

2016

ANNUAL REPORT |





Atlas Air Worldwide Holdings, Inc. (Nasdaq: AAWW) is a growing global leader in innovative, outsourced aviation services.

Our broad array of 747, 777, 767, 757 and 737 aircraft empowers leading express and e-commerce delivery providers, airlines, freight forwarders and charter customers to increase fleet flexibility and network efficiency, drive an expanded global presence, and more quickly capitalize on market opportunities.

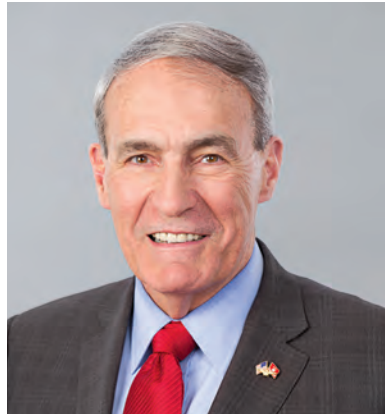
Working within a stable financial structure, guided by seasoned industry executives and a vision carried out—every day—by experienced and motivated employees, we continue to capitalize on strategic initiatives powering business growth and delivering value to our customers and shareholders.

Atlas Air Worldwide is the parent company of Atlas Air, Inc., Southern Air, Inc., majority owner of Polar Air Cargo Worldwide, Inc., and owner of Titan Aviation Holdings, Inc., which leases aircraft worldwide.



INNOVATIVE, OUTSOURCED AVIATION SERVICES

A HISTORIC, TRANSFORMATIVE YEAR



Frederick McCorkle
Chairman of the Board

April 17, 2017

As we move more deeply into the fast-growing express and e-commerce markets, our scale and scope of operations will grow more than it ever has in previous years.

TO OUR SHAREHOLDERS:

2016 was a truly historic and transformative year for Atlas Air Worldwide.

In keeping with our commitment to drive value for our shareholders and our vision to be our customers' most trusted partner, we capitalized on several strategic opportunities to further strengthen our position as the leader in international aviation outsourcing.

In April, we acquired Southern Air in a highly complementary transaction that expands our platform into 777 and 737 operations and provides our customers with access to a broader array of aircraft and operating services.

A month later, we reached agreement to provide air transport services for leading e-commerce retailer Amazon. In addition to leasing and operating twenty 767-300 freighters to Amazon in support of package deliveries to its customers, our arrangements provide for future growth of the relationship as Amazon may increase its business with us.

In September, by an affirmative vote of approximately 99.9% of the votes cast, our shareholders approved the issuance to Amazon of warrants to acquire up to 30% of the common shares of the company. The warrants granted to Amazon are part of the inherent value creation and alignment of interest designed to strengthen our long-term relationship.

The Southern Air and Amazon initiatives are just two examples of our commitment to capitalizing on profitable opportunities during what is a new era of business growth and development for the company.

We are moving more deeply into the fast-growing express and e-commerce markets. At the same time, we continue to serve heavy airfreight with unparalleled service and to grow our relationships with our other strategic customers.

As a result, our scale and scope of operations will grow more than it ever has in previous years. Our fleet will expand significantly. We will be flying new routes to new stations. And we will be providing new services to new customers.

As in the past, our diversification and development strategy is designed to respond to profitable opportunities and produce attractive earnings.

Underlying our efforts is a commitment to a set of core values that focus on safety, security and compliance; customer service; continuous improvement; teamwork; and always communicating our plan.

Driving our execution are:

- ▶ An experienced, dedicated team of employees focused on our customers' expectations;
- ▶ A modern, superior fleet tailored to meet our customers' unique needs;
- ▶ Unrivaled value-added global operating services; and
- ▶ A solid financial structure.

FINANCIAL AND OPERATING HIGHLIGHTS

[\$ in millions, except per share]	For the Year Ended		% Change
	12/31/16	12/31/15	
Operating revenues	\$ 1,839.6	\$ 1,822.7	0.9
Income from continuing operations, net of taxes	42.6	7.3	483.6
Adjusted income from continuing operations, net of taxes ¹	114.3	125.3	(8.8)
Diluted EPS from continuing operations	1.70	0.29	486.2
Adjusted diluted EPS from continuing operations ¹	4.50	5.01	(10.2)
Total assets	\$ 4,247.4	\$ 4,164.4	2.0
Debt obligations	1,851.4	1,901.3	(2.6)
Stockholders' equity	\$ 1,517.3	\$ 1,454.2	4.3
Aircraft fleet [total] ²	90.0	67.0	34.3
Block hours	210,444	178,060	18.2

¹Adjusted income from continuing operations, net of taxes and adjusted diluted EPS from continuing operations are non-GAAP measures that exclude certain items. See Page 45 of our 2016 Annual Report on Form 10-K, included with this Annual Report to Stockholders, for a reconciliation to the most directly comparable financial measures in accordance with GAAP.

²Includes customer-owned aircraft operated by the company.

As we move forward and build upon the successes of 2016, we are fortunate to be guided by a skillful management group, led by Chief Executive Officer, Bill Flynn. Supporting Bill are our Chief Operating Officer, John Dietrich; Chief Commercial Officer, Michael Steen; Chief Financial Officer, Spencer Schwartz; and General Counsel, Chief Human Resources Officer and Secretary, Adam Kokas.

Our management team, along with our customer-focused cadre of employees, have proven the effectiveness of our mission and strategy. Recognizing the quality and depth of our leadership and the significance of our achievements, *Airline Economics* named Atlas Air

GROWING FLEET

5

OPERATING PLATFORMS
747, 777, 767, 757, 737

90

AIRCRAFT
+23 IN 2016

HEADING TO MORE THAN

100

> 57 SINCE 2011

Worldwide 2016's Airline Management Team of the Year.

Moving forward, the transformation of our company continues.

We will deepen our presence in existing markets, diversify our business mix by capitalizing on opportunities in new ones, and continue to offer innovative new airfreight solutions and services that benefit both our customers' and our revenue streams.

The future has never looked brighter. My fellow board members and I have the highest levels of confidence that Bill, his senior team, and all our employees will continue to strengthen the reputation for quality, innovation, and growth that is Atlas Air Worldwide.

HKG



04:00 | Touchdown HKG

Hong Kong is a key global hub in the express, e-commerce and airfreight markets, and a keystone in our global operating network.

04:15 | Unloading

Our broad array of 747, 777, 767, 757 and 737 aircraft helps us meet and exceed our customers' expectations, whether they're shipping an overnight package or oversized heavy equipment.

05:00 | Tune-up

Expert technicians and ground support staff around the globe enable us to deliver against aggressive customer service quality goals, while maintaining a safe and compliant operation.

05:30 | Fuel-up

The operating efficiency of our 747-8Fs, -400Fs, and 777Fs, including their superior fuel efficiency, range, capacity and loading capabilities, creates a compelling value proposition for our customers and positions us well in the marketplace.

OUR FLEET IS ALIGNED WITH THE GROWING

EXPRESS AND E-COMMERCE MARKETS

05:45 | Handling

State-of-the-art aircraft, including our nose-door 747s, help ensure safe and reliable handling of all cargo and express packages. We also handle oversized, unusual, or high-maintenance goods that require special care.

06:15 | Loading

Our loading procedures focus on safe handling while maximizing efficiency of all cargo to meet the demands of today's growing express, e-commerce and airfreight markets.

06:30 | Logistics

With our 24-hour operations control center and regional sales offices around the world, we can quickly respond to customer requests, additions, reschedules and reroutes. Our customer website provides live flight tracking and online changes.

07:00 | Takeoff

Thanks to our advanced aircraft, capable pilots and crew, on-ground efficiency, and superior flight planning and routing capabilities, our on-time delivery record is one of the highest in the industry.



HKG to ANC

BUILDING ON OUR COMMITMENT



William J. Flynn
President and CEO

April 17, 2017

TO OUR SHAREHOLDERS:

Building on our previous successes and our commitment to pursue strategic growth opportunities, we made several decisions in 2016 that are among the most important in the history of Atlas Air Worldwide.

We continued to expand our presence in the e-commerce and express markets, which continue to demonstrate robust growth.

To that end, we entered into an exciting long-term commercial relationship with Amazon to support the ongoing expansion of its e-commerce business and to enhance its customer delivery capabilities.

"Amazon One," our first aircraft for Amazon and the first in its new "Prime Air" livery, began operations in August, followed by a second aircraft in early 2017. We have secured all 20 of the aircraft and conversion slots required for Amazon, and expect to ramp up to full service through 2018.

MORE ACHIEVEMENTS

Another example of our commitment to growth is our acquisition of Southern Air. The addition of its 10-aircraft, 777 and 737 CMI operating platforms generated immediate earnings accretion in 2016 and further expanded our business base in the dynamic express and e-commerce sectors, both of which rely on airfreight and dedicated freighter services.

Also in 2016 we completed an agreement to operate a 747-400 freighter for Nippon Cargo Airlines, with an opportunity for additional aircraft in the future. Similarly, we entered into an agreement in early 2017 to operate one of our 747-400 freighters for Asiana Cargo.

While expanding our customer base and presence in key markets, we continue to focus on strengthening relationships with our current valued customers.

For example, we entered a five-year agreement with FedEx Express to provide five 747-400 freighter aircraft for its peak flying seasons beginning in 2017. We have worked closely and successfully with FedEx for many years, but this agreement allows both companies to plan for the longer term.

Our customers recognize and appreciate our commitment to meeting or exceeding their needs. One example we are especially proud of is being named, for the fourth consecutive year, *Payload Asia's* Leasing Provider of the Year and Charter Operator of the Year.

As always, these and other accomplishments were made possible by a dedicated team of employees—crewmembers and ground staff—who commit their skills and talents to fulfilling our mission of being our customers' most trusted partner.

OUR PERFORMANCE

2016 ended on a strong note, capped by a fourth quarter in which we delivered record revenues and adjusted earnings and generated both sequential

We are entering a new era of significant business growth and development, ... well-positioned to drive value and benefits for customers and to grow earnings and cash flow for shareholders.

and year-over-year improvements in our block-hour volumes and margins.

Both operationally and financially, our full-year performance reflected the leadership and strength of our ACMI and Charter businesses, the annuity-like contribution of our Dry Leasing operations, ongoing efficiency and productivity initiatives, and a disciplined balance sheet focus.

On an adjusted basis, income from continuing operations, net of taxes, totaled \$114.3 million, or \$4.50 per diluted share,¹ in 2016. Primarily due to charges associated with a benefit plan change in control and transaction-related expenses, our continuing operations generated income of \$42.6 million, or \$1.70 per diluted share, on a reported basis.

Both adjusted and reported results in 2016 reflected better contributions and synergies from Southern Air than originally anticipated as well as an increase in military passenger and cargo demand. Results also reflected the impact of startup expenses and initial warrants related to our new service for Amazon, which we

expect to become accretive in 2017 and to be meaningfully accretive to our earnings and cash flows over time.

LOOKING AHEAD

We are a stronger company today. We are entering a new era of significant business growth and development.

As we move ahead, we are optimistic that airfreight will continue to grow from its current record levels. It is a vital component of global macroeconomic and social development, and a fundamental vehicle in global trade.

With our expanding business base and the ongoing development of our strategic platform, we are also driving more deeply into the faster-growing express and e-commerce markets.

Led by the strength of our brand and our global market leadership in outsourced aircraft and services, our acquisition of Southern Air, our long-term agreements with Amazon, and deeper business relationships, we are well-positioned to drive value and benefits for our customers and to grow earnings and cash flow for our shareholders.

GROWING GLOBAL FOOTPRINT

210,444

BLOCK HOURS
2011-2016 CAGR:² 9.0%

39,882

FLIGHTS
2011-2016 CAGR:² 13.7%

425

AIRPORTS
+173 SINCE 2011

119

COUNTRIES
+25 SINCE 2011

²COMPOUND ANNUAL GROWTH RATE

¹Adjusted income from continuing operations, net of taxes and adjusted diluted EPS from continuing operations are non-GAAP measures that exclude certain items. See Page 45 of our 2016 Annual Report on Form 10-K, included with this Annual Report to Stockholders, for a reconciliation to the most directly comparable financial measures in accordance with GAAP.

TOTAL FLEET: 90 OPERATING FLEET: 81

747

42 BOEING 747s

- 10 747-8Fs
- 24 747-400Fs
- 4 Boeing Large Cargo Freighters (LCFs)
- 4 747-400 passenger



777

11 BOEING 777s

- All 777-200LRs
- 5 CMI
- 6 Titan



767

30 BOEING 767/757s

- 23 767-200/300Fs*
- 6 767-200/300 passenger
- 1 757-200 freighter Titan



737

7 BOEING 737s

- 5 737-400Fs
- 1 737-300F Titan
- 1 737-800 passenger Titan



*includes to-be-converted aircraft

PARTNERING WITH THE BEST



and many more

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

FORM 10-K

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2016**
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934**
- Commission file number **001-16545**



Atlas Air Worldwide Holdings, Inc.
(Exact name of registrant as specified in its charter)

Delaware <i>(State or other jurisdiction of incorporation or organization)</i>	13-4146982 <i>(IRS Employer Identification No.)</i>
2000 Westchester Avenue, Purchase, New York <i>(Address of principal executive offices)</i>	10577 <i>(Zip Code)</i>
Registrant's telephone number, including area code: (914) 701-8000	

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

<u>Title of Each Class</u>	<u>Name of Each Exchange on Which Registered</u>
Common Stock, \$0.01 Par Value	The NASDAQ Global Select Market

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

None

Indicate by check mark if the registrant is a well known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for at least the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark whether disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark if the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the registrant's Common Stock held by non-affiliates based upon the closing price of Common Stock as reported on The NASDAQ Global Select Market as of June 30, 2016 was approximately \$1,053.1 million. In determining this figure, the registrant has assumed that all directors, executive officers and persons known to it to beneficially own ten percent or more of such Common Stock are affiliates. This assumption shall not be deemed conclusive for any other purpose. As of February 10, 2017, there were 25,126,608 shares of the registrant's Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:

Certain portions of the registrant's Proxy Statement relating to the 2017 Annual Meeting of Stockholders, to be filed with the Securities and Exchange Commission, are incorporated by reference into Part III.

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K (this “Report”), as well as other reports, releases and written and oral communications issued or made from time to time by or on behalf of Atlas Air Worldwide Holdings, Inc. (“AAWW”), contain statements that may constitute “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Those statements are based on management’s beliefs, plans, expectations and assumptions, and on information currently available to management. Generally, the words “will,” “may,” “should,” “expect,” “anticipate,” “intend,” “plan,” “continue,” “believe,” “seek,” “project,” “estimate” and similar expressions used in this Report that do not relate to historical facts are intended to identify forward-looking statements.

The forward-looking statements in this Report are not representations or guarantees of future performance and involve certain risks, uncertainties and assumptions. Such risks, uncertainties and assumptions include, but are not limited to, those described in Item 1A, “Risk Factors.” Many of such factors are beyond AAWW’s control and are difficult to predict. As a result, AAWW’s future actions, financial position, results of operations and the market price for shares of AAWW’s common stock could differ materially from those expressed in any forward-looking statements. Readers are therefore cautioned not to place undue reliance on forward-looking statements. AAWW does not intend to publicly update any forward-looking statements that may be made from time to time by, or on behalf of, AAWW, whether as a result of new information, future events or otherwise, except as required by law.

PART I

ITEM 1. BUSINESS

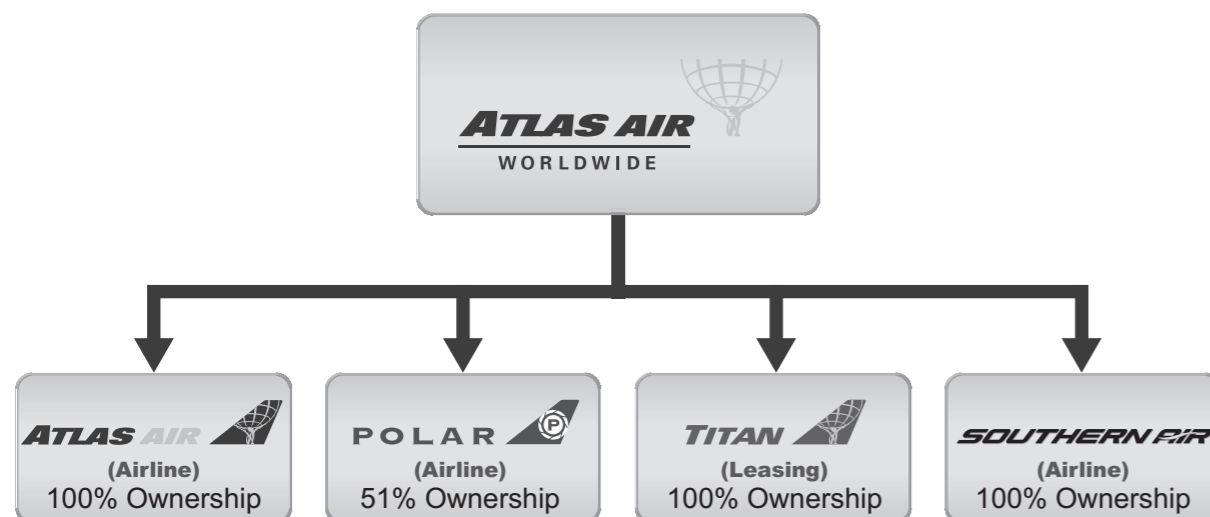
Glossary

The following represents terms and statistics specific to our business and industry. They are used by management to evaluate and measure operations, results, productivity and efficiency.

Block Hour	The time interval between when an aircraft departs the terminal until it arrives at the destination terminal.
C Check	High-level or “heavy” airframe maintenance checks, which are more intensive in scope than Line Maintenance and are generally performed between 18 and 24 months depending on aircraft type.
D Check	High-level or “heavy” airframe maintenance checks, which are the most extensive in scope and are generally performed every six and eight years depending on aircraft type.
Heavy Maintenance	Scheduled maintenance activities, which are the most extensive in scope and are primarily based on time or usage intervals, including, but not limited to, C Checks, D Checks and engine overhauls. In addition, unscheduled engine repairs involving the removal of the engine from the aircraft are considered to be Heavy Maintenance.
Line Maintenance	Maintenance events occurring during normal day-to-day operations.
Non-heavy Maintenance	Discrete maintenance activities for the overhaul and repair of specific aircraft components, including landing gear, auxiliary power units and engine thrust reversers.
Yield	The average amount a customer pays to fly one tonne of cargo one mile.

Overview

AAWW is a holding company with two wholly owned operating subsidiaries, Atlas Air, Inc. (“Atlas”) and, as of April 7, 2016, Southern Air, Inc. (“Southern Air”). It also has a 51% economic interest and 75% voting interest in Polar Air Cargo Worldwide, Inc. (“Polar”). In addition, AAWW is the parent company of several wholly owned subsidiaries related to our dry leasing services (collectively referred to as “Titan”). When used in this Report, the terms “we,” “us,” “our,” and the “Company” refer to AAWW and all entities in our consolidated financial statements.



We are a leading global provider of outsourced aircraft and aviation operating services. We operate the world’s largest fleet of 747 freighters and provide customers a broad array of 747, 777, 767, 757 and 737 aircraft for domestic, regional and international cargo and passenger applications. We provide unique value to our customers by giving them access to highly reliable new production freighters that deliver the lowest unit cost in the marketplace combined with outsourced aircraft operating services that we believe lead the industry in terms of quality and global scale. Our customers include express delivery providers, e-commerce retailers, airlines, freight forwarders, the U.S. military and charter brokers. We provide global services with operations in Africa, Asia, Australia, Europe, the Middle East, North America and South America.

Our primary service offerings include the following:

- ACMI, whereby we provide outsourced cargo and passenger aircraft operating solutions, including the provision of an aircraft, crew, maintenance and insurance, while customers assume fuel, demand and price risk. In addition, customers are responsible for landing, navigation and most other operational fees and costs;
- CMI, which is part of our ACMI business segment, whereby we provide outsourced cargo and passenger aircraft operating solutions, including the provision of crew, Line Maintenance and insurance, but not the aircraft. Customers assume fuel, demand and price risk, and are responsible for providing the aircraft (which they may lease from us) and for Heavy and Non-Heavy Maintenance, landing, navigation and most other operational fees and costs;
- Charter, whereby we provide cargo and passenger aircraft charter services to customers, including the U.S. Military Air Mobility Command (“AMC”), brokers, freight forwarders, direct shippers, airlines, sports teams and fans, and private charter customers. The customer pays a fixed charter fee that includes fuel, insurance, landing fees, navigation fees and most other operational fees and costs; and
- Dry Leasing, whereby we provide cargo and passenger aircraft and engine leasing solutions. The customer operates, and is responsible for insuring and maintaining, the flight equipment.

We believe that the scale, scope and quality of our outsourced services are unparalleled in our industry. The relative operating cost efficiency of our current 747-8F, 747-400F and 777-200LRF aircraft, including their superior fuel efficiency, range, capacity and loading capabilities, creates a compelling value proposition for our customers and positions us well in the markets we operate. Our growing fleet of 767-300 and 737-400 freighter aircraft are well-suited for regional and domestic applications.

We are focused on the further enhancement of our market-leading ACMI and CMI services. We are currently the only operator offering 747-8F and 777 aircraft under ACMI and CMI agreements, and we have the flexibility to expand our fleet in response to market conditions. We believe that our current fleet, which also includes our 747-400F aircraft, represents one of the most efficient, reliable freighter fleets in the market. Our primary placement for the 747-8F and 747-400F aircraft will continue to be long-term ACMI outsourcing contracts with high-credit-quality customers.

During 2016, we significantly expanded our CMI and Dry Leasing services. In April 2016, the acquisition of Southern Air provided us with immediate entry into the 777 and 737 aircraft operating platforms, with ten aircraft and the potential for developing additional business with existing and new customers. In May 2016, we entered into agreements with Amazon.com, Inc. and its subsidiary, Amazon Fulfillment Services, Inc., (collectively “Amazon”), which involve, among other things, the leasing and operation of 20 Boeing 767-300 freighter aircraft. The first two aircraft were placed in service in August 2016 and February 2017, and the remainder are expected to be placed in service by the end of 2018. In addition to the contracts above, our Dry Leasing business includes six 777 freighters that are Dry Leased to customers on a long-term basis. Our Dry Leasing portfolio diversifies our business mix and enhances our predictable, long-term revenue and earnings streams.

AAWW was incorporated in Delaware in 2000. Our principal executive offices are located at 2000 Westchester Avenue, Purchase, New York 10577, and our telephone number is (914) 701-8000.

Operations

Introduction. Our business is organized into three operating segments based on our service offerings: ACMI, Charter and Dry Leasing. All segments are directly or indirectly engaged in the business of air transportation services but have different commercial and economic characteristics. Each operating segment is separately reviewed by our chief operating decision maker to assess operating results and make resource allocation decisions. Additional information regarding our reportable segments can be found in Note 13 to our consolidated financial statements included in Item 8 of Part II of this Report (the “Financial Statements”).

ACMI. The core of our business is generally providing cargo aircraft outsourcing services to customers on an ACMI and CMI basis, in exchange for guaranteed minimum revenues at predetermined levels of operation for defined periods of time. ACMI and CMI contracts provide a predictable annual revenue and cost base by minimizing the risk of fluctuations such as price, fuel and demand risk in the air cargo business. Our revenues and most of our costs under ACMI and CMI contracts are denominated in U.S. dollars, minimizing currency risks associated with international business.

All of our ACMI and CMI contracts provide that the aircraft remain under our exclusive operating control, possession and direction at all times. These contracts further provide that both the contracts and the routes to be operated may be subject to prior and periodic approvals of the U.S. or foreign governments. Revenue from ACMI and CMI contracts is typically recognized as the Block Hours are operated on behalf of a customer during a given month, as defined contractually. If a customer flies below a minimum contracted Block Hour guarantee, the contracted minimum revenue amounts are recognized as revenue. The original length of these contracts generally ranges from two to seven years, although we do offer contracts of shorter or longer duration. In addition, we have also operated short-term ACMI cargo and passenger services and we expect to continue to provide such services.

As a percentage of our operating revenue, ACMI segment revenue represented 45.4% in 2016, 43.4% in 2015 and 43.2% in 2014. As a percentage of our operated Block Hours, ACMI represented 72.2% in 2016, 70.9% in 2015 and 71.4% in 2014.

Charter. Our Charter business primarily provides full planeload cargo and passenger aircraft to customers, including the AMC, brokers, freight forwarders, direct shippers, airlines, sports teams and fans, and private charter customers. Charters are for one or more flights based on a specific origin and destination. Atlas also provides limited airport-to-airport cargo services to select markets, including several cities in South America. In addition, we occasionally earn revenue on subcontracted Charter flights. Atlas typically bears all direct operating costs for both cargo and passenger charters, which include fuel, insurance, landing and navigation fees, and most other operational fees and costs.

As a percentage of our operating revenue, Charter segment revenue, which includes fuel and other operational costs, represented 47.9% in 2016, 49.9% in 2015 and 50.4% in 2014. As a percentage of our operated Block Hours, Charter represented 27.0% in 2016, 28.2% in 2015 and 27.7% in 2014.

Dry Leasing. Our Dry Leasing business provides aircraft and engines to customers, including some CMI customers, for compensation that is typically based on a fixed monthly amount (a “Dry Lease”). This business is primarily operated by Titan, which is principally a cargo aircraft dry lessor, but also owns and manages aviation assets such as passenger narrow-body aircraft, engines and related equipment. Titan also markets its expertise in asset management, passenger-to-freighter conversion and other aviation-related technical services. As a percentage of our operating revenue, Dry Leasing segment revenue represented 5.8% in 2016, 5.9% in 2015 and 5.6% in 2014.

Other Revenue. As a percentage of our operating revenue, Other revenue, which includes administrative and management support services and flight simulator training, represented 0.9% in 2016, 0.8% in 2015 and 0.8% in 2014.

DHL Investment and Polar

DHL Network Operations (USA), Inc. (“DHL”) holds a 49% equity interest and a 25% voting interest in Polar (see Note 3 to our Financial Statements). AAWW owns the remaining 51% equity interest and 75% voting interest. Under a 20-year blocked space agreement that expires in 2027 (the “BSA”), Polar provides air cargo capacity to DHL. Atlas and Polar also have a flight services agreement, whereby Atlas is compensated by Polar on a per Block Hour basis, subject to a monthly minimum Block Hour guarantee, at a predetermined rate with the opportunity for performance premiums that escalate annually. Under the flight services agreement, Atlas provides Polar with crew, maintenance and insurance for the aircraft. Under separate agreements, Atlas and Polar supply administrative, sales and ground support services to one another. Deutsche Post AG (“DP”) has guaranteed DHL’s (and Polar’s) obligations under the various agreements described above. AAWW has agreed to indemnify DHL for and against various obligations of Polar and its affiliates. Collectively, these agreements are referred to in this Report as the “DHL Agreements”. The DHL Agreements provide us with a minimum guaranteed annual revenue stream from aircraft that have been dedicated to Polar for DHL and other customers’ freight over the life of the agreements. DHL provides financial support and also assumes the risks and rewards of the operations of Polar.

Combined with Polar, we provide ACMI, CMI, Charter and Dry Leasing services to support DHL’s transpacific express, North American and intra-Asian networks. In addition, we fly between the Asia Pacific region, the Middle East and Europe on behalf of DHL and other customers. Atlas also provides incremental charter capacity to Polar and DHL on an ad hoc basis. The following table summarizes the aircraft types and services provided to DHL as of December 31, 2016:

<u>Aircraft Type</u>	<u>Service</u>	<u>Total</u>
747-8F	ACMI	6
747-400F	ACMI	7
777-200LR	CMI	5
767-300	CMI and Dry Leasing	4
767-200	CMI	9
737-400F	CMI	5
757-200F	Dry Leasing	1
Total		<u>37</u>

Amazon

In May 2016, we entered into certain agreements with Amazon, which involve, among other things, CMI operation of 20 Boeing 767-300 freighter aircraft for Amazon by Atlas, as well as Dry Leasing by Titan. The Dry Leases will have a term of ten years, while the CMI operations will be for seven years (with an option for Amazon to extend the term to ten years). The first two aircraft were placed in service in August 2016 and February 2017, and the remainder are expected to be placed in service by the end of 2018.

In conjunction with these agreements, we granted Amazon a warrant providing the right to acquire up to 20% of our outstanding common shares, after giving effect to the issuance of shares pursuant to the warrants, at an exercise price of \$37.50 per share. A portion of the warrant, representing the right to purchase 3.75 million shares, vested immediately upon issuance of the warrant and the remainder of the warrant, representing the right to purchase 3.75 million shares, will vest in increments of 375,000 as the lease and operation of each of the 11th through 20th aircraft commences. The warrant will be exercisable in accordance with its terms through 2021. As of December 31, 2016, no warrants have been exercised.

The agreements also provide incentives for future growth of the relationship as Amazon may increase its business with us. In that regard, we granted Amazon a warrant to acquire up to an additional 10% of our outstanding common shares, after giving effect to the issuance of shares pursuant to the warrants, for an exercise price of \$37.50 per share. This warrant to purchase 3.75 million shares will vest in conjunction with payments by Amazon for additional business with us. The warrant will be exercisable in accordance with its terms through 2023.

Sales and Marketing

We have regional sales offices in various locations around the world that cover the Americas, Asia Pacific, Europe, Africa and Middle East regions. These offices market our ACMI, CMI and Dry Leasing services to express delivery providers, e-commerce retailers, airlines and freight forwarders. They also market our cargo and passenger Charter services to charter brokers, the U.S. military, freight forwarders, direct shippers and airlines.

Fuel

Historically, aircraft fuel is one of the most significant expenses for us. During 2016, 2015 and 2014, fuel costs represented 16.5%, 19.6%, and 24.9%, respectively, of our total operating expenses. Fuel prices and

availability are subject to wide price fluctuations based on geopolitical issues, supply and demand, which we can neither control nor accurately predict. The following table summarizes our total fuel consumption and costs:

	2016	2015	2014
Gallons consumed (in thousands)	163,862	147,081	131,787
Average price per gallon, including tax	\$ 1.68	\$ 2.27	\$ 3.07
Cost (in thousands)	\$275,113	\$333,390	\$404,263

Our exposure to fluctuations in fuel price is limited to the commercial portion of our Charter business only. The ACMI segment has no direct fuel price exposure because ACMI and CMI contracts require our customers to pay for aircraft fuel. Similarly, we generally have no fuel price risk for AMC charters because the price is set under our contract with the AMC, and we receive or make payments to adjust for price increases and decreases from the contractual rate.

In the past, we have not experienced significant difficulties with respect to fuel availability. Although we do not currently anticipate a significant reduction in the availability of aircraft fuel, a number of factors, such as geopolitical uncertainties in oil-producing nations and shortages of and disruptions to refining capacity or transportation of aircraft fuel from refining facilities, make accurate predictions unreliable. For example, hostilities and political turmoil in oil-producing nations could lead to disruptions in oil production and/or to substantially increased oil prices. Any inability to obtain aircraft fuel at competitive prices would materially and adversely affect our results of operation and financial condition.

Employees

Our business depends on highly qualified management, operations and flight personnel. As a percentage of our consolidated operating expenses, salaries, wages and benefits accounted for approximately 25.4% in 2016, 20.7% in 2015 and 19.2% in 2014. As of December 31, 2016, we had 2,646 employees, 1,581 of whom were pilots. We maintain a comprehensive training program for our pilots in compliance with U.S. Federal Aviation Administration (“FAA”) requirements, in which each pilot regularly attends recurrent training programs.

Pilots of Atlas and Southern Air, and flight dispatchers of Atlas and Polar are represented by the International Brotherhood of Teamsters (the “IBT”). These employees represented approximately 60.5% of our workforce as of December 31, 2016. We have a five-year collective bargaining agreement (“CBA”) with our Atlas pilots, which became amendable in September 2016; and a four-year CBA with the Southern Air pilots, which became amendable in November 2016. We also have a five-year CBA with our Atlas and Polar dispatchers, which becomes amendable in November 2017.

After we completed the acquisition of Southern Air in April 2016, we informed the IBT of our intention to pursue (and we have been pursuing) a complete operational merger of Atlas and Southern Air. Pursuant to the merger provisions in both the Atlas and Southern Air CBAs, joint negotiations for a single CBA for Atlas and Southern Air should commence promptly. Once a seniority list is presented to us by the unions, it triggers an agreed-upon time frame to negotiate a new joint CBA with any unresolved issues submitted to binding arbitration. After the merger process began, the IBT filed an application for mediation with the National Mediation Board (“NMB”) on behalf of the Atlas pilots. We have opposed the mediation application as it is not in accordance with the merger provisions in the parties’ existing CBAs, which have a defined and streamlined process for negotiating a joint CBA when a merger occurs, as in the case with the Atlas and Southern Air merger. The NMB conducted a pre-mediation investigation in June 2016, which is currently pending. Due to a lack of meaningful progress in such discussions, in February 2017, we filed a lawsuit against the IBT to compel arbitration on the issue of whether the merger provisions in Atlas and Southern Air’s CBAs apply to the bargaining process.

We are subject to risks of work interruption or stoppage as permitted by the Railway Labor Act of 1926 (the “Railway Labor Act”) and incur additional administrative expenses associated with union representation of our employees.

Maintenance

Maintenance represented our third-largest operating expense for the year ended December 31, 2016. Primary maintenance activities include scheduled and unscheduled work on airframes and engines. Scheduled maintenance activities encompass those activities specified in our maintenance program approved by the FAA. The costs necessary to adhere to these maintenance programs may increase over time, based on the age of the equipment or due to FAA airworthiness directives (“ADs”).

Under the ADs issued pursuant to the FAA’s Aging Aircraft Program, we are subject to extensive aircraft examinations and may be required to undertake structural modifications to our fleet from time to time to address any problems of corrosion and structural fatigue. The FAA has issued increased inspection and maintenance requirements depending on aircraft type and ADs requiring certain additional aircraft modifications. We believe all aircraft in our fleet are in compliance with all existing ADs. It is possible, however, that additional ADs applicable to the types of aircraft or engines included in our fleet could be issued in the future and that the cost of complying with such ADs could be substantial.

Under our FAA-approved maintenance programs, all Heavy Maintenance is currently performed by third-party service providers that are compensated on a time-and-material basis as we believe they provide the most reliable and efficient means of maintaining our aircraft fleet.

Insurance

We maintain insurance of the types and in amounts deemed adequate and consistent with current industry standards. Principal coverage includes: liability for injury to members of the public, including passengers; injury to crewmembers and ground staff; damage to our property and that of others; and loss of, or damage to, flight equipment, whether on the ground or in flight.

Aviation insurance premiums historically have fluctuated based on factors that include the loss history of the industry in general and the insured carrier in particular. Terrorist attacks and other adverse events involving aircraft could result in increases in insurance costs and could affect the price and availability of such coverage. We participate in an insurance pooling arrangement with DHL and its partners. This allows us to obtain aviation hull and liability, war-risk hull and cargo loss, crew, third-party liability insurance and hull deductible coverage at reduced rates from the commercial insurance providers. If we are no longer included in this arrangement for any reason or if pool members have coverage incidents, we may incur higher insurance costs.

Governmental Regulation

General. Atlas, Polar and Southern Air (the “Airlines”) are subject to regulation by the U.S. Department of Transportation (the “DOT”) and the FAA, among other U.S. and foreign government agencies. The DOT primarily regulates economic issues affecting air service, such as certification, fitness and citizenship, competitive practices, insurance and consumer protection. The DOT has the authority to investigate and institute proceedings to enforce its economic regulations and may assess civil penalties, revoke operating authority or seek criminal sanctions. The Airlines hold DOT-issued certificates of public convenience and necessity plus exemption authority to engage in scheduled air transportation of property and mail in domestic, as well as enumerated international markets, and charter air transportation of property and mail on a worldwide basis. Atlas additionally holds worldwide passenger charter authority.

The DOT conducts periodic evaluations of each air carrier’s fitness and citizenship. In the area of fitness, the DOT seeks to ensure that a carrier has the managerial competence, compliance disposition and financial resources needed to conduct the operations for which it has been certificated. Additionally, each U.S. air carrier must remain a U.S. citizen by (i) being organized under the laws of the United States or a state, territory or possession thereof; (ii) requiring its president and at least two-thirds of its directors and other managing officers

to be U.S. citizens; (iii) allowing no more than 25% of its voting stock to be owned or controlled, directly or indirectly, by foreign nationals; and (iv) not being otherwise subject to foreign control. The DOT broadly interprets “control” to exist when an individual or entity has the potential to exert substantial influence over airline decisions through affirmative action or the threatened withholding of consents and/or approvals. We believe the DOT will continue to find the Airlines’ fitness and citizenship favorable.

In addition, the Airlines are required to hold valid FAA-issued air carrier certificates and FAA-approved operations specifications authorizing operation in specific regions with specified equipment under specific conditions and are subject to extensive FAA regulation and oversight. The FAA is the U.S. government agency primarily responsible for regulation of flight operations and, in particular, matters affecting air safety, such as airworthiness requirements for aircraft, operating procedures, mandatory equipment and the licensing of pilots, mechanics and dispatchers. The FAA monitors compliance with maintenance, flight operations and safety regulations and performs frequent spot inspections of aircraft, employees and records. The FAA also has the authority to issue ADs and maintenance directives and other mandatory orders relating to, among other things, inspection of aircraft and engines, fire retardant and smoke detection devices, increased security precautions, collision and windshear avoidance systems, noise abatement and the mandatory removal and replacement of aircraft parts that have failed or may fail in the future. In addition, the FAA mandates certain record-keeping procedures. The FAA has the authority to modify, temporarily suspend or permanently revoke an air carrier’s authority to provide air transportation or that of its licensed personnel, after providing notice and a hearing, for failure to comply with FAA rules, regulations and directives. The FAA is empowered to assess civil penalties for such failures or institute proceedings for the imposition and collection of monetary fines for the violation of certain FAA regulations and directives. The FAA is also empowered to modify, suspend or revoke an air carrier’s authority on an emergency basis, without providing notice and a hearing, where significant safety issues are involved.

In December 2011, the FAA adopted a rule to impose new flight and duty time requirements with the stated goal of reducing pilot fatigue. The rule took effect on January 14, 2014. The rule applies to Atlas’ passenger operations but not to the Airlines’ all-cargo operations. The Independent Pilots Association, representing the pilots of United Parcel Service, Inc. (“UPS”), filed a judicial appeal in the U.S. Court of Appeals for the District of Columbia Circuit challenging the FAA decision not to include all-cargo operations in the rule. On March 24, 2016, the Court issued an order denying the appeal. Should the FAA decide either on its own initiative or pursuant to Congressional directive to change the final rule to include all-cargo operations, it could result in a material increase in crew costs for the Airlines. It could also have a material impact on our business, results of operations and financial condition by limiting crew scheduling flexibility and increasing operating costs, especially with respect to long-range flights.

International. Air transportation in international markets (the vast majority of markets in which the Airlines operate) is subject to extensive additional regulation. The ability of the Airlines to operate in other countries is governed by aviation agreements between the United States and the respective countries (in the case of Europe, the European Union (the “EU”)) or, in the absence of such an agreement, by principles of reciprocity. Sometimes, aviation agreements restrict the number of Airlines that may operate, their frequency of operation, or the routes over which they may fly. This makes it necessary for the DOT to award route and operating rights to U.S. air carrier applicants through competitive route proceedings. International aviation agreements are periodically subject to renegotiation, and changes in U.S. or foreign governments could result in the alteration or termination of such agreements, diminish the value of existing route authorities or otherwise affect Atlas and Polar’s international operations. Foreign government authorities also impose substantial licensing and business registration requirements and, in some cases, require the advance filing and/or approval of schedules or rates. Moreover, the DOT and foreign government agencies typically regulate alliances and other commercial arrangements between U.S. and foreign air carriers, such as the ACMI and CMI arrangements that Atlas maintains. Approval of these arrangements is not guaranteed and may be conditional. In addition, approval during one time period does not guarantee approval in future periods.

A foreign government’s regulation of its own air carriers can also affect our business. For instance, the EU places limits on the ability of EU carriers to use ACMI aircraft operated by airlines of non-EU member states. The regulations have a negative impact on our ACMI business opportunities.

Airport Access. The ability of the Airlines to operate suitable schedules is dependent on their ability to gain access to airports of their choice at commercially desirable times and on acceptable terms. In some cases, this is constrained by the need for the assignment of takeoff and landing “slots” or comparable operational rights. Like other air carriers, the Airlines are subject to such constraints at slot-restricted airports in cities such as Chicago and a variety of foreign locations (e.g., Tokyo, Shanghai and Incheon). The availability of slots is not assured and the inability of the Airlines’ or their ACMI carrier customers to obtain additional slots could inhibit efforts to provide expanded services in certain international markets. In addition, nighttime flight restrictions have been imposed or proposed by various airports in Europe, Canada and the U.S. Depending on their severity, these could have an adverse operational impact.

Access to the New York airspace presents an additional challenge. Because of congestion in the New York area, especially at John F. Kennedy International Airport (“JFK”), the FAA imposes hourly limits on JFK operations of those carriers offering scheduled services and potentially could place limits on Charter flights.

As a further means to address congestion, the FAA allows U.S. airports to raise landing fees to defray the costs of airfield facilities under construction or reconstruction. Any landing fee increases implemented would have an impact on airlines generally.

Security. The U.S. Transportation Security Administration (“TSA”) extensively regulates aviation security through rules, regulations and security directives that are designed to prevent unauthorized access to passenger and freighter aircraft and the introduction of prohibited items including firearms and explosives onto an aircraft. Atlas and Polar currently operate pursuant to a TSA-approved risk-based security program that, we believe, adequately maintains the security of all aircraft in the fleet. We utilize the TSA, the intelligence community and the private sector as sources for our aggressive threat-based risk-management program. There can be no assurance, however, that we will remain in compliance with existing or any additional security requirements imposed by TSA or by U.S. Congress without incurring substantial costs, which may have a material adverse effect on our operations. To mitigate any such increase, we are working closely with the Department of Homeland Security and other government agencies to ensure that a risk-based management approach is utilized to target specific “at-risk” cargo. This approach will limit any exposure to regulation that would require 100% screening of all cargo at an excessive cost. Additionally, foreign governments and regulatory bodies (such as the European Commission) impose their own aviation security requirements and have increasingly tightened such requirements. This may have an adverse impact on our operations, especially to the extent the new requirements may necessitate redundant or costly measures or be in conflict with TSA requirements. We have successfully implemented all European Commission security programs allowing us unimpeded access to European markets.

Environmental. We are subject to various federal, state and local laws relating to the protection of the environment, including the discharge or disposal of materials and chemicals and the regulation of aircraft noise, which are administered by numerous state, local and federal agencies. For instance, the DOT and the FAA have authority under the Aviation Safety and Noise Abatement Act of 1979 and under the Airport Noise and Capacity Act of 1990 to monitor and regulate aircraft engine noise. We believe that all aircraft in our fleet materially comply with current DOT, FAA and international noise standards.

We are also subject to the regulations of the U.S. Environmental Protection Agency (the “EPA”) regarding air quality in the United States. All of our aircraft meet or exceed applicable EPA fuel venting requirements and smoke emissions standards.

There is significant U.S. and international government interest in implementing measures to respond to the problem of climate change and greenhouse gas emissions. Various governments, including the United States, are pursuing measures to regulate climate change and greenhouse gas emissions.

In October 2013, the International Civil Aviation Organization (“ICAO”) reached a nonbinding agreement to address climate change by developing global market-based measures to assist in achieving a carbon-neutral growth from 2020 onward. In October 2016, ICAO approved a resolution to adopt a global market-based measure known as the Carbon Offsetting and Reduction Scheme for International Aviation (“CORSIA”), which is designed to offset any annual increases in total carbon emissions from international civil aviation above a baseline level determined by the average of 2019 and 2020 emissions. Although various details regarding the implementation of CORSIA still need to be finalized, a pilot phase will run from 2021 to 2023 and, starting in 2019, the airlines of participating countries will begin monitoring and reporting fuel burn during international flights. As a result, for each year starting in 2021, covered airlines may need to purchase allowances to offset their assigned share of emissions overages.

Additionally, the EU continues to pursue a parallel track to address climate change through its Emissions Trading Scheme (“ETS”). Following the end of every year, to the extent the ETS applies, each airline must tender the number of carbon emissions allowances (“Allowances”) corresponding to carbon emissions generated by its covered flight activity during the year. If the airline’s flight activity during the year has produced carbon emissions exceeding the number of Allowances that it has been awarded, the airline must acquire Allowances from other airlines in the open market. In recognition of ICAO’s recent adoption of CORSIA, the ETS was suspended with respect to international aviation through December 31, 2016; however, measures continue to remain applicable to intra-EU aviation. Although certain EU political leaders have stated that the EU is likely to extend the suspension applicable to flights to and from the EU beyond December 31, 2016, we cannot be certain whether or for how long the EU will do so.

In the United States, various constituencies have continued to advocate for controls on greenhouse gas emissions. Previously, both houses of the U.S. Congress passed legislation to impose a carbon-related tax on fuel sold to airlines and other entities. However, a bill has not been signed into law. Also, on August 15, 2016, the U.S. Environmental Protection Agency (“EPA”) issued a final rule finding that greenhouse gas emissions from aircraft cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare. That finding could lead to EPA regulation of greenhouse gas emissions from aircraft.

Other Regulations. Air carriers are also subject to certain provisions of the Communications Act of 1934 because of their extensive use of radio and other communication facilities and are required to obtain an aeronautical radio license from the Federal Communications Commission. Additionally, we are subject to U.S. and foreign antitrust requirements and international trade restrictions imposed by U.S. presidential determination and U.S. government agency regulation, including the Office of Foreign Assets Control of the U.S. Department of the Treasury. We endeavor to comply with such requirements at all times. We are also subject to state and local laws and regulations at locations where we operate and at airports that we serve. Our operations may become subject to additional international, U.S. federal, state and local requirements in the future.

We believe that we are in material compliance with all currently applicable laws and regulations.

Civil Reserve Air Fleet. As part of our Charter business, Atlas and Polar both participate in the U.S. Civil Reserve Air Fleet (“CRAF”) Program, which permits the U.S. Department of Defense to utilize participants’ aircraft during national emergencies when the need for military airlift exceeds the capability of military aircraft. Participation in the CRAF Program could adversely restrict our commercial business in times of national emergency. Under the CRAF Program, contracts with the AMC typically cover a one-year period. We have made a substantial number of our aircraft available for use by the U.S. military in support of their operations and we operate such flights pursuant to cost-based contracts. Atlas bears all direct operating costs for both passenger and cargo aircraft, which include fuel, insurance, overfly, landing and ground handling expenses. The contracted charter rates (per mile) and fuel prices (per gallon) are fixed by the AMC periodically. We receive reimbursements from the AMC each month if the price of fuel paid by us to vendors for the AMC Charter flights exceeds the fixed price. If the price of fuel paid by us is less than the fixed price, then we pay the difference to the AMC.

Airlines may participate in the CRAF Program either alone or through a teaming arrangement. We are a member of the team led by FedEx Corporation (“FedEx”). We pay a commission to the FedEx team, based on the revenues we receive under our AMC contracts. The AMC buys cargo capacity on two bases: a fixed basis, which is awarded both annually and quarterly, and expansion flying, which is awarded on an as-needed basis throughout the contract term. While the fixed business is predictable, Block Hour levels for expansion flying are difficult to predict and thus are subject to fluctuation.

Future Regulation. The U.S. Congress, the DOT, the FAA, the TSA and other government agencies are currently considering, and in the future may consider, adopting new laws, regulations and policies regarding a wide variety of matters that could affect, directly or indirectly, our operations, ownership and profitability. It is impossible to predict what other matters might be considered in the future and to judge what impact, if any, the implementation of any future proposals or changes might have on our businesses.

Competition

The market for ACMI and CMI services is competitive. We believe that the most important basis for competition in this market is the efficiency and cost-effectiveness of the aircraft assets and the scale, scope and quality of the outsourced operating services provided. Atlas is currently the only provider of ACMI and CMI services with the modern 747-8F and 777 aircraft. The primary ACMI and CMI providers for 747-400 and 767 aircraft include the following: Atlas; Air Atlanta Icelandic; Air Transport Services Group, Inc.; Kalitta Air, LLC; and Western Global Airlines.

The Charter market is competitive, with a number of cargo operators that include AirBridge Cargo Airlines; Cargolux; Kalitta Air, LLC; National Air Cargo; and passenger airlines providing similar services utilizing 747-8Fs, 747-400s and 747-200s. We believe that we offer a superior long-haul aircraft in the 747-8F and 747-400, and we will continue to develop new opportunities in the Charter market for aircraft not otherwise deployed in our ACMI business.

The Dry Leasing business is also competitive. We believe that we have an advantage over other cargo aircraft lessors in this business as a result of our relationships in the cargo market and our insights and expertise as an operator of aircraft. Titan also competes in the passenger aircraft leasing market to develop key customer relationships, enter strategic geographic markets, and/or acquire feedstock aircraft for future freighter conversion. Our primary competitors in the aircraft leasing market include GE Capital Aviation Services; AWAS; Guggenheim Aviation Partners, LLC; Aviation Capital Group Corp.; Aircastle Ltd.; AerCap Holdings N.V.; Air Transport Services Group, Inc.; and Fly Leasing, among many others.

Available Information

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, and all amendments to those reports, filed with or furnished to the Securities and Exchange Commission (the “SEC”), are available free of charge through our corporate internet website, www.atlasair.com, as soon as reasonably practicable after we have electronically filed such material with, or furnished it to, the SEC.

The public may read and copy any materials that we file with SEC at the SEC’s Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov.

The information on our website is not, and shall not be deemed to be, part of this Report or incorporated into any other filings we make with the SEC.

ITEM 1A. RISK FACTORS

You should carefully consider each of the following Risk Factors and all other information in this Report. These Risk Factors are not the only ones facing us. Our operations could also be impaired by additional risks and uncertainties. If any of the following risks and uncertainties develops into actual events, our business, financial condition and results of operations could be materially and adversely affected.

RISKS RELATED TO OUR BUSINESS

Risks Related to Our Business Generally

Deterioration in the airfreight market, global economic conditions or financial markets could adversely affect our business, results of operations, financial condition, liquidity and ability to access capital markets.

Airfreight demand has historically been highly dependent on global economic conditions. If demand for our services, Yields or lease rates deteriorate, it could have a material adverse effect on our business, results of operations and financial condition.

In addition, we may face significant challenges if conditions in the financial markets deteriorate. Our business is capital intensive and growth depends on the availability of capital for new aircraft, among other things. If capital availability deteriorates, we may be unable to raise the capital necessary to finance business growth or other initiatives or to repay our debt when it matures. Our ability to access the capital markets may be restricted at a time when we would like, or need, to do so, which could have an impact on our flexibility to react to changing economic and business conditions.

We could be adversely affected if any of our existing aircraft are underutilized or we fail to redeploy or deploy aircraft with customers at favorable rates. We could also be adversely affected from the loss of one or more of our aircraft for an extended period of time.

Our operating revenues depend on our ability to effectively deploy the aircraft in our fleet and maintain high utilization of our aircraft at favorable rates. If we have underutilized aircraft, we would seek to redeploy those aircraft in our other lines of business or sell them. If we are unable to successfully redeploy our existing aircraft at favorable rates or sell them on favorable terms, it could have a material adverse effect on our business, results of operations and financial condition. In addition, if one or more of our aircraft are out of service for an extended period of time, our operating revenues would decrease and we may have difficulty fulfilling our obligations under one or more of our existing contracts. The loss of revenue resulting from any such business interruption, and the cost and potentially long lead time and difficulties in sourcing a replacement aircraft, could have a material adverse effect on our business, results of operations and financial condition.

Our financial condition may suffer if we experience unanticipated costs as a result of ongoing lawsuits, claims and investigations related to alleged pricing practices or other legal and regulatory matters.

In the United Kingdom, several groups of named claimants have brought suit against British Airways Plc (“British Airways”) in connection with alleged improper matters related to the use of fuel surcharges and other rate components for air cargo services and are seeking damages allegedly arising from that conduct. British Airways has filed claims in the lawsuit against Polar Air Cargo LLC (“Old Polar”), formerly Polar Air Cargo, Inc., a consolidated subsidiary, and other carriers for contribution should British Airways be found liable to claimants.

In the Netherlands, Stichting Cartel Compensation, successor in interest to claims of various shippers, has filed suit in the district court in Amsterdam against British Airways, KLM, Martinair, Air France, Lufthansa and Singapore Airlines seeking recovery for damages purportedly arising from the same pricing practices at issue in the proceeding described above. In response, British Airways, KLM, Martinair, Air France and Lufthansa filed third-party indemnification lawsuits against Old Polar and Polar seeking indemnification in the event the defendants are found to be liable in the main proceedings.

If Old Polar, Polar or the Company were to incur an unfavorable outcome in the litigation described above or in similar litigation or a related investigation, it could have a material adverse effect on our business, results of operations and financial condition.

In addition to the litigation and investigations described above, we are subject to a number of Brazilian customs claims, as well as other claims, lawsuits and pending actions which we consider to be routine and incidental to our business (see Note 14 to our Financial Statements). If we were to receive an adverse ruling or decision on any such claims, it could have an adverse effect on our business, results of operations and financial condition.

Global trade flows are typically seasonal, and our business, including our ACMI customers’ business, experiences seasonal variations.

Global trade flows are typically seasonal in nature, with peak activity occurring during the retail holiday season, which generally begins in September/October and lasts through most of December. Our ACMI and CMI contracts generally have contractual utilization minimums that typically allow our customers to cancel an agreed-upon percentage of the guaranteed hours of aircraft utilization over the course of a year. Our ACMI and CMI customers often exercise those cancellation options early in the first quarter of the year, when the demand for air cargo capacity is historically low following the seasonal holiday peak in the fourth quarter of the previous year. While our revenues typically fluctuate seasonally as described above, a significant proportion of the costs associated with our business, such as debt service, aircraft rent, depreciation and facilities costs, are fixed and cannot easily be reduced to match the seasonal drop in demand. As a result, our net operating results are typically subject to a high degree of seasonality.

We may fail to realize the anticipated benefits of or fully integrate the acquisition of Southern Air, which could adversely affect our business, results of operations and financial condition, including the market price of our common stock.

Completing the integration of Southern Air with our other existing operations is subject to DOT approvals and authorizations, which may not be granted on a timely basis or at all. In addition, the Southern Air integration may expose us to operational challenges and risks, which could cause actual results to differ materially from anticipated results, including but not limited to: the diversion of management’s attention from our existing business; the assumption of unknown liabilities of the acquired business; the potential impairment of acquired identifiable intangible assets, including goodwill; the ability to effectively operate the 777 and 737 platforms or grow our business; the ability of the companies to maintain contracts that are important to our operations; the ability of the companies to fund and execute our business plans; our ability to attract, motivate and retain key employees; and our ability to attract and retain customers. If we do not receive the approvals and authorizations from the DOT on a timely basis or at all, or we otherwise fail to realize the anticipated benefits or fully integrate the acquisition of Southern Air, it could adversely affect our business, results of operations and financial condition, including the market price of our common stock.

As a U.S. government contractor, we are subject to a number of procurement and other rules and regulations that affect our business. A violation of these rules and regulations could lead to termination or suspension of our government contracts and could prevent us from entering into contracts with government agencies in the future.

To do business with government agencies, including the AMC, we must comply with, and are affected by, many rules and regulations, including those related to the formation, administration and performance of U.S. government contracts. These rules and regulations, among other things:

- require, in some cases, procurement from small businesses;
- require disclosure of all cost and pricing data in connection with contract negotiations;

- give rise to U.S. government audit rights;
- impose accounting rules that dictate how we define certain accounts, define allowable costs and otherwise govern our right to reimbursement under certain cost-based U.S. government contracts;
- establish specific health, safety and doing-business standards; and
- restrict the use and dissemination of information classified for national security purposes and the exportation of certain products and technical data.

These rules and regulations affect how we do business with our customers and, in some instances, add costs to our business. A violation of these rules and regulations could result in the imposition of fines and penalties or the termination of our contracts. In addition, the violation of certain other generally applicable rules and regulations could result in our suspension or debarment as a government contractor.

Fuel availability and price volatility could adversely affect our business and operations.

The price of aircraft fuel is unpredictable and can be volatile. While we have been able to reduce our exposure to fuel risk significantly, we do bear some risk of fuel exposure for our Charter operations. Our ACMI and CMI contracts require our customers to pay for aircraft fuel.

If fuel costs increase significantly, our customers may reduce the volume and frequency of cargo shipments or find less costly alternatives for cargo delivery, such as land and sea carriers. Such instances could have a material adverse impact on our business, results of operations and financial condition.

In the past, we have not experienced significant difficulties with respect to fuel availability. Although we do not currently anticipate a significant reduction in the availability of aircraft fuel, a number of factors, such as geopolitical uncertainties in oil-producing nations and shortages of and disruptions to refining capacity, make accurate predictions unreliable. Any inability to obtain aircraft fuel at competitive prices could have a material adverse impact on our business, results of operations and financial condition.

We are party to collective bargaining agreements covering pilots of Atlas and Southern Air and a collective bargaining agreement covering our Atlas and Polar flight dispatchers. This could result in higher labor costs and/or result in a work interruption or stoppage.

Pilots of Atlas and Southern Air and flight dispatchers of Atlas and Polar are represented by the IBT. We have a five-year CBA with our Atlas pilots, which became amendable in September 2016 and a four-year CBA with the Southern Air pilots, which became amendable in November 2016. We also have a five-year CBA with our Atlas and Polar flight dispatchers, which becomes amendable in November 2017. We are subject to risks of increased labor costs associated with having a partially unionized workforce, as well as a greater risk of work interruption or stoppage, which could negatively impact our ability to conduct business. We cannot provide assurance that disputes, including disputes with certified collective bargaining representatives of our employees, will not arise in the future or that any outcome of such disputes will result in an agreement on terms satisfactory to us.

Insurance coverage may become more expensive and difficult to obtain and may not be adequate to insure all of our risks. In addition, if our Dry Lease customers have inadequate insurance coverage or fail to fulfill their indemnification obligations, it could have a material adverse impact on our business, results of operations and financial condition.

Aviation insurance premiums historically have fluctuated based on factors that include the loss history of the industry in general, and the insured carrier in particular. Adverse events involving aircraft could result in increased insurance costs and could affect the price and availability of such coverage.

We participate in an insurance pooling arrangement with DHL and its partners. This allows us to obtain aviation hull and liability, war-risk hull and cargo loss, crew, third-party liability and hull deductible coverage at reduced rates from the commercial insurance providers. If we are no longer included in this arrangement for any reason or if pool members have coverage incidents, we may incur higher insurance costs.

There can be no assurance that we will be able to maintain our existing coverage on terms favorable to us, that the premiums for such coverage will not increase substantially or that we will not bear substantial losses and lost revenue from accidents or other adverse events. Substantial claims resulting from an accident in excess of related insurance coverage or a significant increase in our insurance expense could have a material adverse effect on our business, results of operations and financial condition. Additionally, while we carry insurance against the risks inherent to our operations, which we believe are consistent with the insurance arrangements of other participants in our industry, we cannot provide assurance that we are adequately insured against all risks, including coverage for weapons of mass destruction.

Lessees are required under our Dry Leases to indemnify us for, and insure against, liabilities arising out of the use and operation of the aircraft, including third-party claims for death or injury to persons and damage to property for which we may be deemed liable. Lessees are also required to maintain public liability, property damage and all-risk hull and war-risk hull insurance on the aircraft at agreed-upon levels. If our lessees' insurance is not sufficient to cover all types of claims that may be asserted against us or if our lessees fail to fulfill their indemnification obligations, we would be required to pay any amounts in excess of our insurance coverage, which could have a material adverse impact on our business, results of operations and financial condition.

We rely on third parties to provide certain essential services. If these service providers do not deliver the high level of service and support required in our business, we may lose customers and revenue.

We rely on third parties to provide certain essential services on our behalf, including maintenance, ground handling and flight attendants. In certain locations, there may be very few sources, or sometimes only a single source, of supply for these services. If we are unable to effectively manage these third parties, they may provide inadequate levels of support which could harm our customer relationships and have an adverse impact on our operations and the results thereof. Any material problems with the quality and timeliness of our contracted services, or an unexpected termination of those services, could have a material adverse effect on our business, results of operations and financial condition.

Some of our aircraft are periodically deployed in potentially dangerous situations, which may result in business interruption or harm to our passengers, employees or contractors and/or damage to our aircraft/cargo.

Some of our aircraft are deployed in potentially dangerous locations and carry hazardous cargo incidental to the services we provide in support of our customers' activities. Some areas through which our flight routes pass are subject to geopolitical instability, which increases the risk of death or injury to our passengers, employees or contractors, business interruption or a loss of, or damage to, our aircraft and/or its cargo. While we maintain insurance to cover injury to our passengers, employees and contractors as well as the loss/damage of aircraft/cargo, except for limited situations, we do not have insurance against the loss arising from business interruption. It may be difficult to replace lost or substantially damaged aircraft due to the high capital requirements and long delivery lead times for new aircraft or to locate appropriate in-service aircraft available for lease or sale. Any injury to passengers, employees or contractors or loss/damage of aircraft/cargo could have a material adverse impact on our business, results of operations and financial condition.

We could be adversely affected by a failure or disruption of our information technology systems.

We are heavily and increasingly dependent on technology to operate our business. The information technology systems on which we rely could be disrupted due to various events, some of which are beyond our

control, including natural disasters, power failures, terrorist attacks, equipment failures, software failures, computer viruses, security breaches and cyber attacks. We have taken numerous steps to implement business resiliency and cybersecurity to help reduce the risk of some of these potential disruptions. There can be no assurance, however, that the measures we have taken are adequate to prevent or remedy disruptions or failures of these systems. Any substantial or repeated failure of these systems could impact our operations and customer service, result in the loss of important data, loss of revenues, and increased costs, and generally harm our business. Moreover, a failure of certain of our vital systems could limit our ability to operate our flights for an extended period of time, which would have a material adverse impact on our business, results of operations and financial condition.

Our ability to utilize net operating loss carryforwards for U.S. income tax purposes may be limited. In addition, we operate in multiple jurisdictions and may become subject to a wide range of income and other taxes.

As of December 31, 2016, we had \$991.0 million of federal net operating loss carryforwards for U.S. income tax purposes, net of unrecognized tax benefits and valuation allowance, which will expire through 2036, if not utilized. Section 382 of the Internal Revenue Code (“Section 382”) imposes an annual limitation on the amount of a corporation’s U.S. federal taxable income that can be offset by net operating loss carryforwards (“NOLs”) if it experiences an “ownership change”, as defined by Section 382. We experienced ownership changes, as defined by Section 382, in 2004 and 2009. Accordingly, the use of our NOLs generated prior to these ownership changes is subject to an annual limitation. In addition, the acquisition of Southern Air constituted an ownership change for that entity and resulted in a limitation on the use of its NOLs. If certain changes in our ownership occur prospectively, there could be an additional annual limitation on the amount of utilizable NOLs, which could have a material adverse impact on our business, results of operations and financial condition.

We operate in multiple jurisdictions and may become subject to a wide range of income and other taxes. If our operations become subject to significant income and other taxes, this could have a material adverse impact on our business, results of operations and financial condition.

Risks Related to Our ACMI Business

We depend on a limited number of significant customers for our ACMI business and the loss of one or more of such customers could materially adversely affect our business, results of operations and financial condition.

Our ACMI business depends on a limited number of customers, which has typically averaged between six and eight. We typically enter into long-term ACMI and CMI contracts with our customers. The terms of our existing contracts are scheduled to expire on a staggered basis. There is a risk that any one of our significant ACMI or CMI customers may not renew their contracts with us on favorable terms or at all, perhaps due to reasons beyond our control. For example, certain of our airline ACMI customers may not renew their ACMI contracts with us because they decide to exit the dedicated cargo business or as they take delivery of new aircraft in their own fleet. Select customers have the opportunity to terminate their long-term agreements in advance of the expiration date, following notice to allow for remarketing of the aircraft.

Entering into ACMI and CMI contracts with new customers generally requires a long sales cycle, and as a result, if our contracts are not renewed, and there is a resulting delay in entering into new contracts, it could have a material adverse impact on our business, results of operations and financial condition.

Our agreements with several ACMI and CMI customers require us to meet certain performance targets, including certain departure/arrival reliability standards. Failure to meet these performance targets could adversely affect our financial results.

Our ability to derive the expected economic benefits from our transactions with certain ACMI and CMI customers depends substantially on our ability to successfully meet strict performance standards and deadlines

for aircraft and ground operations, which become increasingly stringent over time. If we do not meet these requirements, we may not be able to achieve the projected revenues and profitability from these contracts, and we could be exposed to certain remedies, including termination of the agreements with Amazon and the BSA with DHL in the most extreme of circumstances, as described below.

Risks Related to the Agreements with Amazon

We may fail to realize the anticipated strategic and financial benefits of our relationship with Amazon.

Realization of the anticipated benefits from the agreements with Amazon is subject to a number of challenges and uncertainties, such as the timing of aircraft deliveries and unforeseen costs. If we fail to realize the expected benefits, it could adversely impact our business, results of operations and financial condition.

Our agreements with Amazon confer certain termination rights which, if exercised or triggered, may result in our inability to realize the full benefits of the agreements.

The agreements give Amazon the option to terminate in certain circumstances and upon the occurrence of certain events of default, including a change of control or our failure to meet certain performance requirements. In particular, Amazon will have the right to terminate without cause the agreement providing for CMI operations, with an effective termination date not earlier than January 1, 2018, upon providing us at least 180 days’ prior written notice of termination.

Upon termination, Amazon will generally, subject to certain exceptions, retain the warrants that have vested prior to the time of termination and, depending on the circumstances giving rise to the termination, may have the right to accelerated vesting of the remaining warrants upon a change of control of our company. Upon termination, Amazon or we may also have the right to receive a termination fee from the other party depending on the circumstances giving rise to the right of termination.

If Amazon exercises any of these termination rights, it could adversely impact our business, results of operations and financial condition.

Our future earnings and earnings per share, as reported under generally accepted accounting principles, could be adversely impacted by the warrants granted to Amazon.

The warrants granted to Amazon increase the number of diluted shares reported, which has an effect on our fully diluted earnings per share. Further, the warrants are presented as liabilities in our consolidated balance sheets and are subject to fair value measurement adjustments during the periods that they are outstanding. Accordingly, future fluctuations in the fair value of the warrants could adversely impact our results of operations.

If Amazon exercises its right to acquire shares of our common stock pursuant to the warrants, it will dilute the ownership interests of our then-existing stockholders and could adversely affect the market price of our common stock.

If Amazon exercises its right to acquire shares of our common stock pursuant to the warrants, it will dilute the ownership interests of our then-existing stockholders and reduce our earnings per share. In addition, any sales in the public market of any common stock issuable upon the exercise of the warrants by Amazon could adversely affect prevailing market prices of our common stock.

If Amazon exercises its right to acquire shares of our common stock pursuant to the warrants, Amazon may become a significant stockholder and may be entitled to appoint a director to our board of directors.

The warrants issued by us to Amazon grant Amazon the right to purchase up to 30%, in the aggregate, of our common stock on a post-issuance basis. If the warrants granted to Amazon are exercised, Amazon may

become a significant stockholder of our company. We have entered into a stockholders agreement with Amazon, pursuant to which Amazon's ability to vote in its discretion will generally be capped at 14.9% with the remainder to be voted in accordance with our board of directors' recommendation. In addition, under the stockholders agreement, Amazon will be entitled to appoint one director to our board of directors when Amazon owns 10% or more of our common stock. Until such time, Amazon will be entitled to designate a non-voting observer to our board of directors.

Risk Related to the BSA with DHL

Our agreements with DHL confer certain termination rights to them which, if exercised or triggered, may result in our inability to realize the full benefits of the BSA with DHL.

The BSA gives DHL the option to terminate the agreements for convenience by giving notice to us before the twelfth or fifteenth anniversary of the agreement's commencement date, which was October 27, 2008. Further, DHL has a right to terminate the BSA for cause following a specified management resolution process if we default on our performance or we are unable to perform for reasons beyond our control. If DHL exercises any of these termination rights, it could adversely impact our business, results of operations and financial condition.

Risks Related to Our Charter Business

We derive a significant portion of our revenues from the AMC, and a substantial portion of these revenues have been generated pursuant to expansion flying, as opposed to fixed contract arrangements with the AMC. Revenues from the AMC are volatile and may decline from current levels.

As a percentage of our total operating revenue, revenue derived from the AMC was approximately 23.7% in 2016, 23.0% in 2015 and 18.7% in 2014. Historically, the revenues derived from expansion flights for the AMC significantly exceeded the value of the fixed flight component of our AMC contract.

Revenues from the AMC are typically derived from one-year contracts. Our AMC contract generally runs from October 1 through September 30 of the following year. Changes in national and international political priorities can significantly affect the volume of business from the AMC. Any decrease in U.S. military activity could reduce revenue from the AMC. In addition, our share of the total business from the AMC depends on several factors, including the total fleet size we commit to the CRAF program and the total number of aircraft deployed by our teaming arrangement partners and competitors in the program.

The AMC also holds all carriers to certain on-time performance requirements as a percentage of flights flown and, as a result of AMC demand volatility, it has become more difficult to comply with those requirements. To the extent that we fail to meet those performance requirements or if we fail to pass biannual AMC audits, revenues from our business with the AMC could decline through a suspension or termination of our AMC contract. Our revenues could also decline due to a reduction in the revenue rate we are paid by the AMC, a greater reliance by the AMC on its own fleet or a reduction in our allocation of AMC flying. Any reduction in our AMC flying could also negatively impact our Charter revenue from commercial customers for trips related to one-way AMC missions. We expect revenues and profitability from our business with the AMC to continue to remain volatile as the U.S. military continues to move troops and cargo to and from areas of conflict around the world. If we are unable to effectively deploy any resultant capacity during periods of reduced flying, it could have a material adverse effect on our business, results of operations and financial condition.

Our business with the AMC is sensitive to teaming arrangements which affect our relative share of AMC flying and the associated revenue. If one of our team members reduces its commitments or withdraws from the program, or if other carriers on other teams commit additional aircraft, our share of AMC flying may decline. In addition, any changes made to the commissions that we pay or receive for AMC flying or changes to the contracting mechanism could impact the revenues or profitability of this business.

Each year, the AMC allocates its air capacity requirements to different teams of participating airlines based on a mobilization value point system that is determined by the amount and types of aircraft that each team of

airlines pledges to the program. We participate in the program through a teaming arrangement with other airlines, led by FedEx. Our team is one of two major teams participating in the program during our current contract year. Several factors could adversely affect the amount of AMC flying that is allocated to us, including:

- changes in the contracting mechanism;
- the formation of new competing teaming arrangements;
- the withdrawal of any of our team's current partners, especially FedEx;
- a reduction of the number of aircraft pledged by us or other members of our team; or
- increased participation of other carriers on other teams.

Any changes that would result in a reduction in our share of, or profitability from, AMC flying could have a material adverse effect on our business, results of operations and financial condition.

Risk Related to Our Dry Leasing Business

Any default by our Dry Lease customers, including (but not limited to) failure to make timely payments, failure to maintain insurance or failure to properly maintain our aircraft, could adversely affect our financial results

Our Dry Leasing business depends on the ability of our customers to satisfy their obligations under our leases, which may be affected by factors outside our control, including but not limited to: supply and demand of aircraft; competition; economic conditions; the price and availability of aircraft fuel; government regulations; the availability and cost of financing; failure to maintain insurance; and their overall financial condition and cash flow. Any default by our customers can result in reduced cash flow, termination of the lease and repossession of the related aircraft, any of which could have a material adverse effect on our business, results of operations and financial condition.

Dry Leasing customers are primarily responsible for maintaining our aircraft. Although we require many of our customers to pay us supplemental maintenance revenue, failure of a customer to perform required maintenance during the lease term could result in higher maintenance costs, a decrease in the value of our aircraft, the inability to re-lease aircraft at favorable rates, if at all, or impairment charges, which could have a material adverse effect on our business, results of operations and financial condition.

RISKS RELATED TO OUR INDUSTRY

The market for air cargo services is competitive and if we are unable to compete effectively, we may lose current customers or fail to attract new customers. We could also be adversely affected if a large number of long-haul freighter aircraft or freighter aircraft of different equipment types are introduced into the market.

Each of the markets in which we participate is competitive and fragmented. We offer a broad range of aviation services and our competitors vary by geographic market and type of service and include other international and domestic contract carriers, regional and national ground handling and logistics companies, internal cargo units of major airlines and third-party cargo providers. Competition in the air cargo and transportation market is influenced by several key factors, including quality, price and availability of assets and services. Regulatory requirements to operate in the U.S. domestic air cargo market have been reduced, facilitating the entry into domestic markets by non-U.S. air cargo companies. If we were to lose any major customers and/or fail to attract customers, it could have a material adverse effect on our business, results of operations and financial condition.

Additionally, an increase in the number of aircraft in the freight market could cause Yields and rates to fall and/or could negatively affect our customer base. If either circumstance were to occur, our business, results of operations and financial condition could be materially and adversely affected.

We are subject to extensive governmental regulations and failure to comply with these regulations in the U.S. and abroad, or the adoption of any new laws, policies or regulations or changes to such regulations, may have an adverse effect on our business.

Our operations and our customers' operations are subject to complex aviation and transportation laws and regulations, including Title 49 of the U.S. Code, under which the DOT and the FAA exercise regulatory authority over air carriers. In addition, our business activities and our customers' business activities fall within the jurisdiction of various other federal, state, local and foreign authorities, including the U.S. Department of Defense, the TSA, U.S. Customs and Border Protection, the U.S. Treasury Department's Office of Foreign Assets Control and the U.S. EPA. In addition, other countries in which we operate have similar regulatory regimes to which we are subjected. These laws and regulations may require us to maintain and comply with the terms of a wide variety of certificates, permits, licenses, noise abatement standards, maintenance and other requirements and our failure to do so could result in substantial fines or other sanctions. These U.S. and foreign aviation regulatory agencies have the authority to modify, amend, suspend or revoke the authority and licenses issued to us for failure to comply with provisions of law or applicable regulations and may impose civil or criminal penalties for violations of applicable rules and regulations. Such fines or sanctions, if imposed, could have a material adverse effect on our mode of conducting business, results of operations and financial condition. In addition, U.S. and foreign governmental authorities may adopt, amend or interpret accounting standards, tax laws, regulations or treaties that could require us to take additional and potentially costly compliance steps or result in the grounding of some of our aircraft, which could increase our operating costs or result in a loss of revenues.

International aviation is increasingly subject to requirements imposed or proposed by foreign governments. This is especially true in the areas of transportation security, aircraft noise and emissions control, and greenhouse gas emissions. These may be duplicative of, or incompatible with U.S. government requirements, resulting in increased compliance efforts and expense.

Foreign governments also place temporal and other restrictions on the ability of their own airlines to use aircraft operated by other airlines. For example, the European Aviation Safety Agency ("EASA") requires that the aircraft capacity secured from and operated by non-EU airlines meet internationally set standards and additional EASA requirements. These and other similar regulatory developments could have a material adverse effect on our business, results of operations and financial condition.

Initiatives to address global climate change may adversely affect our business and increase our costs.

To address climate change, governments continue to pursue various means to reduce aviation-related greenhouse gas emissions. Compliance with these or other measures that are ultimately adopted could result in substantial costs for us. For example, in October 2013, the ICAO reached a nonbinding agreement to develop global market-based measures to assist in achieving carbon-neutral growth from 2020 onward. In October 2016, the ICAO approved the CORSIA, which is designed to offset any annual increases in total carbon emissions from international civil aviation above a baseline level determined by the average of 2019 and 2020 emissions. Although various details regarding the implementation of CORSIA still need to be finalized, a pilot phase will run from 2021 to 2023 and, starting in 2019, the airlines of participating countries will begin monitoring and reporting fuel burn during international flights. As a result, for each year starting in 2021, covered airlines may need to purchase allowances to offset their assigned share of emissions overages.

Additionally, the EU continues to pursue a parallel track to address climate change through the EU ETS. Following the end of every year, to the extent the ETS applies, each airline must tender the number of allowances corresponding to carbon emissions generated by its covered flight activity during the year. If the airline's flight activity during the year has produced carbon emissions exceeding the number of carbon emissions allowances that it has been awarded, the airline must acquire additional allowances from other airlines in the open market. In recognition of ICAO's recent adoption of CORSIA, the ETS was suspended with respect to international aviation

through December 31, 2016; however, measures continue to remain applicable to intra-EU aviation. Although certain EU political leaders have stated that the EU is likely to extend this suspension beyond December 31, 2016, we cannot be certain whether or for how long the EU will do so.

In the U.S., various constituencies have continued to advocate for controls on greenhouse gas emissions. Previously, both houses of the U.S. Congress passed legislation to impose a carbon-related tax on fuel sold to airlines and other entities; however, a bill has not yet been signed into law. On August 15, 2016, the EPA issued a final rule finding that greenhouse gas emissions from aircraft cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare. This finding could lead to EPA regulation of greenhouse gas emissions from aircraft.

It is possible that these or similar climate change measures will be imposed in a manner adversely affecting airlines. The costs of complying with potential new environmental laws or regulations could have a material adverse effect on our business, results of operations and financial condition.

The airline industry is subject to numerous security regulations and rules that increase costs. Imposition of more stringent regulations and rules than those that currently exist could materially increase our costs.

The TSA has increased security requirements in response to increased levels of terrorist activity, and has adopted comprehensive new regulations governing air cargo transportation, including all-cargo services, in such areas as cargo screening and security clearances for individuals with access to cargo. Additional measures, including a requirement to screen cargo, have been proposed, which, if adopted, may have an adverse impact on our ability to efficiently process cargo and would increase our costs and those of our customers. The cost of compliance with increasingly stringent regulations could have a material adverse effect on our business, results of operations and financial condition.

Our future operations might be constrained if FAA flight and duty time rules are expanded to apply to all-cargo operations.

In December 2011, the FAA adopted a rule to impose new flight and duty time requirements with the stated goal of reducing pilot fatigue. The rule took effect on January 14, 2014 and applies to our passenger operations but not to our all-cargo operations. Should the FAA decide either on its own initiative or pursuant to Congressional directive to change the final rule to include all-cargo operations, it could result in a material increase in our crew costs. It could also have a material adverse impact on our business, results of operations and financial condition by limiting crew scheduling flexibility and increasing operating costs, especially with respect to long-range flights.

RISKS RELATED TO OUR LEASE AND DEBT OBLIGATIONS

Our substantial lease and debt obligations, including aircraft leases and other obligations, could impair our financial condition and adversely affect our ability to raise additional capital to fund our aircraft purchases and conversions, operations or other capital requirements, all of which could limit our financial resources and ability to compete, and may make us vulnerable to adverse economic events.

As of December 31, 2016, we had total debt obligations of approximately \$1.9 billion and total aircraft operating leases and other lease obligations of \$0.9 billion. These obligations have increased and are expected to increase further as we enter into financing arrangements for 767-300 aircraft purchases and passenger-to-freighter conversions, GENx engine upgrades and other capital requirements. We cannot provide assurance that we will be able to obtain such financing arrangements or on terms attractive to us. Our outstanding financial obligations could have negative consequences, including:

- making it more difficult to satisfy our debt and lease obligations;
- requiring us to dedicate a substantial portion of our cash flows from operations for interest, principal and lease payments and reducing our ability to use our cash flows to fund working capital and other general corporate requirements;

- increasing our vulnerability to general adverse economic and industry conditions; and
- limiting our flexibility in planning for, or reacting to, changes in our business and in our industry.

Our ability to service our debt and meet our lease and other obligations as they come due is dependent on our future financial and operating performance. This performance is subject to various factors, including factors beyond our control, such as changes in global and regional economic conditions, changes in our industry, changes in interest or currency exchange rates, the price and availability of aircraft fuel and other costs, including labor and insurance. Accordingly, we cannot provide assurance that we will be able to meet our debt service, lease and other obligations as they become due and our business, results of operations and financial condition could be adversely affected under these circumstances.

Certain of our debt obligations contain a number of restrictive covenants. In addition, many of our debt and lease obligations have cross-default and cross-acceleration provisions.

Restrictive covenants in certain of our debt and lease obligations, under certain circumstances, could impact our ability to:

- borrow under certain financing arrangements;
- consolidate or merge with or into other companies or sell substantially all our assets;
- expand significantly into lines of businesses beyond existing business activities or those which are cargo-related and/or aviation-related and similar businesses; and/or
- modify the terms of debt or lease financing arrangements.

In certain circumstances, a covenant default under one of our debt instruments could cause us to be in default of other obligations as well. Any unremedied defaults could lead to an acceleration of the amounts owed and potentially could cause us to lose possession or control of certain aircraft, either of which could have a material adverse effect on our business, results of operations and financial condition.

We may not have the ability to raise the funds necessary to settle conversions of our convertible notes or to repurchase the convertible notes upon either a fundamental change or a make-whole fundamental change, and our future debt may contain limitations on our ability to pay cash upon conversion or repurchase of the convertible notes.

We issued convertible senior notes in June 2015 (the “Convertible Notes”), which contain conditional conversion features that allow the holders of the Convertible Notes the option to convert if certain trading conditions are met or upon the occurrence of specified corporate events. In the event a conditional conversion feature of the Convertible Notes is triggered, holders of Convertible Notes will be entitled to convert the Convertible Notes at any time during specified periods at their option. If one or more holders elect to convert their Convertible Notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our common stock, we would be required to settle a portion or all of our conversion obligation through the payment of cash, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their Convertible Notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the Convertible Notes as current on the balance sheet instead of as noncurrent, which could result in a material reduction of our net working capital.

The holders of the Convertible Notes also may require us to repurchase their Convertible Notes upon the occurrence of a fundamental change (as defined in the indenture governing the Convertible Notes) at a price equal to 100% of the principal amount of the Convertible Notes to be repurchased, plus accrued and unpaid interest, if any. However, we may not have enough available cash to fund these obligations or be able to obtain financing on favorable terms, or at all, at the time we are required to make repurchases of Convertible Notes surrendered or Convertible Notes being converted. Our failure to repurchase Convertible Notes at a time when

the repurchase is required by the indenture or to pay any cash payable on future conversions of the Convertible Notes as required by the indenture would constitute a default under the indenture, which could result in acceleration of the principal amount of the notes and additional funding obligations by us.

In addition, if a make-whole fundamental change (as defined in the indenture governing the Convertible Notes), including specified corporate transactions, occurs prior to the maturity date, under certain circumstances, it would increase the conversion rate. The increase in the conversion rate would be determined based on the date on which the specified corporate transaction becomes effective and the price paid (or deemed to be paid) per share of our common stock in such transaction, but in no event would increase to greater than 17.8922 shares of common stock per \$1,000 of principal, subject to adjustment in the same manner as the conversion rate. The increase in the conversion rate for Convertible Notes converted in connection with a make-whole fundamental change may result in us having to pay out additional cash in respect of the Convertible Notes upon conversion, or result in additional dilution to our shareholders if the conversion is settled, at our election, in shares of our common stock.

The Convertible Note hedge and warrant transactions may affect the value of our common stock.

In connection with the Convertible Notes offering, we entered into Convertible Note hedge transactions with option counterparties. The Convertible Note hedge transactions are expected generally to reduce the potential dilution to our common stock upon any conversion of notes and/or offset any cash payments we are required to make in excess of the principal amount of converted notes, as the case may be. We also entered into warrant transactions with the option counterparties. However, the warrant transactions could separately have a dilutive effect on our earnings per share to the extent that the market price per share of our common stock exceeds the applicable strike price of the warrants. Accordingly, when the Convertible Note hedge transactions and the warrant transactions are taken together, the extent to which the Convertible Note hedge transactions reduce the potential dilution to our common stock (or the cash payments in excess of the principal amount of the notes) upon conversion of the notes is effectively capped by the warrant transaction at the strike price of the warrant.

The option counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding various hedging transactions, including (without limitation) derivatives, with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions prior to the maturity of the notes (and are likely to do so during any observation period related to a conversion of notes). This activity could cause or avoid an increase or a decrease in the market price of our common stock.

RISKS RELATED TO OWNERSHIP OF OUR COMMON STOCK

U.S. citizenship requirements may limit common stock voting rights.

Under U.S. federal law and DOT requirements, we must be owned and actually controlled by “citizens of the United States,” a statutorily defined term requiring, among other things, that not more than 25% of our issued and outstanding voting stock be owned and controlled, directly or indirectly, by non-U.S. citizens. The DOT periodically conducts airline citizenship reviews and, if it finds that this requirement is not met, may require adjustment of the voting rights of the airline’s issued shares.

As one means to effect compliance, our certificate of incorporation and by-laws provide that the failure of non-U.S. citizens to register their shares on a separate stock record, which we refer to as the “Foreign Stock Record,” results in a suspension of their voting rights. Our by-laws further limit the number of shares of our capital stock that may be registered on the Foreign Stock Record to 25% of our issued and outstanding shares. Registration on the Foreign Stock Record is made in chronological order based on the date we receive a written request for registration. As a result, if a non-U.S. citizen acquires shares of our common stock and does not or is not able to register those shares on our Foreign Stock Record, they may lose their ability to vote those shares.

Provisions in our restated certificate of incorporation and by-laws and Delaware law, and our issuance of warrants to Amazon, might discourage, delay or prevent a change in control of the Company and, therefore, depress the trading price of our common stock.

Provisions of our restated certificate of incorporation, by-laws and Delaware law may render more difficult or discourage any attempt to acquire our company, even if such acquisition may be believed to be favorable to the interests of our stockholders. These provisions may also discourage bids for our common stock at a premium over market price or adversely affect the market price of our common stock. In addition, the vesting of warrants issued by us to Amazon will generally, subject to certain exceptions, be accelerated upon a change of control of our company, which may discourage attempts to acquire our company.

Our common stock share price is subject to fluctuations in value.

The trading price of our common shares is subject to material fluctuations in response to a variety of factors, including quarterly variations in our operating results, conditions of the airfreight market and global economic conditions or other events and factors that are beyond our control.

In the past, following periods of significant volatility in the overall market and in the market price of a company's securities, securities class action litigation has been instituted against these companies in some circumstances. If this type of litigation were instituted against us following a period of volatility in the market price for our common stock, it could result in substantial costs and a diversion of our management's attention and resources, which could have a material adverse effect on our business, results of operations and financial condition.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Aircraft

The following tables provide information about AAWW's aircraft and customer-provided aircraft as of December 31, 2016:

AAWW Aircraft

The following table summarizes AAWW's aircraft as of December 31, 2016:

<u>Aircraft Type</u>	<u>Configuration</u>	<u>Owned*</u>	<u>Leased**</u>	<u>Total</u>	<u>Average Age Years</u>
ACMI and Charter Segments					
747-8F	Freighter	10	—	10	4.1
747-400	Freighter	8	13	21	16.9
747-400BCF	Converted Freighter	1	1	2	24.7
747-400	Passenger	2	—	2	25.7
767-300ER	Passenger	4	1	5	22.7
Total		25	15	40	15.3
Dry Leasing Segment					
777-200LRF	Freighter	6	—	6	6.1
767-300	Converted Freighter***	12	—	12	21.0
757-200	Freighter	1	—	1	27.4
737-800	Passenger	1	—	1	8.9
737-300	Freighter	1	—	1	24.1
Total		21	—	21	16.6
Total Fleet		46	15	61	15.7

* See Note 9 to our Financial Statements for a description of our financing facilities.

** See Note 10 to our Financial Statements for a description of our lease obligations.

***Some aircraft are undergoing passenger-to-freighter conversion as of December 31, 2016.

Lease expirations for our operating leased aircraft included in the above tables range from July 2017 to February 2025.

Customer-provided Aircraft for CMI Service

The following table summarizes customer-provided aircraft as of December 31, 2016:

<u>Aircraft Type</u>	<u>Configuration</u>	<u>Provided by</u>	<u>Total</u>
777-200	Freighter	DHL	5
747-400	Freighter	NCA*	1
747-400	Dreamlifter	Boeing**	4
747-400	Passenger	Sonangol***	2
767-300	Freighter	DHL	2
767-200	Freighter	DHL	9
767-200	Passenger	MLW****	1
737-400	Freighter	DHL	5
Total			29

- * Aircraft owned by Nippon Cargo Airlines Co., Ltd. (“NCA”)
- ** Aircraft owned by The Boeing Company (“Boeing”)
- *** Aircraft owned by the Sonangol Group, the multinational energy company of Angola.
- **** Aircraft owned by MLW Air, LLC (“MLW Air”)

Ground Facilities

Our principal office is located in Purchase, New York, where we lease approximately 120,000 square feet under a long-term lease, for which the current term expires in 2022 with certain renewal options. This office includes both operational and administrative support functions, including flight and crew operations, maintenance and engineering, material management, human resources, legal, sales and marketing, finance and information technology. We also lease approximately 37,000 square feet of office space in Florence, Kentucky under a long-term lease, for which the current term expires in 2021. This office includes operational support functions, primarily for Southern Air, including flight and crew operations, maintenance and engineering, and material management. In addition, we lease a variety of smaller offices and ramp space at various airport and regional locations generally on a short-term basis.

ITEM 3. LEGAL PROCEEDINGS

The information required in response to this Item is set forth in Note 14 to our Financial Statements, and such information is incorporated herein by reference. Such description contains all of the information required with respect hereto.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Since 2006, our common stock has been traded on The NASDAQ Global Select Market under the symbol “AAWW”.

Market Price of Common Stock

The following table sets forth the closing high and low sales prices per share of our common stock for the periods indicated.

	<u>High</u>	<u>Low</u>
2016 Quarter Ended		
December 31	\$53.45	\$41.15
September 30	\$43.56	\$34.62
June 30	\$48.66	\$38.32
March 31	\$42.96	\$33.37
2015 Quarter Ended		
December 31	\$43.77	\$34.98
September 30	\$54.88	\$34.22
June 30	\$59.42	\$42.26
March 31	\$49.97	\$43.02

The last reported sale price of our common stock on The NASDAQ National Market on February 10, 2017 was \$51.90 per share. As of February 10, 2017, there were approximately 25.1 million shares of our common stock issued and outstanding, and 45 holders of record of our common stock.

See Note 17 to our Financial Statements for a discussion of our stock repurchase program.

Equity Compensation Plans

See Item 12, “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters” for information regarding our equity compensation plans as of December 31, 2016.

Dividends

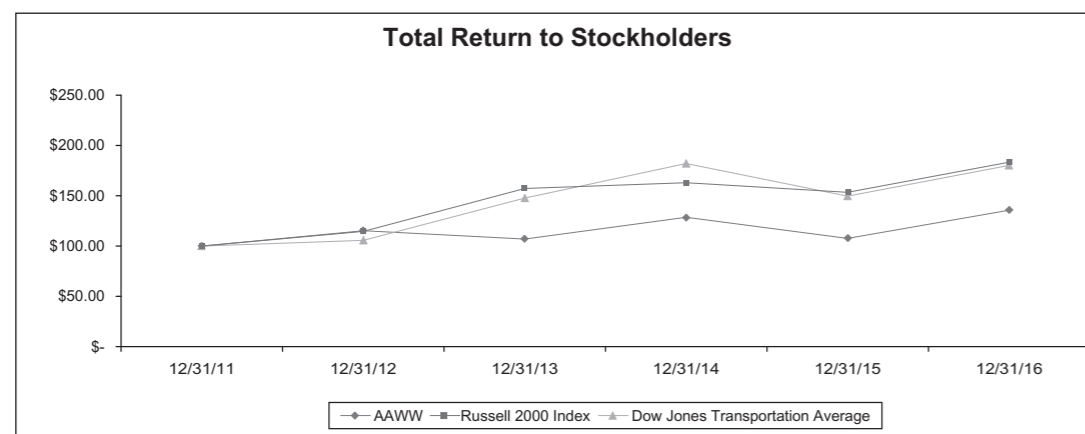
We have never paid a cash dividend with respect to our common stock and we do not anticipate paying a dividend in the foreseeable future. Moreover, certain of our financing arrangements contain financial covenants that could limit our ability to pay cash dividends.

Foreign Ownership Restrictions

Under our by-laws, U.S. federal law and DOT regulations, we must be controlled by U.S. citizens. In this regard, our President and at least two-thirds of our board of directors and officers must be U.S. citizens and not more than 25% of our outstanding voting common stock may be held by non-U.S. citizens. We believe that, during the period covered by this Report, we were in compliance with these requirements.

Performance Graph

The following graph compares the performance of AAWW common stock to the Russell 2000 Index and the Dow Jones Transportation Average for the period beginning December 31, 2011 and ending on December 31, 2016. The comparison assumes \$100 invested in each of our common stock, the Russell 2000 Index and the Dow Jones Transportation Average and reinvestment of all dividends.



Total Return between 12/31/11 and 12/31/16

Cumulative Return	12/31/11	12/31/12	12/31/13	12/31/14	12/31/15	12/31/16
AAWW	\$100.00	\$115.33	\$107.08	\$128.29	\$107.57	\$135.70
Russell 2000 Index	\$100.00	\$114.63	\$157.05	\$162.60	\$153.31	\$183.17
Dow Jones Transportation Average	\$100.00	\$105.72	\$147.43	\$182.08	\$149.57	\$180.17

ITEM 6. SELECTED FINANCIAL DATA

The selected statements of operations data for the years ended December 31, 2016, 2015 and 2014 and the selected balance sheet data as of December 31, 2016 and 2015 have been derived from our audited Financial Statements included elsewhere in this Report. The selected balance sheet data as of December 31, 2014, 2013 and 2012, and selected statements of operations data for the years ended December 31, 2013 and 2012 have been derived from our audited Financial Statements not included in this Report.

In the following table, all amounts are in thousands, except for per share data.

	2016	2015	2014	2013	2012
Statement of Operations Data:					
Total operating revenues	\$1,839,627	\$1,822,659	\$1,799,198	\$1,656,900	\$1,646,032
Total operating expenses	1,671,316	1,699,154	1,623,226	1,470,110	1,419,541
Operating income	168,311	123,505	175,972	186,790	226,491
Income from continuing operations, net of taxes	42,625	7,286	102,227	93,989	129,714
Loss from discontinued operations, net of taxes (a)	(1,109)	—	—	—	—
Net income	41,516	7,286	102,227	93,989	129,714
Less: Net income (loss) attributable to noncontrolling interests	—	—	(4,530)	152	(213)
Net income attributable to Common Stockholders	\$ 41,516	\$ 7,286	\$ 106,757	\$ 93,837	\$ 129,927
Earnings per share from continuing operations:					
Basic	\$ 1.72	\$ 0.29	\$ 4.08	\$ 3.68	\$ 4.91
Diluted	\$ 1.70	\$ 0.29	\$ 4.07	\$ 3.67	\$ 4.89
Loss per share from discontinued operations:					
Basic	\$ (0.04)	\$ —	\$ —	\$ —	\$ —
Diluted	\$ (0.04)	\$ —	\$ —	\$ —	\$ —
Earnings per share:					
Basic	\$ 1.67	\$ 0.29	\$ 4.08	\$ 3.68	\$ 4.91
Diluted	\$ 1.65	\$ 0.29	\$ 4.07	\$ 3.67	\$ 4.89
Balance Sheet Data:					
Total assets	\$4,247,379	\$4,164,403	\$4,007,277	\$3,617,371	\$3,086,239
Long-term debt (less current portion)	\$1,666,663	\$1,739,496	\$1,736,747	\$1,499,607	\$1,115,274
Total equity	\$1,517,338	\$1,454,183	\$1,417,795	\$1,322,125	\$1,288,104

(a) See Note 4 to our Financial Statements for the presentation of Florida West International Airways, Inc. as a discontinued operation.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with the Financial Statements included in Item 8 of this report.

Business Overview

We are a leading global provider of outsourced aircraft and aviation operating services. We operate the world's largest fleet of 747 freighters and provide customers a broad array of 747, 777, 767, 757 and 737 aircraft

for domestic, regional and international cargo and passenger applications. We provide unique value to our customers by giving them access to highly reliable new production freighters that deliver the lowest unit cost in the marketplace combined with outsourced aircraft operating services that we believe lead the industry in terms of quality and global scale. Our customers include express delivery providers, e-commerce retailers, airlines, freight forwarders, the U.S. military and charter brokers. We provide global services with operations in Africa, Asia, Australia, Europe, the Middle East, North America and South America.

We believe that the following competitive strengths will allow us to capitalize on opportunities that exist in the global airfreight industry:

Market leader with leading-edge technology and differentiated, value-creating solutions

The 747-8F and 777-200LRF aircraft are two of the most efficient long-haul wide-body commercial freighters available and we are currently the only operator offering these aircraft under ACMI and CMI agreements. Our operating model deploys our aircraft to drive maximum utilization and value from our fleet. The scale of our fleet enables us to have aircraft available globally to respond to our customers' needs, both on a planned and ad hoc basis. We believe this provides us with a commercial advantage over our competitors that operate smaller and less flexible fleets.

Our Dry Leasing business is primarily focused on a portfolio of six 777-200LRF aircraft and our growing fleet of 767-300 freighter aircraft for regional and domestic applications. These aircraft are dry leased to customers on a long-term basis, which further diversifies our business mix and enhances our predictable, long-term revenue and earnings streams.

Stable base of contractual revenue and reduced operational risk

Our focus on providing long-term contracted aircraft and operating solutions to customers stabilizes our revenues and reduces our operational risk. ACMI and CMI contracts with customers generally range from two to seven years, although some contracts have shorter or longer durations. Dry Leasing contracts with customers generally range from five to twelve years. Under ACMI, CMI and Dry Leasing, our customers assume fuel, demand and price risk resulting in reduced operational risk for AAWW. ACMI, CMI and Dry Leasing contracts typically provide us with a guaranteed minimum level of revenue and target level of profitability.

Focus on asset optimization

By managing the largest fleet of outsourced freighter aircraft, we achieve significant economies of scale in areas such as aircraft maintenance, crew efficiency, crew training, inventory management and purchasing.

Our mix of aircraft is closely aligned with our customer needs. By providing the broadest array of 747, 777, 767, 757 and 737 aircraft for domestic, regional and international applications, we believe that we are well-suited to meet the current and anticipated requirements of our customers.

We continually evaluate our fleet to ensure that we offer the most efficient and effective mix of aircraft to meet our customers' needs. Our service model is unique in that we offer a portfolio of operating solutions that complement our freighter aircraft businesses. We believe this allows us to improve the returns we generate from our asset base by allowing us to flexibly redeploy aircraft to meet changing market conditions, ensuring the maximum utilization of our fleet. Our Charter services complement our ACMI services by allowing us to increase aircraft utilization during open time and to react to changes in demand and Yield in these segments. We have employees situated around the globe who closely monitor demand for commercial charter services in each region, enabling us to redeploy available aircraft quickly. We also endeavor to manage our portfolio to stagger contract terms, which mitigates our remarketing risks and aircraft down time.

Long-term strategic customer relationships and unique innovative service offerings

We combine the global scope and scale of our efficient aircraft fleet with high-quality, cost-effective operations and premium customer service to provide unique, fully integrated and reliable solutions for our customers. We believe this approach results in customers that are motivated to seek long-term relationships with us. This has historically allowed us to command higher prices than our competitors in several key areas. These long-term relationships help us to build resilience into our business model.

Our customers have access to our innovative solutions, such as inter-operable crews, flight scheduling, fuel-efficiency planning, and maintenance spare coverage, which, we believe, set us apart from other participants in the outsourced aircraft and aviation operating services market. Furthermore, we have access to valuable operating rights to restricted markets such as Brazil, Japan and China. We believe our freighter services allow our customers to effectively expand their capacity and operate dedicated freighter aircraft without simultaneously taking on exposure to fluctuations in the value of owned aircraft and, in the case of our ACMI and CMI contracts, long-term expenses relating to crews and maintenance. Dedicated freighter aircraft enable schedules to be driven by cargo rather than passenger demand (for those customers that typically handle portions of their cargo operations via belly capacity on passenger aircraft), which we believe allows our customers to drive higher contribution from cargo operations.

We are focused on providing safe, secure and reliable services. Atlas, Polar and Southern Air all have successfully completed the International Air Transport Association's Operational Safety Audit (IOSA), a globally recognized safety and quality standard.

We provide outsourced aircraft and aviation services to some of the world's premier express delivery providers, e-commerce retailers, airlines and freight forwarders. We will take advantage of opportunities to maintain and expand our relationships with our existing customers, while seeking new customers and new geographic markets.

During 2016, we significantly expanded our CMI and Dry Leasing services with long-term contracts with DHL and Amazon. In April 2016, we expanded our relationship with DHL through the acquisition of Southern Air which provided us with immediate entry into the 777 and 737 aircraft operating platforms, with ten aircraft and the potential for developing additional business with existing and new customers. In May 2016, we entered into agreements with Amazon, which involve, among other things, the lease and operation of 20 Boeing 767-300 freighter aircraft. The first two aircraft were placed in service in August 2016 and February 2017, while the remainder are expected to be placed in service by the end of 2018.

Experienced management team

Our management team has extensive operating and leadership experience in the airfreight, airline, aircraft leasing and logistics industries at companies such as United Airlines, US Airways, Lufthansa Cargo, GE Capital Aviation Services, Air Canada, Ansett Worldwide Aviation Services, Canadian Airlines, Cathay Pacific, Continental Airlines, ICF International, Seabury Group LLC, ASTAR Air Cargo and KLM Cargo, as well as the United States Army, Navy, Air Force and Federal Air Marshal Service. Our management team is led by William J. Flynn, who has over 40 years of experience in freight and transportation and has held senior management positions with several transportation companies. Prior to joining AAWW ten years ago, Mr. Flynn was President and CEO of GeoLogistics, a global transportation and logistics enterprise.

Business Strategy

Our strategy includes the following:

Focus on securing long-term customer contracts

We will continue to focus on securing long-term contracts with customers, which provide us with stable revenue streams and predictable margins. In addition, these agreements limit our direct exposure to fuel and other costs and mitigate the risk of fluctuations in both Yield and demand in the airfreight business, while also improving the overall utilization of our fleet.

Aggressively manage our fleet with a focus on leading-edge aircraft

We continue to actively manage our fleet of leading-edge wide-body freighter aircraft to meet customer demands. Our 747-8F and 777-200LRF freighter aircraft are primarily utilized in our ACMI business, while our 747-400s are utilized in our ACMI and Charter business. We aggressively manage our fleet to ensure that we provide our customers with the most efficient aircraft to meet their needs.

Our Dry Leasing business is primarily focused on a portfolio of six modern, efficient 777-200LRF aircraft and our growing fleet of 767-300 freighter aircraft for regional and domestic applications. We will continue to explore opportunities to invest in additional aircraft, such as the 20 767-300 freighter aircraft committed to Amazon.

Drive significant and ongoing productivity improvements

We continue to enhance our organization through a cost saving and productivity enhancing initiative called “Continuous Improvement.” We created a separate department to drive the process and to involve all areas of the organization in the effort to reexamine, redesign and improve the way we do business.

Selectively pursue and evaluate future acquisitions and alliances

From time to time, we explore business combinations, such as our acquisition of Southern Air, and alliances with e-commerce providers, such as our agreements with Amazon, other cargo airlines, services providers, dry leasing and other companies to enhance our competitive position, geographic reach and service portfolio.

Appropriately managing capital allocation and returning capital to shareholders

Our commitment to creating, enhancing and returning value to our shareholders reflects a disciplined and balanced capital allocation strategy. Our focus is on maintaining a strong balance sheet, investing in modern efficient assets, and returning capital to shareholders.

Business Developments

Our ACMI results for 2016, compared with 2015, were impacted by the following events:

- In March 2015, we began ACMI flying one additional 747-8F aircraft for DHL.
- In January, February, March and April of 2015, we began CMI flying four additional 767-200 freighters owned by DHL in its North American network.
- In July 2015, we began ACMI flying one additional 747-400F aircraft for DHL, increasing the number of 747 freighter aircraft in ACMI service for DHL to thirteen.
- In December 2015 and February 2016, we began CMI flying for DHL two 767-300 freighter aircraft, Dry Leased from Titan, in DHL’s North American network, increasing the number of freighter aircraft in CMI service for DHL to twelve.

- In April 2016, we acquired Southern Air, which currently operates five 777-200LRF and five 737-400F aircraft under CMI agreements for DHL.
- In August 2016, we began CMI flying for Amazon the first of 20 Boeing 767-300 freighter aircraft Dry Leased from Titan. In February 2017, we placed the second 767-300 freighter aircraft into service. The remaining aircraft are expected to be placed in service by the end of 2018.

In November 2016, we entered into an agreement with Nippon Cargo Airlines to operate a 747-400 freighter aircraft on its transpacific routes. We began flying during the first quarter of 2017.

In August 2016, we entered into a long-term ACMI agreement with FedEx to provide five 747-400 freighter aircraft for peak flying seasons beginning in 2017.

In February 2017, we entered into an agreement with Asiana Cargo to provide a 747-400 freighter aircraft for its transpacific routes. We began flying during the first quarter of 2017.

Charter results for 2016 were impacted, compared with 2015, when Yields benefited from the U.S. West Coast port disruption. This impact was partially offset by an increase in Block Hours during 2016, primarily reflecting increased cargo and passenger demand from the AMC.

In December 2015 and February 2016, we began Dry Leasing two 767-300 converted freighter aircraft to DHL on a long-term basis. In March 2016, we also Dry Leased a 737-800 passenger aircraft on a long-term basis to a customer following its scheduled return. In August 2016 and February 2017, we began Dry Leasing two 767-300 converted freighter aircraft to Amazon on a long-term basis.

Results of Operations

The following discussion should be read in conjunction with our Financial Statements and other financial information appearing and referred to elsewhere in this report.

Years Ended December 31, 2016 and 2015

Operating Statistics

The following tables compare our Segment Operating Fleet (average aircraft equivalents during the period) and total Block Hours operated:

	2016	2015	Inc/(Dec)
Segment Operating Fleet			
ACMI*			
747-8F Cargo	8.1	8.9	(0.8)
747-400 Cargo	13.1	12.6	0.5
747-400 Dreamlifter	2.8	3.0	(0.2)
777-200 Cargo	3.7	—	3.7
767-300 Cargo	4.3	2.1	2.2
767-200 Cargo	9.0	8.3	0.7
737-400 Cargo	3.7	—	3.7
747-400 Passenger	1.0	1.2	(0.2)
767-200 Passenger	1.0	1.0	—
Total	46.7	37.1	9.6
Charter			
747-8F Cargo	1.9	0.2	1.7
747-400 Cargo	9.6	9.4	0.2
747-400 Passenger	2.0	1.8	0.2
767-300 Passenger	3.6	2.9	0.7
Total	17.1	14.3	2.8
Dry Leasing			
777-200 Cargo	6.0	6.0	—
767-300 Cargo	2.3	—	2.3
757-200 Cargo	1.0	1.0	—
737-300 Cargo	1.0	1.0	—
737-800 Passenger	1.0	1.2	(0.2)
Total	11.3	9.2	2.1
Less: Aircraft Dry Leased to CMI customers	(2.3)	—	(2.3)
Total Operating Average Aircraft Equivalents	<u>72.8</u>	<u>60.6</u>	<u>12.2</u>
Out-of-service	—	0.4	(0.4)

* ACMI average fleet excludes spare aircraft provided by CMI customers.

	2016	2015	Inc/(Dec)	% Change
Block Hours				
Total Block Hours**	210,444	178,060	32,384	18.2%

** Includes ACMI, Charter and other Block Hours.

Operating Revenue

The following table compares our Operating Revenue (in thousands):

	2016	2015	Inc/(Dec)	% Change
Operating Revenue				
ACMI	\$ 834,997	\$ 791,442	\$ 43,555	5.5%
Charter	881,991	908,753	(26,762)	(2.9)%
Dry Leasing	105,795	107,218	(1,423)	(1.3)%
Customer incentive asset amortization	(537)	—	(537)	NM
Other	17,381	15,246	2,135	14.0%
Total Operating Revenue	<u>\$1,839,627</u>	<u>\$1,822,659</u>	<u>\$ 16,968</u>	<u>0.9%</u>

NM represents year-over-year changes that are not meaningful.

ACMI

	2016	2015	Inc/(Dec)	% Change
ACMI Block Hours	151,919	126,206	25,713	20.4%
ACMI Revenue Per Block Hour	\$ 5,496	\$ 6,271	\$ (775)	(12.4)%

ACMI revenue increased \$43.6 million, or 5.5%, primarily due to increased flying, partially offset by reduced Revenue per Block Hour. The increase in Block Hours reflects the impact from the Southern Air Acquisition and increased 767 CMI flying, partially offset by the temporary redeployment of 747-8F aircraft to the Charter segment. The decrease in Revenue per Block Hour primarily reflects the 777-200 and 737-400 CMI flying from the Southern Air Acquisition, increased 767 CMI flying and the temporary redeployment of 747-8F aircraft to Charter in 2016.

Charter

	2016	2015	Inc/(Dec)	% Change
Charter Block Hours:				
Cargo	40,376	35,463	4,913	13.9%
Passenger	16,403	14,776	1,627	11.0%
Total	<u>56,779</u>	<u>50,239</u>	<u>6,540</u>	<u>13.0%</u>
Charter Revenue Per Block Hour:				
Cargo	\$14,861	\$17,655	\$(2,794)	(15.8)%
Passenger	\$17,191	\$19,130	\$(1,939)	(10.1)%
Total	<u>\$15,534</u>	<u>\$18,089</u>	<u>\$(2,555)</u>	<u>(14.1)%</u>

Charter revenue decreased \$26.8 million, or 2.9%, primarily due to a decrease in Revenue per Block Hour, partially offset by an increase in Block Hours. The decrease in Revenue per Block Hour was primarily driven by a reduction in fuel prices in 2016 and the impact of higher rates resulting from the U.S. West Coast port disruption in 2015, partially offset by the temporary redeployment of 747-8F aircraft from the ACMI segment. The increase in Charter Block Hours was primarily driven by an increase in cargo and passenger demand from the AMC.

Dry Leasing

Dry Leasing revenue decreased \$1.4 million, or 1.3%, primarily due to lower revenue from maintenance payments received in 2016 related to the scheduled return of aircraft. Revenue from maintenance payments is based on the maintenance condition of the aircraft at the end of the lease. Partially offsetting this decrease was revenue from the placement of two 767-300 converted freighter aircraft with DHL in December 2015 and February 2016, and one 767-300 converted freighter aircraft with Amazon in August 2016.

Operating Expenses

The following table compares our Operating Expenses (in thousands):

	2016	2015	Inc/(Dec)	% Change
Operating Expenses				
Salaries, wages and benefits	\$ 424,332	\$ 351,372	\$ 72,960	20.8%
Aircraft fuel	275,113	333,390	(58,277)	(17.5)%
Maintenance, materials and repairs	206,106	202,337	3,769	1.9%
Depreciation and amortization	148,876	128,740	20,136	15.6%
Aircraft rent	146,110	145,031	1,079	0.7%
Travel	127,748	102,755	24,993	24.3%
Passenger and ground handling services	89,657	83,185	6,472	7.8%
Navigation fees, landing fees and other rent	78,441	99,345	(20,904)	(21.0)%
Loss (gain) on disposal of aircraft	(11)	1,538	(1,549)	NM
Special charge	10,140	17,388	(7,248)	(41.7)%
Transaction-related expenses	22,071	—	22,071	NM
Other	142,733	234,073	(91,340)	(39.0)%
Total Operating Expenses	\$1,671,316	\$1,699,154		

Salaries, wages and benefits increased \$73.0 million, or 20.8%, primarily driven by \$23.5 million of expense for a change in control, as defined under certain benefit plans, related to the Amazon transaction (see Note 7 to our Financial Statements), the impact of the Southern Air Acquisition, increased flying and increased crewmember costs related to Amazon and other fleet growth initiatives.

Aircraft fuel decreased \$58.3 million, or 17.5%, primarily due to fuel price decreases, partially offset by increased fuel consumption. Fuel consumption increased primarily reflecting the increase in Charter Block Hours operated. We do not incur fuel expense in our ACMI or Dry Leasing businesses as the cost of fuel is borne by the customer. Average fuel cost per gallon and fuel consumption for 2016 and 2015 were:

	2016	2015	Inc/(Dec)	% Change
Average fuel cost per gallon	\$ 1.68	\$ 2.27	\$ (0.59)	(26.0)%
Fuel gallons consumed (000s)	163,862	147,081	16,781	11.4%

Maintenance, materials and repairs increased by \$3.8 million, or 1.9%, primarily reflecting increases of \$7.1 million for 777-200 aircraft, \$5.1 million for 767 aircraft and \$2.3 million for 747-8F aircraft, partially offset by a decrease of \$12.6 million for 747-400 aircraft. Heavy Maintenance expense on 747-400 aircraft decreased \$10.2 million primarily due to a decrease in the number of engine overhauls, partially offset by an increase in the number of C Checks. Heavy Maintenance expense on 747-8F aircraft decreased \$5.9 million primarily due to a decrease in unscheduled engine repairs. Line Maintenance increased by \$7.7 million on 747-8F aircraft, \$5.0 million on 767 aircraft and \$4.1 million on 747-400 aircraft due to increased flying and additional repairs performed. Line maintenance also increased \$4.6 million on 777-200 aircraft related to the Southern Air Acquisition. Non-heavy Maintenance on 747-400 aircraft decreased \$6.4 million as a result of fewer events. Heavy airframe maintenance checks and engine overhauls impacting Maintenance, materials and repairs for 2016 and 2015 were:

Heavy Maintenance Events	2016	2015	Inc/(Dec)
747-8F C Checks	4	4	—
747-400 C Checks	9	5	4
747-400 D Checks	4	4	—
767 C Checks	1	1	—
CF6-80 engine overhauls	3	10	(7)

Depreciation and amortization increased \$20.1 million, or 15.6%, primarily due to additional aircraft operating in 2016.

Travel increased \$25.0 million, or 24.3%, primarily due to the impact of the Southern Air Acquisition, increased flying and higher rates related to crewmember travel.

Passenger and ground handling services increased \$6.5 million, or 7.8%, primarily due to increased flying.

Navigation fees, landing fees and other rent decreased \$20.9 million, or 21.0%, primarily due to a reduction in purchased capacity from the subcontracting of certain Charter flights.

Special charge in 2016 represents a \$10.1 million impairment loss on engines held for sale (see Note 5 to our Financial Statements). We may sell additional flight equipment, which could result in additional charges in future periods. Special charge in 2015 resulted from an \$8.3 million impairment loss on engines held for sale and a \$7.7 million charge for the early termination of high-rate operating leases for two engines.

Transaction-related expenses in 2016 relate to the Southern Air Acquisition and Amazon transaction, which primarily include: certain compensation costs, including employee termination benefits; professional fees; and integration costs (see Notes 4 and 7 to our Financial Statements).

Other decreased \$91.3 million, or 39.0%, primarily due to the settlement of the U.S. class action litigation and related legal fees in 2015 (see Note 14 to our Financial Statements), partially offset by an accrual for legal matters and the Southern Air Acquisition in 2016.

Non-operating Expenses (Income)

The following table compares our Non-operating Expenses (Income) (in thousands):

	2016	2015	Inc/(Dec)	% Change
Non-operating Expenses (Income)				
Interest income	\$ (5,532)	\$ (12,554)	\$ (7,022)	(55.9)%
Interest expense	84,650	96,756	(12,106)	(12.5)%
Capitalized interest	(3,313)	(1,027)	2,286	NM
Loss on early extinguishment of debt	132	69,728	(69,596)	NM
Unrealized loss on financial instruments	2,888	—	(2,888)	NM
Gain on investments	—	(13,439)	(13,439)	NM
Other expense	70	1,261	(1,191)	NM

Interest income decreased \$7.0 million, or 55.9%, primarily due to a decrease in PTCs.

Interest expense decreased \$12.1 million, or 12.5%, primarily due to a decrease in interest rates resulting from the refinancing of higher-rate EETCs with lower-rate Convertible Notes in 2015 and a reduction in our average debt balances, reflecting payments of debt.

Loss on early extinguishment of debt was related to the refinancing of five EETCs with lower-rate Convertible Notes during the third quarter of 2015.

Unrealized loss on financial instruments represents the change in fair value of the Amazon Warrant during 2016 (see Note 7 to our Financial Statements).

Gain on investments was related to the early redemption of certain PTC investments resulting from the refinancing of five EETCs with lower-rate Convertible Notes during the third quarter of 2015.

Income taxes. Our effective income tax rates were an expense of 52.3% in 2016 and a benefit of 142.3% for 2015. The effective income tax rate for 2016 differed from the U.S. statutory rate primarily due to a nondeductible customer incentive and to nondeductible compensation expenses resulting from a change in control, as defined under certain of the Company's benefits plans, both related to the Amazon transaction (see Note 7 to our Financial Statements). The effective income tax rate for 2015 differed from the U.S. federal statutory rate primarily due to income tax benefits related to ETI. The effective rates for both periods were impacted by our assertion to indefinitely reinvest the net earnings of foreign subsidiaries outside the U.S. (see Note 11 to our Financial Statements).

Segments

We use an economic performance metric ("Direct Contribution") representing Income (loss) from continuing operations before income taxes excluding the following: Special charges, Transaction-related expenses, nonrecurring items, Losses (gains) on the disposal of aircraft, Losses on early extinguishment of debt, Unrealized losses (gains) on financial instruments, Gains on investments and Unallocated income and expenses, net. Direct Contribution shows the profitability of each segment after allocation of direct operating and ownership costs. We operate our service offerings through the following reportable segments: ACMI, Charter and Dry Leasing. The following table compares the Direct Contribution for our reportable segments (see Note 13 to our Financial Statements for the reconciliation to Operating income) (in thousands):

	<u>2016</u>	<u>2015</u>	<u>Inc/(Dec)</u>	<u>% Change</u>
Direct Contribution:				
ACMI	\$200,563	\$185,615	\$ 14,948	8.1%
Charter	133,727	124,808	8,919	7.1%
Dry Leasing	33,114	42,023	(8,909)	(21.2)%
Total Direct Contribution	<u>\$367,404</u>	<u>\$352,446</u>	<u>\$ 14,958</u>	<u>4.2%</u>
Unallocated income and expenses, net	<u>\$242,768</u>	<u>\$294,451</u>	<u>\$(51,683)</u>	<u>(17.6)%</u>

ACMI Segment

ACMI Direct Contribution increased \$14.9 million, or 8.1%, primarily due to the Southern Air Acquisition and lower Heavy Maintenance expense. Partially offsetting these items were the temporary redeployment of 747-8F aircraft to the Charter segment, increases in crewmember costs related to Amazon and other fleet growth initiatives, and higher rates related to crewmember travel.

Charter Segment

Charter Direct Contribution increased \$8.9 million or 7.1%, primarily due to an increase in passenger and cargo demand from the AMC and the temporary redeployment of 747-8F aircraft from the ACMI segment. Partially offsetting these increases was the impact of the U.S. West Coast port disruption in 2015.

Dry Leasing Segment

Dry Leasing Direct Contribution decreased \$8.9 million, or 21.2%, primarily due to lower revenue from maintenance payments to us in 2016 related to the scheduled return of aircraft. Partially offsetting this decrease was contribution related to the placement of two 767-300 converted freighter aircraft with DHL in December 2015 and February 2016, and one 767-300 converted freighter aircraft with Amazon in August 2016.

Unallocated income and expenses, net

Unallocated income and expenses, net decreased \$51.7 million, or 17.6%, primarily due to the settlement of the U.S. class action litigation and related legal fees in 2015. Partially offsetting these items were \$23.5 million of compensation expenses for a change in control, as defined under certain benefit plans, related to the Amazon transaction (see Note 7 to our Financial Statements) and the impact of the Southern Air Acquisition in 2016.

Results of Operations

Years Ended December 31, 2015 and 2014

Segment Operating Fleet

The following tables compare our Segment Operating Fleet (average aircraft equivalents during the period) and total Block Hours operated:

	<u>2015</u>	<u>2014</u>	<u>Inc/(Dec)</u>
Segment Operating Fleet			
ACMI*			
747-8F Cargo	8.9	8.5	0.4
747-400 Cargo	12.6	12.0	0.6
747-400 Dreamlifter	3.0	3.1	(0.1)
767-300 Cargo	2.1	2.0	0.1
767-200 Cargo	8.3	5.0	3.3
747-400 Passenger	1.2	1.2	—
767-200 Passenger	1.0	1.0	—
Total	37.1	32.8	4.3
Charter			
747-8F Cargo	0.2	0.5	(0.3)
747-400 Cargo	9.4	9.0	0.4
747-400 Passenger	1.8	1.7	0.1
767-300 Passenger	2.9	2.9	—
Total	14.3	14.1	0.2
Dry Leasing			
777-200 Cargo	6.0	6.0	—
757-200 Cargo	1.0	1.0	—
737-300 Cargo	1.0	1.0	—
737-800 Passenger	1.2	2.0	(0.8)
Total	9.2	10.0	(0.8)
Total Operating Average Aircraft Equivalents	<u>60.6</u>	<u>56.9</u>	<u>3.7</u>
Out-of-service	0.4	1.0	(0.6)

* ACMI average fleet excludes spare aircraft provided by CMI customers.

	<u>2015</u>	<u>2014</u>	<u>Inc/(Dec)</u>	<u>% Change</u>
Block Hours				
Total Block Hours**	178,060	161,090	16,970	10.5%

** Includes ACMI, Charter and other Block Hours.

Operating Revenue

The following table compares our Operating Revenue (in thousands):

	<u>2015</u>	<u>2014</u>	<u>Inc/(Dec)</u>	<u>% Change</u>
Operating Revenue				
ACMI	\$ 791,442	\$ 778,091	\$13,351	1.7%
Charter	908,753	906,676	2,077	0.2%
Dry Leasing	107,218	100,059	7,159	7.2%
Other	15,246	14,372	874	6.1%
Total Operating Revenue	<u>\$1,822,659</u>	<u>\$1,799,198</u>	<u>\$23,461</u>	<u>1.3%</u>

ACMI

	<u>2015</u>	<u>2014</u>	<u>Inc/(Dec)</u>	<u>% Change</u>
ACMI Block Hours	126,206	115,042	11,164	9.7%
ACMI Revenue Per Block Hour	\$ 6,271	\$ 6,764	\$ (493)	(7.3)%

ACMI revenue increased \$13.4 million, or 1.7%, primarily due to increased flying, partially offset by reduced Revenue per Block Hour. The increase in Block Hours was primarily driven by one incremental 747-8F aircraft and one incremental 747-400F aircraft entering ACMI service, four incremental 767-200F aircraft entering CMI service and improvements in ACMI aircraft utilization. The decrease in Revenue per Block Hour reflects the impact of higher Revenue per Block Hour in 2014 resulting from customers that flew below their contractual minimums, payments received in 2014 related to a customer's return of aircraft, and the impact of increased CMI flying in 2015.

Charter

	<u>2015</u>	<u>2014</u>	<u>Inc/(Dec)</u>	<u>% Change</u>
Charter Block Hours:				
Cargo	35,463	31,612	3,851	12.2%
Passenger	14,776	13,085	1,691	12.9%
Total	<u>50,239</u>	<u>44,697</u>	<u>5,542</u>	<u>12.4%</u>
Charter Revenue Per Block Hour:				
Cargo	\$17,655	\$20,217	\$(2,562)	(12.7)%
Passenger	\$19,130	\$20,449	\$(1,319)	(6.5)%
Charter	\$18,089	\$20,285	\$(2,196)	(10.8)%

Charter revenue increased \$2.1 million, or 0.2%, primarily driven by an increase in both cargo and passenger flying, partially offset by a decrease in Revenue per Block Hour. The increase in Charter Block Hours was primarily driven by increased cargo and passenger demand from the AMC and increased commercial cargo demand, which was enhanced by the U.S. West Coast port disruption in early 2015. The decrease in Charter Revenue per Block Hours was primarily driven by the impact of lower fuel prices, partially offset by higher Yields, excluding fuel.

Dry Leasing

Dry Leasing revenue increased \$7.2 million, or 7.2%, primarily due to revenue from maintenance payments related to the scheduled returns of a 737-800 passenger aircraft in February 2015 and a 757-200 cargo aircraft in April 2015, partially offset by a reduction in the number of Dry Leased aircraft following the sale of the returned 737-800 passenger aircraft during the first quarter of 2015.

Operating Expenses

The following table compares our Operating Expenses (in thousands):

	<u>2015</u>	<u>2014</u>	<u>Inc/(Dec)</u>	<u>% Change</u>
Operating Expenses				
Salaries, wages and benefits	\$ 351,372	\$ 311,143	\$ 40,229	12.9%
Aircraft fuel	333,390	404,263	(70,873)	(17.5)%
Maintenance, materials and repairs	202,337	203,567	(1,230)	(0.6)%
Aircraft rent	145,031	140,390	4,641	3.3%
Depreciation and amortization	128,740	120,793	7,947	6.6%
Travel	102,755	79,199	23,556	29.7%
Navigation fees, landing fees and other rent ...	99,345	131,138	(31,793)	(24.2)%
Passenger and ground handling services	83,185	86,820	(3,635)	(4.2)%
Loss on disposal of aircraft	1,538	14,679	(13,141)	(89.5)%
Special charge	17,388	15,114	2,274	15.0%
Other	234,073	116,120	117,953	101.6%
Total Operating Expenses	<u>\$1,699,154</u>	<u>\$1,623,226</u>		

Salaries, wages and benefits increased \$40.2 million, or 12.9%, primarily driven by increases to crewmember and ground staff costs due to higher Block Hours, crew training related to our investment in fleet growth and key initiatives.

Aircraft fuel decreased \$70.9 million, or 17.5%, primarily due to fuel price decreases, partially offset by increased fuel consumption reflecting the increase in Charter Block Hours operated. We do not incur fuel expense in our ACMI or Dry Leasing businesses as the cost of fuel is borne by the customer. Average fuel cost per gallon and fuel consumption for 2015 and 2014 were:

	<u>2015</u>	<u>2014</u>	<u>Inc/(Dec)</u>	<u>% Change</u>
Average fuel cost per gallon	\$ 2.27	\$ 3.07	\$ (0.80)	(26.1)%
Fuel gallons consumed (000s)	147,081	131,787	15,294	11.6%

Maintenance, materials and repairs decreased by \$1.2 million, or 0.6%, reflecting a decrease of \$12.6 million for 747-400 aircraft, partially offset by an increase of \$7.5 million for 747-8F aircraft and \$3.9 million for 767 aircraft. Heavy Maintenance expense on 747-400 aircraft decreased approximately \$22.5 million due to a decrease in the number of C and D Checks, and the number of engine overhauls, partially offset by an increase of \$6.1 million in Non-heavy Maintenance. Heavy Maintenance expense on 747-8F aircraft increased \$5.1 million primarily due to an increase in unscheduled engine repairs, partially offset by a decrease in the number of C Checks. Heavy Maintenance expense on 767 aircraft decreased \$1.6 million primarily due to a decrease in the number of C Checks. Line Maintenance increased by \$5.5 million on 767 aircraft, \$3.9 million on 747-400 aircraft and \$2.4 million on 747-8F aircraft due to increased flying. Heavy airframe maintenance checks and engine overhauls impacting Maintenance, materials and repairs for 2015 and 2014 were:

Heavy Maintenance Events	2015	2014	Inc/(Dec)
747-8F C Checks	4	5	(1)
747-400 C Checks	5	11	(6)
747-400 D Checks	4	6	(2)
767 C Checks	1	3	(2)
CF6-80 engine overhauls	10	14	(4)

Aircraft rent increased \$4.6 million, or 3.3%, primarily due to a leased 747-400BCF aircraft that entered service in June 2015.

Depreciation and amortization increased \$7.9 million, or 6.6%, primarily due to increased scrapping of rotatable parts related to our engine and spare parts purchase program, which avoids more expensive repairs, and additional aircraft operating in 2015.

Travel increased \$23.6 million, or 29.7%, primarily due to higher rates related to crewmember travel to higher cost locations and increased flying.

Navigation fees, landing fees and other rent decreased \$31.8 million, or 24.2%, primarily due to a reduction in purchased capacity from the subcontracting of certain Charter flights.

Passenger and ground handling services decreased \$3.6 million, or 4.2%, primarily due to lower rates related to ground handling for Charters, partially offset by increased flying.

Loss on disposal of aircraft in 2014 resulted from the trade-in of used spare engines for new engines as part of our engine acquisition program.

Special charge in 2015 primarily represents an \$8.3 million impairment loss on engines held for sale and a \$7.7 million charge for the early termination of high-rate operating leases for two engines. Special charge in 2014 represents a \$6.2 million impairment loss on an aircraft held for sale, a \$4.7 million loss related to a consolidated subsidiary's receivable for a loan made to its then 51% U.K. shareholder and a \$3.8 million expense recorded for termination benefits for certain employees (see Note 4 to our Financial Statements).

Other increased \$118.0 million, or 101.6%, primarily due to the settlement of the U.S. class action litigation and related legal fees (see Note 14 to our Financial Statements), increased commission expense on higher revenue from the AMC and increased professional fees to support key initiatives.

Non-operating Expenses (Income)

The following table compares our Non-operating Expenses (Income) (in thousands):

	2015	2014	Inc/(Dec)	% Change
Non-operating Expenses (Income)				
Interest income	\$(12,554)	\$(18,480)	\$ (5,926)	(32.1)%
Interest expense	96,756	104,252	(7,496)	(7.2)%
Capitalized interest	(1,027)	(453)	574	126.7%
Loss on early extinguishment of debt	69,728	—	69,728	NM
Gain on investments	(13,439)	—	13,439	NM
Other expense (income), net	1,261	1,104	157	14.2%

Interest income decreased \$5.9 million, or 32.1%, primarily due to a decrease in our investments in Pass-Through Trust Certificates ("PTCs"). See Note 12 to our Financial Statements for further discussion.

Interest expense decreased \$7.5 million, or 7.2%, primarily due to a decrease in interest rates resulting from the refinancing of higher-rate enhanced equipment trust certificates ("EETCs") with lower-rate Convertible Notes (see Note 9 to our Financial Statements for further discussion) and a reduction in our average debt balances, reflecting payments of debt.

Loss on early extinguishment of debt was related to the refinancing of five EETCs with lower-rate Convertible Notes and the refinancing of two 747-8F term loans during 2015. See Note 9 to our Financial Statements for further discussion.

Gain on investments was related to the early redemption of certain PTC investments resulting from the refinancing of five EETCs with lower-rate Convertible Notes during 2015. See Notes 9 and 12 to our Financial Statements for further discussion.

Income taxes. Our effective income tax rates were benefits of 142.3% for 2015 and 14.2% for 2014. The effective income tax rate for 2015 differed from the U.S. federal statutory rate primarily due to an increase in income from our Dry Leasing business taxed at lower rates and income tax benefits related ETI. The effective income tax rate for 2014 differed from the U.S. federal statutory rate primarily due to an income tax benefit of \$34.8 million, net of reserves, related to ETI. The effective income tax rates for both periods benefit from our intention to indefinitely reinvest the net earnings of certain foreign subsidiaries outside the U.S.

Segments

The following table compares the Direct Contribution for our reportable segments (see Note 13 to our Financial Statements for the reconciliation to Operating income) (in thousands):

	2015	2014	Inc/(Dec)	% Change
Direct Contribution:				
ACMI	\$185,615	\$200,489	\$ (14,874)	(7.4)%
Charter	124,808	47,245	77,563	164.2%
Dry Leasing	42,023	33,224	8,799	26.5%
Total Direct Contribution	\$352,446	\$280,958	\$ 71,488	25.4%
Unallocated income and expenses, net	\$294,451	\$161,616	\$132,835	82.2%

ACMI Segment

ACMI Direct Contribution decreased \$14.9 million, or 7.4%, primarily due to increases in crew costs due to crew training related to our investment in fleet growth, the impact of customers that flew below their contractual minimums in 2014 and payments received in 2014 related to a customer's return of aircraft. Partially offsetting these decreases was a reduction in Heavy Maintenance expense and lower aircraft ownership costs from the refinancing of EETCs with lower-rate Convertible Notes.

Charter Segment

Charter Direct Contribution increased \$77.6 million or 164.2%, primarily due to higher Yields, excluding fuel, increased cargo and passenger flying, as well as higher aircraft utilization, which was enhanced by the U.S. West Coast port disruption in early 2015. In addition, Charter Direct Contribution benefited from a reduction in Heavy Maintenance expense and lower aircraft ownership costs from the refinancing of EETCs with lower-rate Convertible Notes. Partially offsetting these improvements was an increase in crew costs due to crew training related to our investment in fleet growth.

Dry Leasing Segment

Dry Leasing Direct Contribution increased \$8.8 million, or 26.5%, primarily due to revenue from maintenance payments related to the scheduled returns of a 737-800 passenger aircraft in February 2015 and a 757-200 cargo aircraft in April 2015, partially offset by a reduction in the number of Dry Leased aircraft following the sale of the returned 737-800 passenger aircraft during the first quarter of 2015.

Unallocated income and expenses, net

Unallocated income and expenses, net increased \$132.8 million, or 82.2%, primarily due to the settlement of the U.S. class action litigation and related legal fees, increases in noncash expenses related to our Convertible Notes and the refinancing of debt and professional fees to support key initiatives.

Reconciliation of GAAP to non-GAAP Financial Measures

To supplement our Financial Statements presented in accordance with accounting principles generally accepted in the United States of America ("GAAP"), we present certain non-GAAP financial measures to assist in the evaluation of our business performance. These non-GAAP financial measures include Adjusted Income from continuing operations, net of taxes and Adjusted Diluted EPS from continuing operations, which exclude certain noncash income and expenses, and items impacting year-over-year comparisons of our results. These non-GAAP financial measures may not be comparable to similarly titled measures used by other companies and should not be considered in isolation or as a substitute for Income from continuing operations, net of taxes and Diluted EPS from continuing operations, which are the most directly comparable measures of performance prepared in accordance with GAAP.

We use these non-GAAP financial measures in assessing the performance of our ongoing operations and in planning and forecasting future periods. We believe that these adjusted measures, when considered together with the corresponding GAAP financial measures and the reconciliations to those measures, provide meaningful supplemental information to assist investors and analysts in understanding our business results and assessing our prospects for future performance.

The following is a reconciliation of Income (loss) from continuing operations, net of taxes and Diluted EPS from continuing operations, net of taxes to the corresponding non-GAAP financial measures (in thousands, except per share data):

	2016	2015	Percent Change
Income from continuing operations, net of taxes	\$ 42,625	\$ 7,286	485.0%
Impact from:			
Charges associated with benefit plan change in control (a)	23,527	—	
Loss on disposal of aircraft	(11)	1,538	
Special charge	10,140	17,958	
Transaction-related expenses	22,071	—	
Accrual for legal matters and professional fees	6,465	104,380	
Noncash expenses and income, net (b)	8,111	4,480	
Charges associated with refinancing debt	132	73,411	
Gain on investments	—	(13,439)	
Unrealized loss on financial instruments (c)	2,888	—	
Income tax effect of reconciling items (d)	(1,651)	(66,300)	
ETI tax benefit	—	(4,008)	
Adjusted income from continuing operations, net of taxes	<u>\$114,297</u>	<u>\$125,306</u>	<u>(8.8%)</u>
Weighted average diluted shares outstanding	25,120	25,018	
Add: dilutive warrants	299	—	
Adjusted weighted average diluted shares outstanding	<u>25,419</u>	<u>25,018</u>	
Adjusted Diluted EPS from continuing operations, net of taxes	<u>\$ 4.50</u>	<u>\$ 5.01</u>	<u>(10.2%)</u>
	2015	2014	Percent Change
Income from continuing operations, net of taxes	\$ 7,286	\$106,757	(93.2%)
Impact from:			
Loss on disposal of aircraft	1,538	—	
Special charge	17,958	—	
Accrual for legal matters and professional fees	104,380	1,798	
Noncash expenses and income, net (a)	4,480	(105)	
Charges associated with refinancing debt	73,411	15,114	
Gain on investments	(13,439)	—	
Income tax effect of reconciling items (d)	(66,300)	4,594	
ETI tax benefit	(4,008)	(34,755)	
Adjusted income from continuing operations, net of taxes	<u>\$125,306</u>	<u>\$ 93,403</u>	<u>34.2%</u>
Weighted average diluted shares outstanding	25,018	25,127	
Add: dilutive warrants	—	—	
Adjusted weighted average diluted shares outstanding	<u>25,018</u>	<u>25,127</u>	
Adjusted Diluted EPS from continuing operations, net of taxes	<u>\$ 5.01</u>	<u>\$ 3.72</u>	<u>34.7%</u>

- (a) Compensation costs resulting from a change in control under certain benefit plans related to the Amazon transaction (see Note 7 to our Financial Statements).
- (b) Noncash expenses and income, net in 2016 primarily related to amortization of debt discount on the Convertible Notes (see Note 9 to our Financial Statements) and amortization of customer incentive related to the Amazon Warrant (see Note 7 to our Financial Statements). Noncash expenses and income, net in 2015 primarily related to amortization and accretion of debt, lease and investment discounts.
- (c) Unrealized loss on financial instruments related to the Amazon Warrant (see Note 7 to our Financial Statements).
- (d) Income tax effect of reconciling items is primarily impacted by a nondeductible customer incentive and nondeductible compensation expenses resulting from a change in control, as defined under certain of the Company's benefit plans, both related to the Amazon transaction.

Liquidity and Capital Resources

The most significant liquidity events in 2016 were as follows:

Acquisition Transaction

In April 2016, we completed the acquisition of Southern Air for cash consideration of \$105.4 million, net of cash acquired and working capital adjustments.

Debt Transactions

In February 2016, we borrowed \$14.8 million related to the conversion of a 767-300BDSF aircraft under a term loan at a fixed interest rate of 3.19%.

In June 2016, we borrowed \$70.0 million under a term loan secured by a mortgage against six spare GENx engines at a fixed rate of 3.12%.

In December 2016, we borrowed \$18.7 million related to GENx engine performance upgrade kits and overhauls under an unsecured term loan at a fixed interest rate of 2.13%.

In December 2016, we entered into a \$150.0 million revolving credit facility secured by mortgages against a total of 14 747-400 and 767-300 aircraft. As of December 31, 2016, no borrowings were outstanding under the facility. In January 2017, we drew down \$100.0 million under the facility.

Operating Activities. Net cash provided by operating activities for 2016 was \$232.2 million, compared with \$372.9 million for 2015. The decrease primarily reflects changes in the timing of working capital, a payment related to the U.S. class action settlement, payments for Transaction-related expenses and deferred maintenance costs for engines on 747-8F aircraft in 2016 and the impact of the U.S. West Coast port disruption in 2015. Partially offsetting these items were the impact of the Southern Air Acquisition and an increase in passenger and cargo demand from the AMC in 2016.

Investing Activities. Net cash used for investing activities was \$457.4 million for 2016, consisting primarily of \$317.0 million of payments for flight equipment and modifications, \$105.4 million related to the Southern Acquisition and \$46.7 million of core capital expenditures, excluding flight equipment. Payments for flight equipment and modifications in 2016 were primarily related to the purchase of 767-300 passenger aircraft and related freighter conversion costs and spare engines. Partially offsetting these investing activities were \$11.7 million of proceeds from investments. All capital expenditures for 2016 were funded through working capital, except for the flight equipment financed as discussed above. Net cash used for investing activities was \$166.3 million for 2015, consisting primarily of \$227.0 million of payments for flight equipment and modifications, and \$45.0 million of core capital expenditures, excluding flight equipment. Payments for flight equipment and modifications in 2015

were primarily related to the purchase of a 747-8F aircraft, 767-300 passenger aircraft and related freighter conversion costs and spare engines. Partially offsetting these investing activities in 2015 were \$80.3 million of proceeds from investments and \$25.4 million of proceeds from disposal of aircraft.

Financing Activities. Net cash used for financing activities was \$75.5 million for 2016, which primarily reflected \$179.2 million of payments on debt obligations, partially offset by \$103.5 million of proceeds from debt issuance and \$15.1 million of customer maintenance reserves received. Net cash used for financing activities was \$80.5 million for 2015, which primarily reflected \$568.9 million of payments on debt obligations, \$52.9 million for the purchase of convertible note hedges, \$36.1 million of payment of debt extinguishment costs, \$26.5 million related to the purchase of treasury stock and \$14.5 million of debt issuance costs partially offset by \$568.0 million of proceeds from debt issuance, \$36.3 million from the sale of warrants and \$16.1 million of customer maintenance reserves received.

We consider Cash and cash equivalents, Short-term investments, Restricted cash and Net cash provided by operating activities to be sufficient to meet our debt and lease obligations, to fund core capital expenditures for 2017, and to pay amounts due related to the settlement of the U.S. class action litigation. Core capital expenditures for 2017 are expected to range between \$55.0 to \$65.0 million, which excludes flight equipment and capitalized interest. Our payments remaining for flight equipment purchase and conversion commitments are expected to be approximately \$248.6 million, of which approximately \$201.0 million is expected to be made during 2017. We expect to finance the acquisition and conversion of this flight equipment with our revolving credit facility prior to obtaining permanent financing for the converted aircraft.

We may access external sources of capital from time to time depending on our cash requirements, assessments of current and anticipated market conditions, and the after-tax cost of capital. To that end, we filed a shelf registration statement with the SEC in May 2015 that enables us to sell a yet to be determined amount of debt and/or equity securities over the subsequent three years, depending on market conditions, our capital needs and other factors. Our access to capital markets can be adversely impacted by prevailing economic conditions and by financial, business and other factors, some of which are beyond our control. Additionally, our borrowing costs are affected by market conditions and may be adversely impacted by a tightening in credit markets.

We do not expect to pay any significant U.S. federal income tax until 2025 or later. Our business operations are subject to income tax in several foreign jurisdictions. We do not expect to pay any significant cash income taxes in foreign jurisdictions for at least several years. We currently do not intend to repatriate cash from certain foreign subsidiaries that is indefinitely reinvested outside the U.S. Any repatriation of cash from these subsidiaries or certain changes in U.S. tax laws could result in additional tax expense.

Contractual Obligations

The table below provides details of our balances available under credit agreements and future cash contractual obligations as of December 31, 2016 (in millions):

	Total Obligations	Payments Due by Period					
		2017	2018	2019	2020	2021	Thereafter
Debt and capital lease (1)	\$1,943.4	\$194.2	\$190.5	\$189.4	\$297.4	\$190.7	\$ 881.2
Interest on debt (2)	291.2	62.3	55.9	49.5	42.8	32.3	48.4
Aircraft and engine operating leases	861.3	131.0	131.0	140.2	135.4	145.9	177.8
Other operating leases	27.2	5.5	5.5	5.1	4.9	4.4	1.8
Flight equipment purchase and conversion commitments (3)	248.6	201.0	47.6	—	—	—	—
Legal settlement obligation	65.0	35.0	30.0	—	—	—	—
Total Contractual Obligations	\$3,436.7	\$629.0	\$460.5	\$384.2	\$480.5	\$373.3	\$1,109.2

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- (1) Debt reflects gross amounts (see Note 9 to our Financial Statements for a discussion of the related unamortized discount).
 - (2) Amount represents interest on fixed and floating rate debt at December 31, 2016.
 - (3) Amount represents estimated payments primarily related to 767-300 aircraft purchases and passenger-to-freighter conversions.

We maintain a noncurrent liability for unrecognized income tax benefits. To date, we have not resolved the ultimate cash settlement of this liability. As a result, we are not in a position to estimate with reasonable certainty the date upon which this liability would be payable.

Description of Our Debt Obligations

See Note 9 to our Financial Statements for a description of our debt obligations.

Off-Balance Sheet Arrangements

Fifteen of our sixty-one operating and Dry Leased aircraft are under operating leases (this excludes aircraft provided by CMI customers). Five are leased through trusts established specifically to purchase, finance and lease aircraft to us. These leasing entities meet the criteria for variable interest entities. All fixed price options reflect a fair market value purchase option, and as such, we are not the primary beneficiary of the leasing entities. We are generally not the primary beneficiary of the leasing entities if the lease terms are consistent with market terms at the inception of the lease and the leases do not include a residual value guarantee, fixed-price purchase option or similar feature that would obligate us to absorb decreases in value or entitle us to participate in increases in the value of the aircraft. We have not consolidated any of the aircraft-leasing trusts because we are not the primary beneficiary. In addition, we reviewed the other nine Atlas aircraft that are under operating leases but not financed through a trust and determined that none of them would be consolidated upon the application of accounting for consolidations. Our maximum exposure under all operating leases is the remaining lease payments, which amounts are reflected in the future lease commitments above and described in Note 10 to our Financial Statements.

There were no changes in our off-balance sheet arrangements during the fiscal year ended December 31, 2016.

Critical Accounting Policies and Estimates

General Discussion of Critical Accounting Policies and Estimates

An appreciation of our critical accounting policies and estimates is important to understand our financial results. Our Financial Statements are prepared in conformity with GAAP. Our critical policies require management to make estimates and judgments that affect the amounts reported. Actual results may differ significantly from those estimates. The following is a brief description of our current critical accounting policies involving significant management judgment:

Accounting for Long-Lived Assets

We record our property and equipment at cost, and once assets are placed in service, we depreciate them on a straight-line basis over their estimated useful lives to their estimated residual values over periods not to exceed forty years for flight equipment (from date of original manufacture) and three to five years for ground equipment.

We record finite-lived intangible assets acquired at fair value and amortize them over their estimated useful lives. The estimated useful lives are based on estimates of the period during which the assets are expected to generate revenue.

We record impairment charges on long-lived assets when events and circumstances indicate that the assets may be impaired, the undiscounted cash flows estimated to be generated by those assets are less than their carrying amount and the net book value of the assets exceeds their estimated fair value. In making these determinations, we use certain assumptions, including, but not limited to: (i) estimated fair value of the assets and (ii) estimated future cash flows expected to be generated by these assets, which are based on additional assumptions such as asset utilization, revenue generated, associated costs, length of service and estimated residual values. To conduct impairment testing, we group assets and liabilities at the lowest level for which identifiable cash flows are largely independent of cash flows of other assets and liabilities. For flight equipment used in our ACMI and Charter segments, assets are grouped at the operating fleet level. For flight equipment used in our Dry Leasing segment, assets are grouped on an individual basis.

For assets classified as held for sale, an impairment is recognized when the fair value less the cost to sell the asset is less than its carrying amount. Fair value is primarily determined using external appraisals.

In developing these estimates for flight equipment, we use industry data for the equipment types and our anticipated utilization of the assets.

Heavy Maintenance

Except for engines used on our 747-8F aircraft, we account for heavy maintenance costs for airframes and engines used in our ACMI and Charter segments using the direct expense method. Under this method, heavy maintenance costs are charged to expense upon induction, based on our best estimate of the costs. This method can result in expense volatility between quarterly and annual periods, depending on the number and type of heavy maintenance events performed.

We account for heavy maintenance costs for airframes and engines used in our Dry Leasing segment and engines used on our 747-8F aircraft using the deferral method. Under this method, we defer the expense recognition of scheduled heavy maintenance events, which are amortized over the estimated period until the next scheduled heavy maintenance event is required.

Income Taxes

Deferred income taxes are recognized for the tax consequences of reporting items in our income tax returns at different times than the items are reflected in our financial statements. These temporary differences result in deferred tax assets and liabilities that are calculated by applying enacted statutory tax rates applicable to future years to differences between the financial statement carrying amounts and the tax bases of existing assets and liabilities. If necessary, deferred income tax assets are reduced by a valuation allowance to an amount that is determined to be more likely than not recoverable. We must make significant estimates and assumptions about future taxable income and future tax consequences when determining the amount, if any, of the valuation allowance.

We have recorded reserves for income taxes that may become payable in future years. Although management believes that its positions taken on income tax matters are reasonable, we have nevertheless established tax reserves in recognition that various taxing authorities may challenge certain of the positions taken by us, potentially resulting in additional liabilities for taxes.

Goodwill

Goodwill represents the excess of an acquisition's purchase price over the fair value of the identifiable net assets acquired and liabilities assumed. Goodwill is not amortized, but tested for impairment annually during the fourth quarter of each year, or more frequently if certain events or circumstances indicate that an impairment loss may have been incurred. We may elect to perform a qualitative analysis on the reporting unit that has goodwill to

determine whether it is more likely than not that fair value of the reporting unit is less than its carrying value. Under the qualitative approach, we consider various market factors to determine whether events and circumstances have affected the fair value of the reporting unit. If we determine that it is more likely than not that the reporting unit's fair value is less than its carrying amount, or if we elect not to perform a qualitative analysis, we perform a quantitative analysis to determine whether any goodwill impairment exists.

Fair value is determined using a discounted cash flow analysis based on key assumptions including, but not limited to, (i) a projection of revenues, expenses and other cash flows; (ii) terminal period revenue growth and cash flows; and (iii) an assumed discount rate. If the goodwill's carrying value exceeds its fair value calculated using the quantitative approach, an impairment charge is recorded for the difference in fair value and carrying value.

Legal and Regulatory Matters

We are party to legal and regulatory proceedings with respect to a variety of matters in multiple jurisdictions. We evaluate the likelihood of an unfavorable outcome of these proceedings each quarter. Our judgments are subjective and are based on the status of the legal or regulatory proceedings, the merits of our defenses and consultation with legal counsel.

Recent Accounting Pronouncements

See Note 2 to our Financial Statements for a discussion of recent accounting pronouncements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We currently do not hedge against foreign currency fluctuations or aircraft fuel. The potential loss arising from adverse changes to the price and availability of aircraft fuel and interest rates is discussed below. The sensitivity analyses presented herein do not consider the effects that such adverse changes might have on our overall financial performance, nor do they consider additional actions we may take to mitigate our exposure to such changes.

Aircraft Fuel. Our results of operations are affected by changes in the price and availability of aircraft fuel. We have limited fuel risk for our Charter business. Market risk is estimated at a hypothetical 20% increase or decrease in the 2016 average cost per gallon of fuel. Based on actual 2016 fuel consumption for commercial customers in Charter, such an increase would have resulted in an increase to aircraft fuel expense of approximately \$28.1 million in 2016. For our AMC-related Charter flights, the contracted fuel prices are established and fixed by the AMC. We receive reimbursements from the AMC each month if the price of fuel paid by us to vendors for AMC-related Charter flights exceeds the fixed price; if the price of fuel paid by us is less than the fixed price, then we pay the difference to the AMC. ACMI and Dry Leasing do not create an aircraft fuel market risk, as the cost of fuel is borne by the customer.

Variable Interest Rates. Our earnings are affected by changes in interest rates due to the impact those changes have on interest expense from variable rate debt instruments and on interest income generated from our cash and investment balances. As of December 31, 2016, approximately \$91.0 million of our debt at face value had variable interest rates. If interest rates would have increased or decreased by a hypothetical 20% in the underlying rate as of December 31, 2016, our annual interest expense would have changed in 2016 by approximately \$0.7 million.

Foreign Currency. We have limited exposure to market risk from changes in foreign currency exchange rates, interest rates and equity prices that could affect our results of operations and financial condition. Our largest exposure comes from the Brazilian real.

Stock Price. Our earnings are affected by changes in our common stock price due to the impact those changes have on the fair value of our liability for warrants issued to Amazon (See Note 7 to our Financial Statements for a description of the warrants). As of December 31, 2016, our warrant liability was \$95.8 million. If our stock price would have increased or decreased resulting in a hypothetical 20% change in the fair value of the warrant liability as of December 31, 2016, we would have recognized an additional unrealized loss or gain of approximately \$19.2 million in 2016.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Atlas Air Worldwide Holdings, Inc.

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Atlas Air Worldwide Holdings, Inc. and its subsidiaries at December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the index appearing under Item 15(a)(2) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control — Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and financial statement schedule, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements, on the financial statement schedule, and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

New York, New York
February 23, 2017

Atlas Air Worldwide Holdings, Inc.

Consolidated Balance Sheets
(in thousands, except share data)

	December 31, 2016	December 31, 2015
Assets		
Current Assets		
Cash and cash equivalents	\$ 123,890	\$ 425,950
Short-term investments	4,313	5,098
Restricted cash	14,360	12,981
Accounts receivable, net of allowance of \$997 and \$1,247, respectively	166,486	164,308
Prepaid maintenance	4,418	6,052
Prepaid expenses and other current assets	44,603	37,548
Total current assets	358,070	651,937
Property and Equipment		
Flight equipment	3,886,714	3,687,248
Ground equipment	68,688	58,487
Less: accumulated depreciation	(568,946)	(450,217)
Flight equipment modifications in progress	154,226	39,678
Property and equipment, net	3,540,682	3,335,196
Other Assets		
Long-term investments and accrued interest	27,951	37,604
Deferred costs and other assets	204,647	81,183
Intangible assets, net and goodwill	116,029	58,483
Total Assets	<u>\$4,247,379</u>	<u>\$4,164,403</u>
Liabilities and Equity		
Current Liabilities		
Accounts payable	\$ 59,543	\$ 93,278
Accrued liabilities	320,887	293,138
Current portion of long-term debt and capital lease	184,748	161,811
Total current liabilities	565,178	548,227
Other Liabilities		
Long-term debt	1,666,663	1,739,496
Deferred taxes	298,165	286,928
Financial instruments and other liabilities	200,035	135,569
Total other liabilities	2,164,863	2,161,993
Commitments and contingencies		
Equity		
Stockholders' Equity		
Preferred stock, \$1 par value; 10,000,000 shares authorized; no shares issued	—	—
Common stock, \$0.01 par value; 100,000,000 and 50,000,000 shares authorized; 29,633,605 and 28,955,445 shares issued, 25,017,242 and 24,636,651, shares outstanding (net of treasury stock), as of December 31, 2016 and December 31, 2015, respectively	296	290
Additional paid-in-capital	657,082	625,244
Treasury stock, at cost; 4,616,363 and 4,318,794 shares, respectively	(183,119)	(171,844)
Accumulated other comprehensive loss	(4,993)	(6,063)
Retained earnings	1,048,072	1,006,556
Total equity	1,517,338	1,454,183
Total Liabilities and Equity	<u>\$4,247,379</u>	<u>\$4,164,403</u>

See accompanying Notes to Consolidated Financial Statements

Atlas Air Worldwide Holdings, Inc.

Consolidated Statements of Operations
(in thousands, except per share data)

	For the Years Ended December 31,		
	2016	2015	2014
Operating Revenue	\$1,839,627	\$1,822,659	\$1,799,198
Operating Expenses			
Salaries, wages and benefits	424,332	351,372	311,143
Aircraft fuel	275,113	333,390	404,263
Maintenance, materials and repairs	206,106	202,337	203,567
Depreciation and amortization	148,876	128,740	120,793
Aircraft rent	146,110	145,031	140,390
Travel	127,748	102,755	79,199
Passenger and ground handling services	89,657	83,185	86,820
Navigation fees, landing fees and other rent	78,441	99,345	131,138
Loss (gain) on disposal of aircraft	(11)	1,538	14,679
Special charge	10,140	17,388	15,114
Transaction-related expenses	22,071	—	—
Other	142,733	234,073	116,120
Total Operating Expenses	1,671,316	1,699,154	1,623,226
Operating Income	168,311	123,505	175,972
Non-operating Expenses (Income)			
Interest income	(5,532)	(12,554)	(18,480)
Interest expense	84,650	96,756	104,252
Capitalized interest	(3,313)	(1,027)	(453)
Loss on early extinguishment of debt	132	69,728	—
Gain on investments	—	(13,439)	—
Unrealized loss on financial instruments	2,888	—	—
Other expense	70	1,261	1,104
Total Non-operating Expenses (Income)	78,895	140,725	86,423
Income (loss) from continuing operations before income taxes	89,416	(17,220)	89,549
Income tax expense (benefit)	46,791	(24,506)	(12,678)
Income from continuing operations, net of taxes	42,625	7,286	102,227
Loss from discontinued operations, net of taxes	(1,109)	—	—
Net Income	41,516	7,286	102,227
Less: Net loss attributable to noncontrolling interests	—	—	(4,530)
Net Income Attributable to Common Stockholders	<u>\$ 41,516</u>	<u>\$ 7,286</u>	<u>\$ 106,757</u>
Earnings per share from continuing operations:			
Basic	\$ 1.72	\$ 0.29	\$ 4.08
Diluted	\$ 1.70	\$ 0.29	\$ 4.07
Loss per share from discontinued operations:			
Basic	\$ (0.04)	\$ —	\$ —
Diluted	\$ (0.04)	\$ —	\$ —
Earnings per share:			
Basic	\$ 1.67	\$ 0.29	\$ 4.08
Diluted	\$ 1.65	\$ 0.29	\$ 4.07
Weighted average shares:			
Basic	24,843	24,833	25,031
Diluted	25,120	25,018	25,127

See accompanying Notes to Consolidated Financial Statements

Atlas Air Worldwide Holdings, Inc.
Consolidated Statements of Comprehensive Income
(in thousands)

	For the Years Ended December 31,		
	2016	2015	2014
Net Income	\$41,516	\$ 7,286	\$102,227
Other comprehensive income (loss):			
Interest rate derivatives:			
Net change in fair value	—	—	(251)
Reclassification to interest expense	1,770	6,129	2,724
Income tax expense	(700)	(2,277)	(1,022)
Foreign currency translation:			
Translation adjustment	—	(343)	(168)
Other comprehensive income	1,070	3,509	1,283
Comprehensive Income	<u>42,586</u>	<u>10,795</u>	<u>103,510</u>
Less: Comprehensive loss attributable to noncontrolling interests	—	—	(4,352)
Comprehensive Income Attributable to Common Stockholders	<u>\$42,586</u>	<u>\$10,795</u>	<u>\$107,862</u>

See accompanying Notes to Consolidated Financial Statements

Atlas Air Worldwide Holdings, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	For the Years Ended December 31,		
	2016	2015	2014
Operating Activities:			
Income from continuing operations, net of taxes	\$ 42,625	\$ 7,286	\$ 102,227
Less: Loss from discontinued operations, net of taxes	(1,109)	—	—
Net Income	41,516	7,286	102,227
Adjustments to reconcile Net Income to net cash provided by operating activities:			
Depreciation and amortization	168,721	147,604	138,324
Accretion of debt securities discount	(1,277)	(4,651)	(7,947)
Provision for allowance for doubtful accounts	508	171	643
Special charge, net of cash payments	10,140	16,351	12,013
Loss on early extinguishment of debt	132	69,728	—
Unrealized loss on financial instruments	2,888	—	—
Loss (gain) on disposal of aircraft	(11)	1,538	14,679
Deferred taxes	47,381	(25,898)	(12,714)
Stock-based compensation expense	32,724	16,181	13,606
Changes in:			
Accounts receivable	22,974	2,016	(21,070)
Prepaid expenses, current assets and other assets	(29,455)	23,171	23,605
Accounts payable and accrued liabilities	(64,059)	119,390	9,779
Net cash provided by operating activities	232,182	372,887	273,145
Investing Activities:			
Capital expenditures	(46,717)	(45,040)	(24,920)
Payments for flight equipment and modifications	(316,993)	(227,048)	(519,399)
Acquisition of business, net of cash acquired	(105,392)	—	—
Proceeds from investments	11,714	80,302	3,728
Proceeds from disposal of aircraft	—	25,441	—
Net cash used for investing activities	(457,388)	(166,345)	(540,591)
Financing Activities:			
Proceeds from debt issuance	103,492	568,033	572,552
Customer maintenance reserves received	15,105	16,148	17,555
Customer maintenance reserves paid	—	(3,801)	—
Proceeds from sale of warrants	—	36,290	—
Payments for convertible note hedges	—	(52,903)	—
Proceeds from stock option exercises	—	1,193	69
Purchase of treasury stock	(11,275)	(26,522)	(19,496)
Excess tax benefit from stock-based compensation expense	390	555	8
Payment of debt extinguishment costs	—	(36,054)	—
Payment of debt issuance costs	(4,034)	(14,509)	(17,117)
Payments of debt	(179,153)	(568,923)	(301,550)
Net cash (used for) provided by financing activities	(75,475)	(80,493)	252,021
Net increase (decrease) in cash, cash equivalents and restricted cash	(300,681)	126,049	(15,425)
Cash, cash equivalents and restricted cash at the beginning of period	438,931	312,882	328,307
Cash, cash equivalents and restricted cash at the end of period	<u>\$ 138,250</u>	<u>\$ 438,931</u>	<u>\$ 312,882</u>
Noncash Investing and Financing Activities:			
Acquisition of flight equipment included in Accounts payable and accrued liabilities	<u>\$ 14,345</u>	<u>\$ 33,294</u>	<u>\$ 29,087</u>
Acquisition of flight equipment under capital lease	<u>\$ 10,800</u>	<u>\$ —</u>	<u>\$ —</u>
Disposition of aircraft included in Accounts receivable	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 5,072</u>

See accompanying Notes to Consolidated Financial Statements

Atlas Air Worldwide Holdings, Inc.
Consolidated Statements of Stockholders' Equity
(in thousands, except share data)

	Common Stock	Treasury Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Retained Earnings	Total Stockholders' Equity	Noncontrolling Interest	Total Equity
Balance at December 31, 2013 . . .	\$282	\$(125,826)	\$561,481	\$(10,677)	\$ 892,513	\$1,317,773	\$ 4,352	\$1,322,125
Net Income (loss)	—	—	—	—	106,757	106,757	(4,530)	102,227
Other comprehensive income . . .	—	—	—	1,105	—	1,105	178	1,283
Stock option and restricted stock compensation	—	—	13,606	—	—	13,606	—	13,606
Purchase of 591,858 shares of treasury stock	—	(19,496)	—	—	—	(19,496)	—	(19,496)
Exercise of 2,500 employee stock options	—	—	69	—	—	69	—	69
Issuance of 358,447 shares of restricted stock	4	—	(4)	—	—	—	—	—
Tax benefit (expense) on restricted stock and stock options	—	—	(2,019)	—	—	(2,019)	—	(2,019)
Balance at December 31, 2014 . . .	\$286	\$(145,322)	\$573,133	\$(9,572)	\$ 999,270	\$1,417,795	\$ —	\$1,417,795
Net Income	—	—	—	—	7,286	7,286	—	7,286
Other comprehensive income . . .	—	—	—	3,509	—	3,509	—	3,509
Stock option and restricted stock compensation	—	—	16,181	—	—	16,181	—	16,181
Purchase of 565,352 shares of treasury stock	—	(26,522)	—	—	—	(26,522)	—	(26,522)
Exercise of 25,373 employee stock options	—	—	1,193	—	—	1,193	—	1,193
Issuance of 368,912 shares of restricted stock	4	—	(4)	—	—	—	—	—
Equity component of convertible notes, net of tax	—	—	32,234	—	—	32,234	—	32,234
Purchase of convertible note hedges, net of tax	—	—	(33,837)	—	—	(33,837)	—	(33,837)
Issuance of warrants	—	—	36,290	—	—	36,290	—	36,290
Tax benefit (expense) on restricted stock and stock options	—	—	54	—	—	54	—	54
Balance at December 31, 2015 . . .	\$290	\$(171,844)	\$625,244	\$(6,063)	\$1,006,556	\$1,454,183	\$ —	\$1,454,183
Net Income	—	—	—	—	41,516	41,516	—	41,516
Other comprehensive income . . .	—	—	—	1,070	—	1,070	—	1,070
Stock option and restricted stock compensation	—	—	32,724	—	—	32,724	—	32,724
Purchase of 297,569 shares of treasury stock	—	(11,275)	—	—	—	(11,275)	—	(11,275)
Issuance of 678,160 shares of restricted stock	6	—	(6)	—	—	—	—	—
Tax benefit (expense) on restricted stock and stock options	—	—	(880)	—	—	(880)	—	(880)
Balance at December 31, 2016 . . .	\$296	\$(183,119)	\$657,082	\$(4,993)	\$1,048,072	\$1,517,338	\$ —	\$1,517,338

See accompanying Notes to Consolidated Financial Statements

Atlas Air Worldwide Holdings, Inc.
Notes to Consolidated Financial Statements
December 31, 2016

1. Basis of Presentation

Our consolidated financial statements include the accounts of the holding company, Atlas Air Worldwide Holdings, Inc. (“AAWW”), and its consolidated subsidiaries. AAWW is the parent company of Atlas Air, Inc. (“Atlas”) and Southern Air Holdings, Inc. (“Southern Air”). Southern Air was acquired on April 7, 2016 (see Note 4). AAWW is also the parent company of several subsidiaries related to our dry leasing services (collectively referred to as “Titan”). AAWW has a 51% equity interest and 75% voting interest in Polar Air Cargo Worldwide, Inc. (“Polar”). We record our share of Polar’s results under the equity method of accounting.

Noncontrolling interests represents the interest not owned by us and is recorded for consolidated entities in which we own less than 100% of the interest. Intercompany accounts and transactions have been eliminated. We account for investments in entities under the equity method of accounting when we hold between 20% and 50% ownership in the entity and exercise significant influence or when we are not the primary beneficiary of a variable interest entity. The terms “we,” “us,” “our,” and the “Company” mean AAWW and all entities included in its consolidated financial statements.

We provide outsourced aircraft and aviation operating services throughout the world, serving Africa, Asia, Australia, Europe, the Middle East, North America and South America through: (i) contractual service arrangements, including those through which we provide aircraft to customers and value-added services, including crew, maintenance and insurance (“ACMI”), as well as those through which we provide crew, maintenance and insurance, but not the aircraft (“CMI”); (ii) cargo and passenger charter services (“Charter”); and (iii) dry leasing aircraft and engines (“Dry Leasing” or “Dry Lease”).

Except for per share data, all dollar amounts are in thousands unless otherwise noted.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (“GAAP”) requires us to make estimates and judgments that affect the amounts reported in these financial statements and the related disclosures. Actual results may differ from those estimates. Estimates are used in determining, among other items, asset lives and residual values, cash flows for impairment analysis, heavy maintenance costs, income tax accounting, business combinations, intangible assets, warrants, contingent liabilities (including, but not limited to litigation accruals), valuation allowances (including, but not limited to, those related to receivables, expendable parts inventory and deferred taxes), stock-based compensation and self-insurance employee benefit accruals.

Revenue Recognition

Revenue from ACMI and CMI contracts is typically recognized as the block hours are operated on behalf of a customer during a given month, as defined contractually, based on flight departure. The time interval between when an aircraft departs the terminal until it arrives at the destination terminal is measured in hours and called a “Block Hour”. If a customer flies below a minimum contracted Block Hour guarantee, the contracted minimum revenue amounts are recognized as revenue. We recognize revenue for Charter upon flight departure.

We record Dry Lease rental income on a straight-line basis over the term of the operating lease. In limited cases, leases provide for additional rentals based on usage, which is recorded as revenue as it is earned under the terms of the lease. Usage is calculated based on hourly usage or number of flights operated, depending on the lease agreement, and is typically reported monthly by the lessee. Rentals received but unearned under the lease agreements are recorded in deferred revenue and included in Accrued liabilities until earned.

Customer maintenance reserves are amounts received under our Dry Leases that are subject to reimbursement to the lessee upon the completion of qualifying maintenance work on the specific Dry Leased aircraft and are included in Accrued liabilities. We defer revenue recognition until the end of the lease, when we are able to finalize the amount, if any, to be reimbursed to the customer.

The Company recognizes revenue for management and administrative support services when the services are provided.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, demand deposits and other cash investments that are highly liquid in nature and have original maturities of three months or less at acquisition.

Short-term Investments

Short-term investments are primarily comprised of certificates of deposit, current portions of debt securities and money market funds.

Restricted Cash

Cash that is restricted under secured aircraft debt agreements, whereby it can only be used to make principal and interest payments on the related debt secured by those aircraft, is classified as Restricted cash.

Accounts Receivable

We perform a monthly evaluation of our accounts receivable and establish an allowance for doubtful accounts based on our best estimate of probable credit losses resulting from the inability or unwillingness of our customers to make required payments. Account balances are charged off against the allowance when we determine that the receivable will not be recovered.

Escrow Deposits and Letters of Credit

We had \$5.0 million as of December 31, 2016 and \$3.9 million as of December 31, 2015, for certain deposits required in the normal course of business for various items including, but not limited to, surety and customs bonds, airfield privileges, judicial deposits, insurance and cash pledged under standby letters of credit related to collateral. These amounts are included in Deposits and other assets.

Expendable Parts

Expendable parts, materials and supplies for flight equipment are carried at average acquisition costs and are included in Prepaid expenses and other current assets. When used in operations, they are charged to maintenance expense. Allowances for excess and obsolescence for expendable parts expected to be on hand at the date aircraft are retired from service are provided over the estimated useful lives of the related airframes and engines. These allowances are based on management estimates, which are subject to change as conditions in the business evolve. The net book value of expendable parts inventory was \$24.2 million as of December 31, 2016 and \$18.1 million at December 31, 2015, net of allowances for obsolescence of \$22.3 million at December 31, 2016 and \$19.7 million at December 31, 2015.

Property and Equipment

We record property and equipment at cost and depreciate these assets to their estimated residual values on a straight-line basis over their estimated useful lives or average remaining fleet lives. We review these assumptions

at least annually and adjust depreciation on a prospective basis. Expenditures for major additions, improvements and flight equipment modifications are generally capitalized and depreciated over the shorter of the estimated life of the improvement, the modified assets' remaining life or remaining lease term. Most of our flight equipment is specifically pledged as collateral for our indebtedness. The estimated useful lives of our property and equipment are as follows:

	<u>Range</u>
Flight equipment	3 to 40 years
Computer software and equipment	3 to 5 years
Ground handling equipment and other	3 to 5 years

Depreciation expense related to property and equipment was \$141.5 million in 2016, \$122.2 million in 2015 and \$114.0 million in 2014.

The net book value of flight equipment on dry lease to customers was \$936.0 million as of December 31, 2016 and \$887.9 million as of December 31, 2015. The accumulated depreciation for flight equipment on dry lease to customers was \$99.8 million as of December 31, 2016 and \$64.5 million as of December 31, 2015.

Rotable parts are recorded in Property and equipment, net, and are depreciated over their average remaining fleet lives and written off when they are determined to be beyond economic repair. The net book value of rotable parts inventory was \$142.7 million as of December 31, 2016 and \$125.6 million as of December 31, 2015.

Capitalized Interest on Flight Equipment Modifications in Progress

Interest on funds used to finance the acquisition of flight equipment up to the date the asset is ready for its intended use is capitalized and included in the cost of the asset. Included in capitalized interest is the interest paid on the purchase deposit borrowings directly associated with the acquisition of flight equipment. The remainder of capitalized interest recorded on the acquisition of flight equipment is determined by taking the weighted average cost of funds associated with our other debt and applying it against the amounts paid as purchase deposits.

Goodwill

Goodwill represents the excess of an acquisition's purchase price over the fair value of the identifiable net assets acquired and liabilities assumed. Goodwill is not amortized, but tested for impairment annually during the fourth quarter of each year, or more frequently if certain events or circumstances indicate that an impairment loss may have been incurred.

We may elect to perform a qualitative analysis on the reporting unit that has goodwill to determine whether it is more likely than not that fair value of the reporting unit is less than its carrying value. If the qualitative analysis indicates that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, or if we elect not to perform a qualitative analysis, we perform a quantitative analysis to determine whether a goodwill impairment exists. If the goodwill's carrying value exceeds its fair value calculated using the quantitative approach, an impairment charge is recorded for the difference in fair value and carrying value.

Fair value is determined using a discounted cash flow analysis based on key assumptions including, but not limited to, (i) a projection of revenues, expenses and other cash flows; (ii) terminal period revenue growth and cash flows; and (iii) an assumed discount rate.

The total amount of goodwill was \$40.4 million, which is included in Intangible assets, net and goodwill, and Prepaid expense and other current assets in the consolidated balance sheets as of December 31, 2016 (see Notes 4 and 6). During the fourth quarter of 2016, we performed a quantitative analysis and determined that goodwill was not impaired.

Impairment of Long-Lived Assets

We record impairment charges on long-lived assets when events and circumstances indicate that the assets may be impaired, the undiscounted cash flows estimated to be generated by those assets are less than the associated carrying amount and the net book value of the assets exceeds the associated estimated fair value.

For flight equipment and finite-lived intangibles used in our ACMI and Charter segments, assets are grouped at the operating fleet level for impairment testing. For flight equipment and finite-lived intangibles used in our Dry Leasing segment, assets are tested on an individual basis for impairment.

For assets classified as held for sale, an impairment is recognized when the fair value less the cost to sell the asset is less than its carrying amount.

In developing estimates for flight equipment and cash flows, we use external appraisals and other industry data for the various equipment types, anticipated utilization of the assets, revenue generated, associated costs and length of service.

Long-term Investments

Long-term investments consist of debt securities, including accrued interest, for which management has the intent and ability to hold to maturity. These investments are classified as held-to-maturity and are reported at amortized cost. Interest on debt securities and accretion of discounts using the effective interest method are included in Interest income.

Variable Interest Entities and Off-Balance Sheet Arrangements

We hold a 50% interest in GATS GP (BVI) Ltd. (“GATS”), a joint venture with an unrelated third party. The purpose of the joint venture is to purchase rotatable parts and provide repair services for those parts, primarily for our 747-8F aircraft. The joint venture is a variable interest entity and we have not consolidated GATS because we are not the primary beneficiary as we do not exercise financial control. Our investment in GATS was \$22.2 million as of December 31, 2016 and \$20.7 million as of December 31, 2015 and our maximum exposure to losses from the entity is limited to our investment, which is composed primarily of rotatable inventory parts. GATS does not have any third-party debt obligations. We had Accounts payable to GATS of \$2.4 million as of December 31, 2016 and \$2.3 million as of December 31, 2015.

A portion of our operating aircraft are owned or effectively owned and leased through trusts established specifically to purchase, finance and lease aircraft to us. We have not consolidated any aircraft in the related trusts because we are not the primary beneficiary. Our maximum exposure under these operating leases is the remaining lease payments, which amounts are reflected in the future lease commitments more fully described in Note 10.

Income Taxes

Deferred income taxes are recognized for the tax consequences of reporting items in our income tax returns at different times than the items are reflected in our financial statements. These temporary differences result in deferred tax assets and liabilities that are calculated by applying enacted statutory tax rates applicable to future years to differences between the financial statement carrying amounts and the tax bases of existing assets and liabilities. If necessary, deferred income tax assets are reduced by a valuation allowance to an amount that is determined to be more likely than not recoverable. We must make significant estimates and assumptions about future taxable income and future tax consequences when determining the amount, if any, of the valuation allowance.

We have recorded reserves for income taxes that may become payable in future years. Although management believes that its positions taken on income tax matters are reasonable, we have nevertheless established tax reserves in recognition that various taxing authorities may challenge certain of the positions taken by us, potentially resulting in additional liabilities for taxes.

Heavy Maintenance

Except for engines used on our 747-8F aircraft, we account for heavy maintenance costs for airframes and engines used in our ACMI and Charter segments using the direct expense method. Under this method, heavy maintenance costs are charged to expense upon induction, based on our best estimate of the costs.

We account for heavy maintenance costs for airframes and engines used in our Dry Leasing segment and engines used on our 747-8F aircraft using the deferral method. Under this method, we defer the expense recognition of scheduled heavy maintenance events, which are amortized over the estimated period until the next scheduled heavy maintenance event is required. As of December 31, 2016 and December 31, 2015, deferred maintenance, net was \$19.1 million and zero, respectively, which was included within Deferred costs and other assets. During 2016, we deferred maintenance costs of \$19.6 million and recorded deferred maintenance amortization expense of \$0.5 million included in depreciation and amortization expense.

Prepaid Maintenance Deposits

Certain of our aircraft financing agreements require security deposits to our finance providers to ensure that we perform major maintenance as required. These are substantially refundable to us and are, therefore, accounted for as deposits and included in Prepaid maintenance and in Deferred costs and other assets. Such amounts were \$53.4 million as of December 31, 2016 and \$47.2 million at December 31, 2015.

Foreign Currency

While most of our revenues are denominated in U.S. dollars, our results of operations may be exposed to the effect of fluctuations in the U.S. dollar value of foreign currency-denominated operating revenues and expenses. Our largest exposures come from the Brazilian real. We do not currently have a foreign currency hedging program related to our foreign currency-denominated transactions. Gains or losses resulting from foreign currency transactions are included within Non-operating expenses (income).

Stock-Based Compensation

We have various stock-based compensation plans for certain employees and outside directors, which are described more fully in Note 15. We recognize compensation expense, net of estimated forfeitures, on a straight-line basis over the vesting period for each award based on the fair value on grant date. We estimate grant date fair value for all option grants using the Black-Scholes-Merton option pricing model. We estimate option and restricted stock unit forfeitures at the time of grant and periodically revise those estimates in subsequent periods if actual forfeitures differ from those estimates. As a result, we record stock-based compensation expense only for those awards that are expected to vest.

Legal and Regulatory Matters

We are party to legal and regulatory proceedings with respect to a variety of matters. We evaluate the likelihood of an unfavorable outcome of these proceedings each quarter. Our judgments are subjective and are based on the status of the legal or regulatory proceedings, the merits of our defenses and consultation with legal counsel. Due to the inherent uncertainties of the legal and regulatory proceedings in the multiple jurisdictions in which we operate, our judgments may be different from the actual outcomes.

Supplemental Cash Flow Information

Cash interest paid to lenders is calculated on the face amount of our various debt instruments based on the contractual interest rates in effect during each payment period.

The following table summarizes interest and income taxes paid:

	2016	2015	2014
Interest paid	\$66,306	\$75,135	\$84,265
Income taxes paid, net of refunds	\$ 1,160	\$ (228)	\$ 1,181

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the consolidated balance sheets that sum to the total of the same such amounts shown in the consolidated statements of cash flows:

	2016	2015
Cash and cash equivalents	\$123,890	\$425,950
Restricted cash	14,360	12,981
Total cash, cash equivalents and restricted cash shown in consolidated statements of cash flows	<u>\$138,250</u>	<u>\$438,931</u>

Recent Accounting Pronouncements

In November 2016, the Financial Accounting Standards Board (“FASB”) amended its accounting guidance for statements of cash flows. Under the amended guidance, restricted cash should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period amounts shown on the statement of cash flows. We early adopted this guidance retrospectively effective December 31, 2016 and its adoption did not have a material impact on our financial condition, results of operations or cash flows. The amount of restricted cash reclassified to the end-of-period amounts in our statement of cash flows were \$13.0 million and \$14.3 million as of December 31, 2015 and 2014, respectively. As a result, net cash used for investing activities increased by \$1.3 million and decreased by \$7.8 million for the years ended December 31, 2015 and 2014, respectively.

In March 2016, the FASB amended its accounting guidance for share-based compensation. The amended guidance changes how companies account for certain aspects of share-based payment awards to employees, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. This amended guidance is effective as of the beginning of 2017, with early adoption permitted. We adopted this guidance on January 1, 2017. Upon adoption of this amended guidance, the excess tax benefit associated with share-based compensation, which is currently recognized within equity, will be reflected within income tax expense (benefit) in our consolidated statements of operations. Additionally, our consolidated statements of cash flows will present such excess tax benefit, which is currently presented as a financing activity, as an operating activity. The adoption of this amended guidance is not expected to have a material impact on our financial condition, results of operations or cash flows.

In February 2016, the FASB amended its accounting guidance for leases. The guidance requires a lessee to recognize assets and liabilities on the balance sheet arising from leases with terms greater than twelve months. While lessor accounting guidance is relatively unchanged, certain amendments were made to conform with changes made to lessee accounting and recently released revenue recognition guidance. The new guidance will continue to classify leases as either finance or operating, with classification affecting the pattern of expense and income recognition in the statement of operations. It also requires additional quantitative and qualitative disclosures about leasing arrangements. The amended guidance is effective as of the beginning of 2019, with early adoption permitted. While we are still assessing the impact the amended guidance will have on our

financial statements, we expect that recognizing the right-of-use asset and related lease liability will significantly impact our balance sheet. We have developed and are implementing a plan for adopting this amended guidance.

In May 2014, the FASB amended its accounting guidance for revenue recognition. Subsequently, the FASB has issued several clarifications and updates. The fundamental principles of the new guidance are that companies should recognize revenue in a manner that reflects the timing of the transfer of services to customers and consideration that a company expects to receive for the services provided. It also requires additional disclosures necessary for the financial statement users to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. In August 2015, the FASB deferred the effective date by one year to the beginning of 2018, with early adoption permitted. We plan to adopt this guidance on its required effective date. While we are still assessing the methods of adoption and impact the amended guidance will have on our financial statements, we expect that an immaterial amount of revenue currently recognized based on flight departure will likely be recognized over time as the services are performed. In addition, we expect that revenue related to contracted minimum block hour guarantees under certain ACMI and CMI contracts will likely be recognized in later periods under the amended guidance. We have developed and are implementing a plan for adopting this amended guidance.

3. DHL Investment and Polar

DHL Network Operations (USA), Inc. (“DHL”), a subsidiary of Deutsche Post AG (“DP”), holds a 49% equity interest and a 25% voting interest in Polar. Polar is a variable interest entity and we do not consolidate Polar because we are not the primary beneficiary as the risks associated with the direct costs of operation are with DHL. Under a 20-year blocked space agreement, which began in 2008 (the “BSA”), Polar provides air cargo capacity to DHL. Atlas and Polar also have a flight services agreement, whereby Atlas is compensated by Polar on a per Block Hour basis, subject to a monthly minimum Block Hour guarantee, at a predetermined rate with the opportunity for performance premiums that escalate annually. Under the flight services agreement, Atlas provides Polar with crew, maintenance and insurance for the aircraft. Under other separate agreements, we provide aircraft to Polar, and Atlas and Polar supply administrative, sales and ground support services to one another. DP has guaranteed DHL’s (and Polar’s) obligations under the various transaction agreements described above. AAWW has agreed to indemnify DHL for and against various obligations of Polar and its affiliates. Collectively, these agreements are referred to herein as the “DHL Agreements”. The DHL Agreements provide us with a minimum guaranteed revenue stream from aircraft that have been dedicated to Polar for DHL and other customers’ freight over the life of the agreements. DHL provides financial support and also assumes the risks and rewards of the operations of Polar.

In accordance with the DHL Agreements, Polar flies for DHL’s transpacific express network and DHL provides financial support and assumes the risks and rewards of the operations of Polar. In addition to transpacific routes, Polar also flies between the Asia Pacific region, the Middle East and Europe on behalf of DHL and other customers.

The BSA established DHL’s capacity purchase commitments on Polar flights. DHL has the right to terminate the 20-year BSA at the twelfth and fifteenth anniversaries of commencement, which was October 27, 2008. Either party may terminate for cause (as defined) at any time. With respect to DHL, “cause” includes Polar’s inability to meet certain departure and arrival criteria for an extended period of time and upon certain change-of-control events, in which case DHL may be entitled to liquidated damages from Polar. Except for any liquidated damages that we could incur as described above, we do not have any continuing financial exposure to fund debt obligations or operating losses of Polar.

Combined with Polar, we provide ACMI, CMI, Charter and Dry Leasing services to support DHL’s transpacific express, North American and intra-Asian networks. In addition, we fly between the Asia Pacific region, the Middle East and Europe on behalf of DHL and other customers. Atlas also provides incremental charter capacity to Polar and DHL on an ad hoc basis.

The following table summarizes the aircraft types, services and number of aircraft provided to DHL as of December 31, 2016:

<u>Aircraft</u>	<u>Service</u>	<u>Total</u>
747-8F	ACMI	6
747-400F	ACMI	7
777-200LRF	CMI	5
767-300	CMI and Dry Leasing	4
767-200	CMI	9
737-400F	CMI	5
757-200F	Dry Leasing	1
Total		<u>37</u>

The following table summarizes our transactions with Polar:

Revenue and Expenses:	<u>2016</u>	<u>2015</u>	<u>2014</u>
Revenue from Polar	\$407,891	\$399,113	\$325,053
Ground handling and airport fees paid to Polar	\$ 1,667	\$ 2,019	\$ 1,909
Accounts receivable/payable as of December 31:	<u>2016</u>	<u>2015</u>	
Receivables from Polar	\$ 8,161	\$ 6,527	
Payables to Polar	\$ 2,019	\$ 4,660	
Aggregate Carrying Value of Polar Investment as of December 31:	<u>2016</u>	<u>2015</u>	
	\$ 4,870	\$ 4,870	

4. Southern Air Acquisition

On January 15, 2016, we entered into an Agreement and Plan of Merger to acquire all the outstanding shares of Southern Air (the "Southern Air Acquisition"). Southern Air is the parent company of several subsidiaries, including Southern Air Inc. and Florida West International Airways, Inc. ("Florida West"). The Southern Air Acquisition provided us with immediate entry into 777 and 737 aircraft operating platforms, with the potential for developing additional business with existing and new customers of both companies. We believe the platforms provided by these aircraft will augment our ability to offer customers the broadest array of aircraft and operating services for domestic, regional and international applications. Southern Air currently flies five 777-200LRF and five 737-400F aircraft under CMI agreements for DHL.

The Southern Air Acquisition was completed on April 7, 2016. Total consideration of \$105.8 million, net of cash acquired, consisted of the following:

<u>Fair value of consideration</u>	
Cash paid, net of \$15,615 cash acquired	\$107,498
Working capital adjustment	(2,106)
Other adjustments	<u>372</u>
Total consideration	<u>\$105,764</u>

Tangible and identifiable intangible assets acquired and liabilities assumed were recorded at fair value as of the acquisition date. During 2016, we made certain measurement-period adjustments, including the finalization of the fair value of Florida West, and working capital and other adjustments that resulted in a net increase to goodwill of \$4.0 million.

The following table summarizes the preliminary amounts recognized for fair values of the assets acquired and liabilities assumed:

	<u>Estimated Fair Value</u>
Accounts receivable, net	\$ 22,912
Prepaid expenses and other current assets	2,434
Property and equipment	6,355
Intangible assets and goodwill	67,341
Deferred income taxes, net	36,452
Other assets	<u>1,498</u>
Total assets acquired	<u>\$136,992</u>
Accounts payable and accrued liabilities	\$ 31,228
Total liabilities assumed	<u>31,228</u>
Net assets acquired	<u>\$105,764</u>

The fair values and useful lives assigned to all intangible assets and goodwill are as follows:

	<u>Estimated Useful Lives</u>	<u>Estimated Fair Value</u>
Customer relationship	16 years	\$26,280
Trade name	1.5 years	700
Goodwill	Indefinite	<u>40,361</u>
Total intangible assets and goodwill		<u>\$67,341</u>

Customer relationship represents the underlying relationship and agreements with DHL. The trade name relates to the Southern Air brand. Goodwill is not deductible for tax purposes and is primarily attributable to the expanded market opportunities expected from combining the service offerings of Southern Air with ours, as well as the employee work force acquired. Southern Air's results of operations and goodwill are reflected in our ACMI segment. Amortization expense related to Southern Air's intangible assets amounted to \$1.6 million in 2016.

For 2016, our consolidated results include Southern Air's operating revenue of \$79.8 million. For 2016, we incurred Transaction-related expenses of \$17.7 million, primarily related to: certain compensation costs, including employee termination benefits; professional fees; and integration costs associated with the acquisition.

A summary of the employee termination benefit liability, which is expected to be paid by the first quarter of 2018, is as follows:

	<u>Employee Termination Benefits</u>
Transaction-related expenses	\$ 3,797
Cash payments	<u>(2,583)</u>
Liability as of December 31, 2016	<u>\$ 1,214</u>

The unaudited pro forma operating revenue for 2016 and 2015 was \$1,866.7 million and \$1,912.4 million, respectively. This pro forma information has been calculated as if the acquisition had taken place on January 1, 2015 and is not necessarily indicative of the net sales that actually would have been achieved. This information includes adjustments to conform with our accounting policies. The earnings of Southern Air were not material and, accordingly, pro forma and actual earnings information have not been presented.

As part of integrating Southern Air, management decided and committed to pursue a plan to sell Florida West. As a result, the financial results for Florida West are presented as a discontinued operation and the assets and liabilities of Florida West are classified as held for sale, since the date of acquisition through December 31, 2016. The aggregate carrying value of Florida West's assets held for sale was insignificant at December 31, 2016 and was included in Prepaid expenses and other current assets. In February 2017, management determined that a sale was no longer likely to occur and committed to a plan to wind down the Florida West operations. The wind-down of operations is expected to be completed during the first quarter of 2017.

5. Special Charge

During 2016 and 2015, we recognized \$10.1 million of impairment losses for six CF6-80 engines classified as held for sale and \$8.3 million for five CF6-80 engines classified as held for sale, respectively. Depreciation ceased on the engines. Nine engines were traded in during 2016. The carrying value of two CF6-80 engines held for sale at December 31, 2016 was \$2.8 million and five CF6-80 engines held for sale at December 31, 2015 was \$7.7 million, which were included within Prepaid expenses and other current assets in the consolidated balance sheets. Two remaining CF6-80 engines classified as held for sale are expected to be sold during 2017.

During 2015, we recognized a charge of \$7.7 million related to the early termination of high-rate operating leases for two CF6-80 engines.

6. Intangible Assets, Net and Goodwill

The following table presents our Intangible assets, net and goodwill as of December 31:

	<u>2016</u>	<u>2015</u>
Goodwill	\$ 40,361	\$ —
Fair value adjustments on operating leases	45,531	45,531
Lease intangible	57,203	57,203
Customer relationship	26,280	—
Trade name	700	—
Less: accumulated amortization	<u>(54,046)</u>	<u>(44,251)</u>
	<u>\$116,029</u>	<u>\$ 58,483</u>

Goodwill is primarily attributable to the expanded market opportunities expected from combining the service offerings of Southern Air with ours, as well as the employee work force acquired. Fair value adjustments on operating leases represent the capitalized discount recorded in prior years to adjust the lease commitments for our 747-400 aircraft to fair market value and are amortized on a straight-line basis over the life of the leases. Lease intangibles resulted from the acquisition of various aircraft with in-place Dry Leases to customers on a long-term basis and are amortized on a straight-line basis over the life of the leases. Customer relationship represents Southern Air's underlying relationship and agreements with DHL. The trade name relates to the Southern Air brand.

Amortization expense related to intangible assets amounted to \$9.8 million in 2016, \$8.9 million in 2015 and \$9.4 million in 2014.

The estimated future amortization expense of intangible assets as of December 31, 2016 is as follows:

2017	\$ 9,914
2018	9,290
2019	8,590
2020	8,416
2021	8,416
Thereafter	<u>31,042</u>
Total	<u>\$75,668</u>

7. Amazon

In May 2016, we entered into certain agreements with Amazon.com, Inc. and its subsidiary, Amazon Fulfillment Services, Inc., (collectively "Amazon"), which will involve, among other things, CMI operation of 20 Boeing 767-300 freighter aircraft for Amazon by Atlas, as well as Dry Leasing by Titan. The Dry Leases will have a term of ten years, while the CMI operations will be for seven years (with an option for Amazon to extend the term to a total of ten years). The first aircraft was placed in service during the third quarter of 2016 and the remainder are expected to be placed in service by the end of 2018.

In conjunction with these agreements, we granted Amazon a warrant providing the right to acquire up to 20% of our outstanding common shares, after giving effect to the issuance of shares pursuant to the warrants, at an exercise price of \$37.50 per share. A portion of the warrant, representing the right to purchase 3.75 million shares, vested immediately upon issuance of the warrant and the remainder of the warrant, representing the right to purchase 3.75 million shares, will vest in increments of 375,000 as the lease and operation of each of the 11th through 20th aircraft commences. The warrant will be exercisable in accordance with its terms through 2021. As of December 31, 2016, no warrants have been exercised.

The agreements also provide incentives for future growth of the relationship as Amazon may increase its business with us. In that regard, we granted Amazon a warrant to acquire up to an additional 10% of our outstanding common shares, after giving effect to the issuance of shares pursuant to the warrants, for an exercise price of \$37.50 per share. This warrant to purchase 3.75 million shares will vest in conjunction with payments by Amazon for additional business with us. The warrant will be exercisable in accordance with its terms through 2023.

At a special meeting on September 20, 2016, the Company's shareholders, by a vote of approximately 99.9% of the votes cast, approved the issuance of warrants to acquire up to 30% of our outstanding common shares. This approval constituted a change in control, as defined under certain of the Company's benefit plans. As a result, we recognized \$23.5 million in expense, including accelerated compensation expense for restricted and performance share and cash awards, during 2016 (see Notes 15 and 16). The share-based portion of the compensation expense was \$13.3 million.

The \$92.9 million fair value of the vested portion of the warrant issued to Amazon as of May 4, 2016 was recorded as a warrant liability within Financial instruments and other liabilities (the "Amazon Warrant"). The initial fair value of the warrant was recognized as a customer incentive asset within Deferred costs and other assets, net and is being amortized as a reduction of revenue in proportion to the amount of revenue recognized over the terms of the Dry Leases and CMI agreements. During 2016, we amortized \$0.5 million of the customer incentive asset. The balance of the customer incentive asset, net of amortization, was \$92.4 million as of December 31, 2016.

The Amazon Warrant liability is marked-to-market at the end of each reporting period with changes in fair value recorded in Other non-operating expenses. We utilize a Monte Carlo simulation approach to estimate the

fair value of the Amazon Warrant which requires inputs such as our common stock price, the warrant strike price, estimated common stock price volatility and risk-free interest rate, among others. We recognized a net unrealized loss of \$2.9 million on the Amazon Warrant during 2016. The fair value of the Amazon Warrant liability was \$95.8 million as of December 31, 2016.

8. Accrued Liabilities

Accrued liabilities consisted of the following as of December 31:

	2016	2015
Customer maintenance reserves	\$ 81,830	\$ 70,252
Salaries, wages and benefits	55,063	51,649
Maintenance	54,495	52,070
U.S. class action settlement	35,000	35,000
Aircraft fuel	16,149	12,983
Deferred revenue	10,298	12,702
Other	68,052	58,482
Accrued liabilities	<u>\$320,887</u>	<u>\$293,138</u>

9. Debt

Our debt obligations, as of December 31:

	2016	2015
Ex-Im Bank guaranteed notes	\$ 616,892	\$ 689,720
Term loans and capital lease	1,037,077	1,013,265
Convertible Notes	177,398	170,300
EETC	20,044	28,022
Total debt	1,851,411	1,901,307
Less current portion of debt and capital lease	(184,748)	(161,811)
Long-term debt	<u>\$1,666,663</u>	<u>\$1,739,496</u>

At December 31, 2016 and 2015, we had \$92.0 million and \$106.8 million, respectively, of unamortized debt discounts and debt issuance costs, which are presented as a reduction of the carrying amount of outstanding debt.

Many of our financing instruments have cross-default provisions and contain limitations on our ability to, among other things, consummate certain asset sales, merge or consolidate with any other person or sell, assign, transfer, lease, convey or otherwise dispose of all or substantially all of our assets.

Description of our Debt Obligations

Ex-Im Bank Guaranteed Notes

We have issued various notes guaranteed by the Export-Import Bank of the United States (“Ex-Im Bank”), each secured by a mortgage on a 747-8F or 777-200LRF aircraft (the “Ex-Im Guaranteed Notes”). In connection with the issuance of Ex-Im Guaranteed Notes, we paid usual and customary commitment and other fees associated with this type of financing. In addition, there are customary covenants, events of default and certain operating conditions that we must meet for the Ex-Im Guaranteed Notes. These notes accrue interest at a fixed rate with principal and interest payable quarterly.

The following table summarizes the terms and principal balances for each note guaranteed by Ex-Im Bank as of December 31 (in millions):

	Issue Date	Face Value	Collateral Type	Original Term	Fixed Interest Rate	2016	2015
2014 Ex-Im Guaranteed Note	2014	\$140.6	747-8F	134 months	2.67%	\$107.3	\$118.7
First 2013 Ex-Im Guaranteed Note	2013	143.0	747-8F	144 months	1.83%	104.5	115.7
Second 2013 Ex-Im Guaranteed Note	2013	88.0	777-200LRF	90 months	1.84%	51.4	62.9
First 2012 Ex-Im Guaranteed Note	2012	142.0	747-8F	144 months	2.02%	92.7	104.1
Second 2012 Ex-Im Guaranteed Note	2012	142.7	747-8F	144 months	1.73%	95.8	107.2
Third 2012 Ex-Im Guaranteed Note	2012	142.8	747-8F	144 months	1.56%	95.4	106.9
Fourth 2012 Ex-Im Guaranteed Note	2012	143.2	747-8F	144 months	1.48%	98.4	109.8
						<u>\$645.5</u>	<u>\$725.3</u>

Term Loans and Capital Lease

We have entered into various term loans to finance the acquisition of aircraft. Each term loan requires payment of principal and interest quarterly in arrears. Funds available under each term loan agreement are subject to usual and customary fees, and funds drawn under the loan agreements typically bear interest at a fixed rate based on LIBOR, plus a margin. Each facility is guaranteed by us and subject to customary covenants and events of default.

In February 2016, we borrowed \$14.8 million related to the purchase and conversion of a 767-300BDSF aircraft under an eight-year term loan with a final payment of \$3.8 million due in February 2024 (the “First 2016 Term Loan”) secured by a mortgage against the aircraft.

In June 2016, we borrowed \$70.0 million under a five-year term loan with a final payment of \$30.2 million due in June 2021 (the “Second 2016 Term Loan”). The Second 2016 Term Loan is secured by a mortgage against six spare GEnx engines.

In September 2016, we entered into a capital lease, with an option and the intention to purchase, for a 767-300 passenger aircraft which expires in February 2017.

In December 2016, we borrowed \$18.7 million under an unsecured five-year term loan due in October 2021 (the “Third 2016 Term Loan”) for GEnx engine performance upgrade kits and overhauls.

In October 2015, we refinanced two higher-rate term loans, in the aggregate amount of \$195.2 million, with a new lower-rate term loan (the “First 2015 Term Loan”) secured by a mortgage against two 747-8F aircraft.

In November 2015, we borrowed \$125.0 million under a term loan (the “Second 2015 Term Loan”) secured by a mortgage against a 747-8F aircraft. The Second 2015 Term Loan is cross-collateralized and cross-defaulted with the First 2015 Term Loan.

In December 2015, we borrowed \$23.3 million related to the purchase and conversion of a 767-300BDSF aircraft under a term loan (the “Third 2015 Term Loan”) secured by a mortgage against the aircraft.

The following table summarizes the terms and principal balances for each term loan outstanding and the present value of the future minimum lease payments as of December 31 (in millions):

	Issue Date	Face Value	Collateral Type	Original Term	Interest Rate Type	Interest Rate at		2016	2015
						2016	2015	2016	2015
Capital Lease	2016	\$ 10.8	767-300	5 months	Fixed	—	—	\$ 10.8	\$ —
First 2016 Term Loan	2016	14.8	767-300	96 months	Fixed	3.19%	—	13.8	—
Second 2016 Term Loan	2016	70.0	GENx engines	60 months	Fixed	3.12%	—	66.1	—
Third 2016 Term Loan	2016	18.7	None	60 months	Fixed	2.13%	—	18.7	—
First 2015 Term Loan	2015	195.2	Two 747-8F	97 months	Fixed	3.53%	3.53%	177.2	191.7
Second 2015 Term Loan	2015	125.0	747-8F	144 months	Fixed	3.96%	3.96%	118.9	125.0
Third 2015 Term Loan	2015	23.3	767-300	96 months	Fixed	3.72%	3.72%	21.4	23.3
First 2014 Term Loan	2014	115.0	777-200LRF	114 months	Fixed	4.48%	4.48%	94.2	101.7
Second 2014 Term Loan	2014	30.8	777-200LRF	114 months	Fixed	7.30%	7.30%	23.1	25.7
Third 2014 Term Loan	2014	115.0	777-200LRF	118 months	Fixed	4.57%	4.57%	94.2	101.4
Fourth 2014 Term Loan	2014	29.0	777-200LRF	118 months	Fixed	7.29%	7.29%	22.2	24.6
Fifth 2014 Term Loan	2014	115.0	777-200LRF	116 months	Fixed	4.51%	4.51%	95.5	102.9
Sixth 2014 Term Loan	2014	27.2	777-200LRF	116 months	Fixed	7.35%	7.35%	21.3	23.6
First 2013 Term Loan	2013	119.5	777-200LRF	89 months	Variable	3.70%	3.12%	91.0	98.0
Second 2013 Term Loan	2013	110.0	777-200LRF	88 months	Fixed	4.18%	4.18%	85.1	93.1
First 2012 Term Loan	2012	35.7	Four 767-300	60 months	Fixed	6.91%	6.91%	—	8.9
Third 2012 Term Loan	2012	26.0	737-800	84 months	Fixed	4.27%	4.27%	11.2	14.8
First 2011 Term Loan	2011	120.3	747-8F	144 months	Fixed	6.16%	6.16%	88.6	95.5
								<u>\$1,053.3</u>	<u>\$1,030.2</u>

Convertible Notes

In June 2015, we issued \$224.5 million aggregate principal amount of convertible senior notes (the “Convertible Notes”) in an underwritten public offering. The Convertible Notes are senior unsecured obligations and accrue interest payable semiannually on June 1 and December 1 of each year at a fixed rate of 2.25%. The Convertible Notes will mature on June 1, 2022, unless earlier converted or repurchased pursuant to their terms.

During 2015, we used proceeds from the issuance of the Convertible Notes to refinance higher-rate equipment notes funded by enhanced equipment trust certificates (“EETCs”) related to five 747-400 freighter aircraft owned by us in the aggregate amount of \$187.8 million. The EETCs had an average cash coupon of 8.1%. In connection with the refinancing, we recognized a \$66.7 million loss on early extinguishment of debt, of which \$34.0 million was related to debt extinguishment costs paid to the EETC equipment note holders and \$32.7 million was related to the write-off of the debt discount associated with the EETCs. The debt extinguishment costs paid are reflected as a financing activity in the consolidated statements of cash flows. As a result of this refinancing, we recognized a \$13.4 million Gain on investments from the early redemption of certain investments related to EETCs in 2015 (see Note 12).

Each \$1,000 of principal of the Convertible Notes will initially be convertible into 13.5036 shares of our common stock, which is equal to an initial conversion price of \$74.05 per share. The conversion rate will be subject to adjustment upon the occurrence of certain specified events but will not be adjusted for accrued and unpaid interest, except in certain limited circumstances. Upon the occurrence of a “make-whole fundamental change,” we will, in certain circumstances, increase the conversion rate by a number of additional shares of our common stock for Convertible Notes converted in connection with such “make-whole fundamental change”. Additionally, if we undergo a “fundamental change,” a holder will have the option to require us to repurchase all or a portion of its Convertible Notes for cash at a price equal to 100% of the principal amount of the Convertible Notes being repurchased plus any accrued and unpaid interest through, but excluding, the fundamental change repurchase date.

In connection with the offering of the Convertible Notes, we entered into convertible note hedge transactions whereby we have the option to purchase initially (subject to adjustment for certain specified events) a total of 3,031,558 shares of our common stock at a price of \$74.05 per share. The total cost of the convertible note hedge transactions was \$52.9 million. In addition, we sold warrants to the option counterparties whereby the holders of the warrants have the option to purchase initially (subject to adjustment for certain specified events) a total of 3,031,558 shares of our common stock at a price of \$95.01. We received \$36.3 million in cash proceeds from the sale of these warrants in 2015.

Taken together, the purchase of the convertible note hedges and the sale of warrants are intended to offset any economic dilution from the conversion of the Convertible Notes when the stock price is below \$95.01 per share and to effectively increase the overall conversion price from \$74.05 to \$95.01 per share. However, for purposes of the computation of diluted earnings per share in accordance with GAAP, dilution will occur when the average share price of our common stock for a given period exceeds the conversion price of the Convertible Notes, which initially is equal to \$74.05 per share. The \$16.6 million net cost incurred in connection with the convertible note hedges and warrants was recorded as a reduction to additional paid-in capital, net of tax, in the consolidated balance sheet.

On or after September 1, 2021 until the close of business on the second scheduled trading day immediately preceding the maturity date, a holder may convert all or a portion of its Convertible Notes.

Upon conversion, the Convertible Notes will be settled, at our election, in cash, shares of our common stock, or a combination of cash and shares of our common stock. Our current intent and policy is to settle conversions with a combination of cash and shares of common stock with the principal amount of the Convertible Notes paid in cash.

Holder may convert their Convertible Notes at their option at any time prior to September 1, 2021, only under the following circumstances:

- during any calendar quarter (and only during such calendar quarter) if, for each of at least 20 trading days (whether or not consecutive) during the 30 consecutive trading day period ending on, and including, the last trading day of the immediately preceding calendar quarter, the last reported sale price of our common stock for such trading day is equal to or greater than 130% of the conversion price on such trading day;
- during the five consecutive business day period immediately following any five consecutive trading day period (the “measurement period”) in which, for each trading day of the measurement period, the trading price per \$1,000 principal amount of the Convertible Notes for such trading day was less than 98% of the product of the last reported sale price of our common stock for such trading day and the conversion rate on such trading day; or
- upon the occurrence of specified corporate events.

We separately account for the liability and equity components of the Convertible Notes. The carrying amount of the liability component was determined by measuring the fair value of a similar liability that does not

have an associated conversion feature, assuming our nonconvertible unsecured debt borrowing rate. The carrying value of the equity component, the conversion option, which is recognized as additional paid-in-capital, net of tax, creates a debt discount on the Convertible Notes. The debt discount was determined by deducting the relative fair value of the liability component from the proceeds of the Convertible Notes and is amortized to interest expense using an effective interest rate of 6.44% over the term of the Convertible Notes. As of December 31, 2016, the remaining life of the Convertible Notes is 5.4 years. The equity component will not be remeasured as long as it continues to meet the conditions for equity classification.

The Convertible Notes consisted of the following as of December 31:

	<u>2016</u>	<u>2015</u>
Liability component:		
Gross proceeds	\$224,500	\$224,500
Less: debt discount, net of amortization	(42,956)	(49,377)
Less: debt issuance cost, net of amortization	<u>(4,146)</u>	<u>(4,823)</u>
Net carrying amount	<u>\$177,398</u>	<u>\$170,300</u>
Equity component (1)	<u>\$ 52,903</u>	<u>\$ 52,903</u>

(1) Included in Additional paid-in capital on the consolidated balance sheet as of December 31, 2016 and 2015.

The debt issuance costs related to the issuance of the Convertible Notes were allocated to the liability and equity components based on their relative values, as determined above. Total debt issuance costs were \$6.8 million, of which \$5.2 million was allocated to the liability component and \$1.6 million was allocated to the equity component. The debt issuance costs allocated to the liability component are amortized to interest expense using the effective interest method over the term of the Convertible Notes.

The following table presents the amount of interest expense recognized related to the Convertible Notes:

	For the Years Ended	
	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Contractual interest coupon	\$ 5,051	\$2,919
Amortization of debt discount	6,421	3,526
Amortization of debt issuance costs	<u>677</u>	<u>380</u>
Total interest expense recognized	<u>\$12,149</u>	<u>\$6,825</u>

EETC

In 1999, we issued an EETC secured by a 747-400F aircraft in the amount of \$109.9 million for an original term of 20 years with interest rates on the underlying equipment notes ranging from 6.88% to 8.77% and an effective interest rate of 7.52%. The balance outstanding on the leveraged lease was \$20.0 million and \$28.0 million as of December 31, 2016 and 2015, respectively.

Revolving Credit Facility

In December 2016, we entered into a three-year \$150.0 million secured revolving credit facility (the "Revolver") for general corporate purposes, including financing the acquisition and conversion of 767 aircraft prior to obtaining permanent financing for the converted aircraft. The Revolver is secured by mortgages against nine 747-400 and five 767-300 aircraft, and related engines. Amounts outstanding under the Revolver are subject to borrowing base calculations, collateral coverage and fixed charge ratios. The Revolver accrues interest monthly at LIBOR plus a margin of 2.25% per annum on the amounts outstanding and 0.4% on the undrawn

portion. In connection with entry into the Revolver, we paid usual and customary fees. There were no amounts outstanding and we had \$150.0 million of unused availability under the Revolver as of December 31, 2016. In January 2017, we drew down \$100.0 million under the Revolver.

Future Cash Payments for Debt and Capital Lease

The following table summarizes the cash required to be paid by year and the carrying value of our debt reflecting the terms that were in effect as of December 31, 2016:

2017	\$ 194,169
2018	190,529
2019	189,358
2020	297,435
2021	190,682
Thereafter	<u>881,221</u>
Total debt cash payments	1,943,394
Less: unamortized debt discount and debt issuance costs	<u>(91,983)</u>
Debt	<u>\$1,851,411</u>

10. Commitments

Leveraged Lease Structure

In three separate transactions in 1998, 1999 and 2000, we issued EETCs to finance the acquisition of five 747-400F aircraft as leveraged leases. In a leveraged lease, the owner trustee is the owner of record for the aircraft. Wells Fargo Bank Northwest, National Association ("Wells Fargo") serves as the owner trustee with respect to the leveraged leases in each of our EETC transactions. As the owner trustee of the aircraft, Wells Fargo serves as the lessor of the aircraft under the EETC lease between us and the owner trustee. Wells Fargo also serves as trustee for the beneficial owner of the aircraft, the owner participant. The original owner participant for each aircraft invested (on an equity basis) approximately 20% of the original cost of the aircraft. The remaining approximately 80% of the aircraft cost was financed with debt issued by the owner trustee on a nonrecourse basis in the form of equipment notes.

The equipment notes were generally issued in three series, for each aircraft, designated as Series A, B and C equipment notes. The loans evidenced by the equipment notes were funded by the public offering of EETCs. Like the equipment notes, the EETCs were issued in three series, for each EETC transaction designated as Series A, B and C EETCs. Each series of EETCs was issued by the trustee for separate Atlas pass-through trusts with the same designation as the series of EETCs issued (PTCs). Each of these pass-through trustees is also the holder and beneficial owner of the equipment notes bearing the same series designation.

These leasing entities meet the criteria for variable interest entities. We have not consolidated any of the aircraft-leasing trusts because we are not the primary beneficiary. We account for these leases as operating leases and have included them in our minimum annual rental commitments below.

Operating Leases

The following table summarizes rental expenses in:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Aircraft and engines	\$146,110	\$145,031	\$140,390
Purchased capacity, office, vehicles and other	\$ 23,727	\$ 44,228	\$ 68,855

As of December 31, 2016, fifteen of our sixty-one operating aircraft were leased, all, except for one, of which were operating leases, with initial lease term expiration dates ranging from 2017 to 2025, with an average remaining lease term of 5.7 years. Certain of our operating leases contain renewal options and escalations. In addition, we lease engines under short-term lease agreements on an as-needed basis. We record rent expense on a straight-line basis over the lease term.

The following table summarizes our minimum annual rental commitments as of the periods indicated under non-cancelable aircraft, engine, real estate and other operating leases with initial or remaining terms of more than one year, reflecting the terms that were in effect as of December 31, 2016:

	Aircraft and Engine Operating Leases	Other Operating Leases	Total
2017	\$131,002	\$ 5,848	\$136,850
2018	130,955	5,875	136,830
2019	140,193	5,273	145,466
2020	135,372	4,875	140,247
2021	145,925	4,419	150,344
Thereafter	<u>177,757</u>	<u>1,780</u>	<u>179,537</u>
Total payments	<u>\$861,204</u>	<u>\$28,070</u>	<u>\$889,274</u>

In addition to the aircraft we Dry Lease to customers, Polar subleases aircraft from us that are leased from a third party and are included in the table above under aircraft operating leases. The following table summarizes the contractual amount of minimum income under Dry Leases and the non-cancelable aircraft subleases, reflecting the terms that were in effect as of December 31, 2016:

	Dry Lease Income	Sublease Income	Total
2017	\$104,970	\$ 63,360	\$168,330
2018	104,023	52,800	156,823
2019	91,957	—	91,957
2020	81,582	—	81,582
2021	63,028	—	63,028
Thereafter	<u>115,187</u>	<u>—</u>	<u>115,187</u>
Total minimum lease receipts	<u>\$560,747</u>	<u>\$116,160</u>	<u>\$676,907</u>

Equipment Purchase Commitments

As of December 31, 2016, our estimated payments remaining for flight equipment purchase commitments are \$248.6 million, of which \$201.0 million are expected to be made during 2017.

Guarantees and Indemnifications

In the ordinary course of business, we enter into numerous leasing and financing arrangements for real estate, equipment, aircraft and engines that have various guarantees included in the contracts. These guarantees are primarily in the form of indemnities. In both leasing and financing transactions, we typically indemnify the lessors and any financing parties against tort liabilities that arise out of the use, occupancy, manufacture, design, operation or maintenance of the leased premises or financed aircraft, regardless of whether these liabilities relate to the negligence of the indemnified parties. Currently, we believe that any future payments required under many of these guarantees or indemnities would be immaterial, as most tort liabilities and related indemnities are covered by insurance (subject to deductibles). However, payments under certain tax indemnities related to certain

of our financing arrangements, if applicable, could be material, and would not be covered by insurance, although we believe that these payments are not probable. Certain leased premises, such as maintenance and storage facilities, typically include indemnities of such parties for any environmental liability that may arise out of or relate to the use of the leased premises. We also provide standard indemnification agreements to officers and directors in the ordinary course of business.

Financings and Guarantees

Our financing arrangements typically contain a withholding tax provision that requires us to pay additional amounts to the applicable lender or other financing party, if withholding taxes are imposed on such lender or other financing party as a result of a change in the applicable tax law.

These increased costs and withholding tax provisions continue for the entire term of the applicable transaction and there is no limitation on the maximum additional amount we could be required to pay under such provisions. Any failure to pay amounts due under such provisions generally would trigger an event of default and, in a secured financing transaction, would entitle the lender to foreclose upon the collateral to realize the amount due.

11. Income Taxes

The significant components of the provision for income taxes are as follows:

	2016	2015	2014
<i>Current:</i>			
Federal	\$ (376)	\$ 52	\$ 607
State and local	(298)	48	65
Foreign	84	1,292	(636)
Total current expense	<u>(590)</u>	<u>1,392</u>	<u>36</u>
<i>Deferred:</i>			
Federal	46,391	(24,425)	(13,332)
State and local	(1,436)	(3,531)	2,271
Foreign	2,426	2,058	(1,653)
Total deferred expense (benefit)	<u>47,381</u>	<u>(25,898)</u>	<u>(12,714)</u>
Total income tax expense (benefit)	<u>\$46,791</u>	<u>\$(24,506)</u>	<u>\$(12,678)</u>

The domestic and foreign earnings before income taxes are as follows:

	2016	2015	2014
Domestic	\$61,006	\$(57,825)	\$73,386
Foreign	28,410	40,605	16,163
Income (loss) before income taxes	<u>\$89,416</u>	<u>\$(17,220)</u>	<u>\$89,549</u>

A reconciliation of differences between the U.S. federal statutory income tax rate and the effective income tax rates is presented as a percent of expense (benefit) as follows:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
U.S. federal statutory income tax rate	35.0%	(35.0%)	35.0%
State and local taxes based on income, net of federal benefit	1.1%	(2.0%)	2.2%
Change in deferred foreign and state tax rates	(2.2%)	(12.0%)	(4.2%)
Nondeductible customer incentive related to Amazon	10.9%	—	—
Nondeductible compensation expenses related to Amazon	13.0%	—	—
Other nondeductible expenses	4.3%	10.2%	2.2%
Extraterritorial income tax benefit	—	(23.3%)	(38.8%)
Tax incentives and additional deductions	(0.9%)	(4.9%)	(3.8%)
Favorable resolution of income tax issues	—	(13.8%)	(1.5%)
Tax effect of foreign operations	(9.4%)	(66.4%)	(5.7%)
Other	<u>0.5%</u>	<u>4.9%</u>	<u>0.4%</u>
Effective income tax rate	<u>52.3%</u>	<u>(142.3%)</u>	<u>(14.2%)</u>

The effective income tax rate for the twelve months ended December 31, 2016 differed from the U.S. federal statutory rate primarily due to a nondeductible customer incentive and to nondeductible compensation expenses resulting from a change in control, as defined under certain of the Company's benefit plans, both related to the Amazon transaction (see Note 7). We also generated non-recurring tax benefits from extraterritorial income ("ETI") in 2015 and 2014, which reduced our income tax rate in proportion to our income or loss.

We indefinitely reinvest the net earnings of certain foreign subsidiaries engaged in our Dry Leasing business, which favorably impacted our effective income tax rate for all three years. At December 31, 2016, our undistributed net earnings of foreign subsidiaries for which deferred taxes have not been provided were \$103.7 million, and the unrecognized deferred tax liability associated with these earnings was \$36.3 million.

Deferred tax assets and liabilities represent the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. The net noncurrent deferred tax asset (liability) was comprised of the following as of December 31:

	<u>Assets (Liabilities)</u>	
	<u>2016</u>	<u>2015</u>
Deferred tax assets:		
Net operating loss carryforwards and credits	\$ 454,749	\$ 437,408
Accrued compensation	17,036	16,523
Accrued legal settlements	25,442	35,909
Aircraft leases	16,109	14,863
Allowance for doubtful accounts	—	1,597
Goodwill and other intangibles	15,798	—
Interest rate derivatives	3,124	3,825
Long-term debt	3,409	3,827
Obsolescence reserve	7,804	6,723
Stock-based compensation	6,731	5,385
Other	<u>686</u>	<u>1,869</u>
Total deferred tax assets	550,888	527,929
Valuation allowance	<u>(49,396)</u>	<u>(50,711)</u>
Net deferred tax assets	<u>\$ 501,492</u>	<u>\$ 477,218</u>
Deferred tax liabilities:		
Fixed assets	\$(778,905)	\$(754,318)
Accrued expenses	(10)	(2,166)
Acquisition of EETC debt	(4,079)	(6,390)
Deferred maintenance	(6,829)	—
Incentive related to Amazon	<u>(8,614)</u>	<u>—</u>
Total deferred tax liabilities	<u>\$(798,437)</u>	<u>\$(762,874)</u>
Assets (Liabilities)		
2016		
2015		
Deferred taxes included within following balance sheet line items:		
Deferred taxes	\$(298,165)	\$(286,928)
Deferred costs and other assets	<u>1,219</u>	<u>1,272</u>
Net deferred tax assets (liabilities)	<u>\$(296,946)</u>	<u>\$(285,656)</u>

As of December 31, 2016 and 2015, we had U.S. federal tax net operating losses ("NOLs"), net of unrecognized tax benefits and valuation allowances, of approximately \$991.0 million and \$951.6 million, respectively, which will expire through 2036, if not utilized. The increase in NOLs during 2016 resulted primarily from accelerated tax depreciation and from the acquisition of Southern Air (see Note 4). We had alternative minimum tax credits of \$4.7 million and \$5.2 million as of December 31, 2016 and 2015, respectively, with no expiration date. Additionally, we had foreign NOLs for Hong Kong and Singapore of approximately \$463.5 million and \$428.8 million as of December 31, 2016 and 2015, respectively, with no expiration date.

Section 382 of the Internal Revenue Code (the “Code”) imposes an annual limitation on the amount of a corporation’s U.S. federal taxable income that can be offset by NOLs if it experiences an “ownership change”, as defined. We experienced ownership changes, as defined, in 2004 and 2009. Accordingly, the use of our NOLs generated prior to these ownership changes is subject to an annual limitation. If certain changes in our ownership occur prospectively, there could be an additional annual limitation on the amount of utilizable carryforwards.

On each reporting date, management assesses whether we are more likely than not to realize some or all of our deferred tax assets. After our assessment, we maintained a valuation allowance of \$49.4 million, \$50.7 million and \$50.8 million against our deferred tax assets as of December 31, 2016, 2015 and 2014, respectively. We recorded a decrease to the valuation allowance of \$1.3 million during the year ended December 31, 2016, and decreases of \$0.1 million and increase of \$3.0 million during the years ended 2015 and 2014, respectively. The valuation allowance is attributable to a limitation on NOL utilization resulting from the ownership change under Section 382. Due to this limitation, we expect a portion of our NOLs generated in 2004 and prior years to eventually expire unused.

A reconciliation of the beginning and ending unrecognized income tax benefits is as follows:

	2016	2015	2014
Beginning balance	\$112,555	\$109,993	\$ 76,679
Additions for tax positions related to the current year	1,587	551	1,614
Additions for tax positions related to prior years	—	5,503	32,933
Reductions for tax positions related to prior years	(250)	(3,492)	(1,233)
Ending balance	<u>\$113,892</u>	<u>\$112,555</u>	<u>\$109,993</u>

If recognized, all of the unrecognized income tax benefits would favorably impact the effective income tax rate. We will maintain a liability for unrecognized income tax benefits until these uncertain positions are resolved or until the expiration of the applicable statute of limitations, if earlier.

Our policy is to record tax-related interest expense and penalties, if applicable, as a component of income tax expense. We recorded no interest benefit in 2016 or 2015. The cumulative liability for tax-related interest was \$0.1 million as of December 31, 2016 and December 31, 2015. We have not recorded any liability for income tax-related penalties, and the tax authorities historically have not assessed any.

For U.S. federal income tax purposes, the 2012 through 2016 income tax years remain subject to examination. We also file income tax returns in multiple states as well as in Hong Kong and Singapore. Generally, the 2012 through 2016 income tax years remain subject to examination in the states where we file. In addition, 2011 through 2016 Singapore income tax years and 2010 through 2016 Hong Kong income tax years are subject to examination. No income tax examinations are in process.

12. Financial Instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). Inputs used to measure fair value are classified in the following hierarchy:

- Level 1 Unadjusted quoted prices in active markets for identical assets or liabilities;
- Level 2 Other inputs that are observable directly or indirectly, such as quoted prices in active markets for similar assets or liabilities, or inactive quoted prices for identical assets or liabilities in inactive markets;
- Level 3 Unobservable inputs reflecting assumptions about the inputs used in pricing the asset or liability.

We endeavor to utilize the best available information to measure fair value.

The carrying value of Cash and cash equivalents, Short-term investments and Restricted cash is based on cost, which approximates fair value.

Long-term investments consist of debt securities for which we have both the ability and the intent to hold until maturity. These investments are classified as held-to-maturity and reported at amortized cost. The fair value of our Long-term investments is based on a discounted cash flow analysis using the contractual cash flows of the investments and a discount rate derived from unadjusted quoted interest rates for debt securities of comparable risk. Such debt securities represent investments in PTCs related to EETCs issued by Atlas in 1998, 1999 and 2000. Interest on debt securities and accretion of discounts using the effective interest method are included in Interest income.

The fair value of our term loans, notes guaranteed by the Ex-Im Bank and EETCs are based on a discounted cash flow analysis using current borrowing rates for instruments with similar terms.

The fair value of our Convertible Notes is based on unadjusted quoted market prices for these securities.

The fair value of the Amazon Warrant is based on a Monte Carlo simulation which requires inputs such as our common stock price, the warrant strike price, estimated common stock price volatility, and risk-free interest rate, among others.

The following table summarizes the carrying value, estimated fair value and classification of our financial instruments as of:

	December 31, 2016				
	Carrying Value	Fair Value	Level 1	Level 2	Level 3
Assets					
Cash and cash equivalents	\$ 123,890	\$ 123,890	\$123,890	\$ —	\$ —
Short-term investments	4,313	4,313	—	—	4,313
Restricted cash	14,360	14,360	14,360	—	—
Long-term investments and accrued interest	27,951	33,161	—	—	33,161
	<u>\$ 170,514</u>	<u>\$ 175,724</u>	<u>\$138,250</u>	<u>\$ —</u>	<u>\$ 37,474</u>
Liabilities					
Term loans and capital lease	\$1,037,077	\$1,083,832	\$ —	\$ —	\$1,083,832
Ex-Im Bank guaranteed notes	616,892	632,977	—	—	632,977
EETC	20,044	22,935	—	—	22,935
Convertible Notes	177,398	228,429	228,429	—	—
Amazon Warrant	95,775	95,775	—	95,775	—
	<u>\$1,947,186</u>	<u>\$2,063,948</u>	<u>\$228,429</u>	<u>\$95,775</u>	<u>\$1,739,744</u>

	December 31, 2015				
	Carrying Value	Fair Value	Level 1	Level 2	Level 3
Assets					
Cash and cash equivalents	\$ 425,950	\$ 425,950	\$425,950	\$—	\$ —
Short-term investments	5,098	5,098	—	—	5,098
Restricted cash	12,981	12,981	12,981	—	—
Long-term investments and accrued interest	37,604	45,867	—	—	45,867
	<u>\$ 481,633</u>	<u>\$ 489,896</u>	<u>\$438,931</u>	<u>\$—</u>	<u>\$ 50,965</u>
Liabilities					
Term loans	\$1,013,265	\$1,049,785	\$ —	\$—	\$1,049,785
Ex-Im Bank guaranteed notes	689,720	715,890	—	—	715,890
EETC	28,022	30,074	—	—	30,074
Convertible Notes	170,300	185,325	185,325	—	—
	<u>\$1,901,307</u>	<u>\$1,981,074</u>	<u>\$185,325</u>	<u>\$—</u>	<u>\$1,795,749</u>

The following table presents the carrying value, gross unrealized gain (loss) and fair value of our long-term investments and accrued interest by contractual maturity as of:

	December 31, 2016			December 31, 2015		
	Carrying Value	Gross Unrealized Gain (Loss)	Fair Value	Carrying Value	Gross Unrealized Gain (Loss)	Fair Value
Debt securities						
Due after one but within five years	\$27,951	\$5,210	\$33,161	\$37,604	\$8,263	\$45,867
Total	<u>\$27,951</u>	<u>\$5,210</u>	<u>\$33,161</u>	<u>\$37,604</u>	<u>\$8,263</u>	<u>\$45,867</u>

Our Long-term investments include investments in PTCs related to EETCs. During 2015, we repaid EETCs related to five 747-400 freighter aircraft owned by us using proceeds from the Convertible Notes (see Note 9). Following the refinancing, we recognized a \$13.4 million Gain on investments resulting from the early redemption of certain PTCs, of which \$5.7 million was related to the receipt of debt redemption premiums and \$7.7 million was related to the recognition of deferred income on the PTCs purchased at a discount that have been repaid. The early redemption of PTCs does not impact our ability or intent to hold the remainder of our PTC investments to maturity.

13. Segment Reporting

Our business is organized into three operating segments based on our service offerings: ACMI, Charter and Dry Leasing. All segments are directly or indirectly engaged in the business of air transportation services but have different commercial and economic characteristics. Each operating segment is separately reviewed by our chief operating decision maker to assess operating results and make resource allocation decisions. We do not aggregate our operating segments and, therefore, our operating segments are our reportable segments.

We use an economic performance metric (“Direct Contribution”) that shows the profitability of each segment after allocation of direct operating and ownership costs. Direct Contribution represents Income (loss) from continuing operations before income taxes excluding the following: Special charges, Transaction-related expenses, nonrecurring items, Losses (gains) on the disposal of aircraft, Losses on early extinguishment of debt, Unrealized losses (gains) on financial instruments, Gains on investments and Unallocated income and expenses,

net. Direct operating and ownership costs include crew costs, maintenance, fuel, ground operations, sales costs, aircraft rent, interest expense on the portion of debt used for financing aircraft, interest income on debt securities and aircraft depreciation. Unallocated income and expenses, net include corporate overhead, nonaircraft depreciation, noncash expenses and income, interest expense on the portion of debt used for general corporate purposes, interest income on nondebt securities, capitalized interest, foreign exchange gains and losses, other revenue and other non-operating costs.

Management allocates the costs attributable to aircraft operation and ownership among the various segments based on the aircraft type and activity levels in each segment. Depreciation and amortization expense, aircraft rent, maintenance expense, and other aircraft related expenses are allocated to segments based upon aircraft utilization because certain individual aircraft are utilized across segments interchangeably. In addition, certain ownership costs are directly apportioned to the ACMI segment. Other allocation methods are standard activity-based methods that are commonly used in the industry.

The ACMI segment provides aircraft, crew, maintenance and insurance services to customers. Also included in the ACMI segment is CMI, whereby we provide crew, maintenance and insurance services but not the aircraft. Under ACMI and CMI contracts, customers generally guarantee a monthly level of operation at a predetermined rate for a defined period of time. The customer bears the commercial revenue risk and the obligation for other direct operating costs, including fuel.

The Charter segment provides full-paneload air cargo and passenger aircraft charters to customers, including the U.S. Military Air Mobility Command (the “AMC”), brokers, freight forwarders, direct shippers, airlines, sports teams and fans, and private charter customers. Charter customers generally pay a fixed charter fee and we bear the direct operating costs.

The Dry Leasing segment provides for the leasing of aircraft and engines to customers.

Other represents revenue for services that are not allocated to any segment, including administrative and management support services and flight simulator training.

The following table sets forth Operating Revenue and Direct Contribution for our reportable segments reconciled to Operating Income and Income (loss) from continuing operations before income taxes:

	For the Years Ended December 31,		
	2016	2015	2014
Operating Revenue:			
ACMI	\$ 834,997	\$ 791,442	\$ 778,091
Charter	881,991	908,753	906,676
Dry Leasing	105,795	107,218	100,059
Customer incentive asset amortization	(537)	—	—
Other	17,381	15,246	14,372
Total Operating Revenue	<u>\$1,839,627</u>	<u>\$1,822,659</u>	<u>\$1,799,198</u>
Direct Contribution:			
ACMI	\$ 200,563	\$ 185,615	\$ 200,489
Charter	133,727	124,808	47,245
Dry Leasing	33,114	42,023	33,224
Total Direct Contribution for Reportable Segments	<u>367,404</u>	<u>352,446</u>	<u>280,958</u>
Add back (subtract):			
Unallocated income and expenses, net	(242,768)	(294,451)	(161,616)
Loss on early extinguishment of debt	(132)	(69,728)	—
Unrealized loss on financial instruments	(2,888)	—	—
Gain on investments	—	13,439	—
Special charge	(10,140)	(17,388)	(15,114)
Transaction-related expenses	(22,071)	—	—
Loss (gain) on disposal of aircraft	11	(1,538)	(14,679)
Income from continuing operations before income taxes	<u>89,416</u>	<u>(17,220)</u>	<u>89,549</u>
Add back (subtract):			
Interest income	(5,532)	(12,554)	(18,480)
Interest expense	84,650	96,756	104,252
Capitalized interest	(3,313)	(1,027)	(453)
Loss on early extinguishment of debt	132	69,728	—
Unrealized loss on financial instruments	2,888	—	—
Gain on investments	—	(13,439)	—
Other expense	70	1,261	1,104
Operating Income	<u>\$ 168,311</u>	<u>\$ 123,505</u>	<u>\$ 175,972</u>

Given the nature of our business and international flying, geographic information for revenue, long-lived assets and total assets is not presented because it is impracticable to do so.

We are exposed to a concentration of revenue from the AMC and Polar (see Note 3 for further discussion regarding Polar). No other customer accounted for more than 10.0% of our Total Operating Revenue. Revenue from the AMC was \$436.1 million in 2016 and \$418.3 million in 2015. Accounts receivable from the AMC were \$9.0 million and \$26.3 million as of December 31, 2016 and December 31, 2015, respectively. We have not experienced any credit issues with either of these customers.

	2016	2015	2014
Depreciation and amortization expense:			
ACMI	\$ 61,630	\$ 62,253	\$ 56,289
Charter	37,239	27,294	25,286
Dry Leasing	40,164	31,326	31,592
Unallocated	9,843	7,867	7,626
Total Depreciation and Amortization	<u>\$148,876</u>	<u>\$128,740</u>	<u>\$120,793</u>

14. Labor and Legal Proceedings

Labor

Pilots of Atlas and Southern Air, and flight dispatchers of Atlas and Polar are represented by the International Brotherhood of Teamsters (the “IBT”). We have a five-year collective bargaining agreement (“CBA”) with our Atlas pilots, which became amendable in September 2016 and a four-year CBA with the Southern Air pilots, which became amendable in November 2016. We also have a five-year CBA with our Atlas and Polar dispatchers, which becomes amendable in November 2017.

After we completed the acquisition of Southern Air in April 2016, we informed the IBT of our intention to pursue (and we have been pursuing) a complete operational merger of Atlas and Southern Air. Pursuant to the merger provisions in both the Atlas and Southern Air CBAs, joint negotiations for a single CBA for Atlas and Southern Air should commence promptly. Once a seniority list is presented to us by the unions, it triggers an agreed-upon time frame to negotiate a new joint CBA with any unresolved issues submitted to binding arbitration. After the merger process began, the IBT filed an application for mediation with the National Mediation Board (“NMB”) on behalf of the Atlas pilots. We have opposed the mediation application as it is not in accordance with the merger provisions in the parties’ existing CBAs, which have a defined and streamlined process for negotiating a joint CBA when a merger occurs, as in the case with the Atlas and Southern Air merger. The NMB conducted a pre-mediation investigation in June 2016, which is currently pending. Due to a lack of meaningful progress in such discussions, in February 2017, we filed a lawsuit against the IBT to compel arbitration on the issue of whether the merger provisions in Atlas and Southern Air’s CBAs apply to the bargaining process.

We are subject to risks of work interruption or stoppage as permitted by the Railway Labor Act of 1926 (the “Railway Labor Act”) and may incur additional administrative expenses associated with union representation of our employees.

Matters Related to Alleged Pricing Practices

The Company and Polar Air Cargo, LLC (“Old Polar”), a consolidated subsidiary, were named defendants, along with a number of other cargo carriers, in several class actions in the U.S. arising from allegations about the pricing practices of Old Polar and a number of air cargo carriers. These actions were all centralized in the U.S. District Court for the Eastern District of New York. Polar was later joined as an additional defendant. The consolidated complaint alleged, among other things, that the defendants, including the Company and Old Polar, manipulated the market price for air cargo services sold domestically and abroad through the use of surcharges, in violation of U.S., state, and European Union antitrust laws. The suit sought treble damages and attorneys’ fees.

On January 7, 2016, the Company, Old Polar, and Polar entered into a settlement agreement to settle all claims by participating class members against the Company, Old Polar and Polar. The Company, Polar, and Old Polar deny any wrongdoing, and there is no admission of any wrongdoing in the settlement agreement. Pursuant to the settlement agreement, the Company, Old Polar and Polar have agreed to make installment payments over three years to settle the plaintiffs' claims, with payments of \$35.0 million paid on January 15, 2016, \$35.0 million due on or before January 15, 2017, and \$30.0 million due on or before January 15, 2018. The U.S. District Court for the Eastern District of New York issued an order granting preliminary approval of the settlement on January 12, 2016. On October 6, 2016, the final judgment was issued and the settlement was approved.

In the United Kingdom, several groups of named claimants have brought suit against British Airways in connection with the same alleged pricing practices at issue in the proceedings described above and are seeking damages allegedly arising from that conduct. British Airways has filed claims in the lawsuit against Old Polar and a number of air cargo carriers for contribution should British Airways be found liable to claimants. Old Polar's formal statement of defense was filed on March 2, 2015. On October 14, 2015, the U.K. Court of Appeal released decisions favorable to the defendant and contributory defendants on two matters under appeal. Permission has been sought to appeal the U.K. Court of Appeal's decisions to the U.K. Supreme Court. In December 2015, certain claimants settled with British Airways removing a significant portion of the claim against British Airways and therefore reducing the potential contribution required by the other airlines, including Old Polar. On December 16, 2015, the European General Court released decisions annulling decisions that the European Commission made against the majority of the air cargo carriers. The European Commission did not appeal the General Court decision, but may still reopen its investigation or reissue a revised decision, either of which would have a significant impact on the proceedings in the U.K. court. Future procedures, including the pretrial disclosure process, are continuing. We are unable to reasonably predict the outcome of the litigation.

In the Netherlands, Stichting Cartel Compensation, successor in interest to claims of various shippers, has filed suit in the district court in Amsterdam against British Airways, KLM, Martinair, Air France, Lufthansa and Singapore Airlines seeking recovery for damages purportedly arising from the same pricing practices at issue in the proceedings described above. In response, British Airways, KLM, Martinair, Air France and Lufthansa filed third-party indemnification lawsuits against Old Polar and Polar seeking indemnification in the event the defendants are found to be liable in the main proceedings. Old Polar and Polar entered their initial court appearances on September 30, 2015. Various procedural issues are undergoing court review. Like the U.K. proceedings, the Netherlands proceedings are likely to be affected by the European Commission's response to the European General Court decisions of December 16, 2015. We are unable to reasonably predict the outcome of the litigation.

If the Company, Old Polar or Polar were to incur an unfavorable outcome in connection with the U.K. or Netherlands proceedings, such outcome may have a material adverse impact on our business, financial condition, results of operations or cash flows. We are unable to reasonably estimate a range of possible loss for such matters at this time.

Brazilian Customs Claim

Old Polar was cited for two alleged customs violations in Sao Paulo, Brazil, relating to shipments of goods dating back to 1999 and 2000. Each claim asserts that goods listed on the flight manifest of two separate Old Polar scheduled service flights were not on board the aircraft upon arrival and therefore were improperly brought into Brazil. The two claims, which also seek unpaid customs duties, taxes and penalties from the date of the alleged infraction, are approximately \$9.3 million in aggregate based on December 31, 2016 exchange rates.

In both cases, we believe that the amounts claimed are substantially overstated due to a calculation error when considering the type and amount of goods allegedly missing, among other things. Furthermore, we may seek appropriate indemnity from the shipper in each claim as may be feasible. In the pending claim for one of the

cases, we have received an administrative decision dismissing the claim in its entirety, which remains subject to a mandatory appeal by the Brazil customs authorities. As required to defend such claims, we have made deposits pending resolution of these matters. The balances were \$5.0 million as of December 31, 2016 and \$3.8 million as of December 31, 2015, and are included in Deposits and other assets.

We are currently defending these and other Brazilian customs claims and the ultimate disposition of these claims, either individually or in the aggregate, is not expected to materially affect our financial condition, results of operations or cash flows.

Accruals

As of December 31, 2016, the Company had a remaining accrual of \$65.0 million related to the U.S. class action settlement that was recognized in 2015. During 2016, the Company recorded a net accrual of \$6.2 million within Other operating expense in the consolidated statement of operations related to pending litigation outside of the U.S.

Other

We have certain other contingencies incident to the ordinary course of business. Management believes that the ultimate disposition of such other contingencies is not expected to materially affect our financial condition, results of operations or cash flows.

15. Stock-Based and Long-term Incentive Compensation Plans

In 2007, our stockholders approved a Long-Term Incentive Plan (the "2007 Plan"). An aggregate of 0.6 million shares of common stock was reserved for issuance to participants under the 2007 Plan. The 2007 Plan provided for stock awards of up to approximately 2.8 million shares of AAWW's common stock to employees in various forms, including cash awards and performance cash awards. Stock awards included nonqualified options, incentive stock options, share appreciation rights, restricted shares, restricted share units, performance shares and performance units, dividend equivalents and other share-based awards. In 2016, the stockholders approved a revised Long-Term Incentive Plan (the "2016 Plan"), which replaced the 2007 Plan. An aggregate of 0.7 million shares of common stock was reserved for issuance to participants under the 2016 Plan. No new awards have been made under the 2007 Plan since the adoption of the 2016 Plan in May 2016. Awards outstanding under the 2007 Plan will continue to be governed by the terms of that plan and agreements under which they were granted. The 2016 Plan limits the terms of awards to ten years and prohibits the granting of awards more than ten years after the effective date of the 2016 Plan.

As of December 31, 2016, the 2016 Plan had a total of 0.7 million shares of common stock available for future award grants to management and members of the board of directors. Including the impact of the change in control as defined under the benefit plan in 2016 (see Note 7), our compensation expense for both plans was \$30.9 million in 2016, \$15.0 million in 2015 and \$12.5 million in 2014. Income tax benefits recognized for share-based compensation arrangements were \$8.7 million in 2016, \$5.7 million in 2015 and \$4.0 million in 2014. The excess cash tax effect classified as a financing cash inflow was a nominal benefit in 2016, 2015 and 2014.

Nonqualified Stock Options

The portion of the 2016 Plan and the 2007 Plan applicable to employees is administered by the compensation committee of the board of directors, which also establishes the terms of the awards.

Nonqualified stock options, which have not been granted since 2007, vest over a three or four year period and expire seven to ten years from the date of grant. While nonqualified stock options may be granted at any price, they have never been granted with an exercise price less than the fair market value of the stock on the date of grant.

A summary of our options as of December 31, 2016 and changes during the year then ended is presented below:

	Number of Options	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2015	34,700	\$58.41		
Granted	—	—		
Exercised	(30,200)	58.34		
Forfeited, net of adjustments	—	—	—	—
Outstanding as of December 31, 2016	<u>4,500</u>	<u>\$58.89</u>	<u>—</u>	<u>\$—</u>
Exercisable as of December 31, 2016	<u>4,500</u>	<u>\$58.89</u>	<u>—</u>	<u>\$—</u>

The total intrinsic value of options exercised in 2016 and 2015 was nominal and the cash received was zero and \$1.2 million, respectively. No options were exercised in 2014.

As of December 31, 2016, there was no unrecognized compensation cost related to non-vested stock options granted and all options have vested.

Restricted Share Awards

Restricted shares granted vest and are expensed over one-, three- or four- year periods. Restricted share awards have been granted in both shares and units. As of December 31, 2016, a total of 3.5 million restricted shares have been granted under the 2007 and 2016 Plans. All shares were valued at their fair market value on the date of issuance. Unrecognized compensation cost as of December 31, 2016 is \$18.9 million and will be recognized over the remaining weighted average life of 2.1 years.

A summary of our restricted shares as of December 31, 2016 and changes during the year then ended are presented below:

<u>Restricted Share Awards</u>	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested as of December 31, 2015	840,879	\$40.52
Granted	428,314	36.10
Vested	(522,994)	37.84
Forfeited	<u>(16,053)</u>	<u>38.54</u>
Unvested as of December 31, 2016	<u>730,146</u>	<u>\$39.89</u>

The total fair value of shares vested on various vesting dates was \$19.8 million in 2016, \$13.7 million in 2015 and \$11.3 million in 2014. Weighted average grant date fair value was \$47.10 in 2015 and \$33.21 in 2014.

Performance Share and Performance Cash Awards

Performance share and performance cash awards granted are expensed over three years, which generally is the requisite service period. Awards generally become vested if (1) we achieve certain specified performance levels compared with predetermined performance thresholds during a three-year period starting in the grant year and ending on December 31 three years later, and (2) the employee remains employed by us through the determination date which can be no later than four months following the end of the Performance Period. Partial

vesting may occur for certain employee terminations. As a result of a change in control as defined under the benefit plan (see Note 7), the performance levels are deemed to be achieved for all performance share and performance cash awards outstanding as of December 31, 2016. Performance share awards have been granted to employees in shares and units. All performance share and performance cash awards are valued at their fair market value on the date of grant. The estimated compensation expense recognized for performance share and performance cash awards are net of estimated forfeitures. We assess the performance levels in the first quarter of each year for the prior year. We review the results, adjust the estimated performance level and record any change to compensation cost. As of December 31, 2016, a total of 1.7 million performance shares have been granted. Unrecognized compensation cost as of December 31, 2016 is \$8.3 million and will be recognized over the remaining weighted average life of 1.7 years. For the performance cash awards, we had accruals of \$13.1 million as of December 31, 2016 and \$4.0 million as of December 31, 2015 in Other liabilities. Including the impact of the change in control as defined under the benefit plan in 2016, we recognized compensation expense associated with the performance cash awards totaling \$13.9 million in 2016, \$1.6 million in 2015 and \$1.3 million in 2014.

A summary of our performance shares as of December 31, 2016 and changes during the year then ended are presented below:

<u>Performance Share Awards</u>	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested as of December 31, 2015	334,692	\$23.85
Granted	494,894	37.21
Vested	(151,719)	38.32
Forfeited	<u>(101,701)</u>	<u>47.76</u>
Unvested as of December 31, 2016	<u>576,166</u>	<u>\$27.30</u>

The total fair value of shares vested on various vesting dates in 2016 was \$5.8 million, \$3.7 million in 2015 and \$7.0 in 2014. Weighted average grant date fair value was \$47.48 in 2015 and \$32.2 in 2014.

16. Profit Sharing, Incentive and Retirement Plans

Profit Sharing and Incentive Plans

We have an annual incentive compensation program for management employees. The program provides for payments to eligible employees based upon our financial performance, service performance and attainment of individual performance goals, among other things. In addition, our profit sharing plan allows IBT-represented Atlas crewmembers to receive payments from the plan based upon Atlas' financial performance. The profit sharing plan is subject to a minimum financial performance threshold. For both plans, we had accruals of \$22.1 million as of December 31, 2016 and \$27.0 million as of December 31, 2015 in Accrued liabilities. Including the impact of the change in control as defined under the benefit plan in 2016 (see Note 7), we recognized compensation expense associated with both plans totaling \$21.8 million in 2016, \$28.5 million in 2015 and \$21.7 million in 2014.

401(k) and 401(m) Plans

Participants in our retirement plan may contribute a portion of their annual compensation to a 401(k) plan on a pretax basis, subject to aggregate limits under the Code. In addition to 401(k) contributions, participants may contribute a portion of their eligible compensation to a 401(m) plan on an after-tax basis. On behalf of participants in the plan who make elective compensation deferrals, we provide a matching contribution subject to certain limitations. Employee contributions in the plan are vested at all times and our matching contributions are subject to a three-year cliff vesting provision, except for employees who are represented by a collective bargaining agreement and are subject to a three-year graded vesting provision. We recognized compensation expense associated with the plan matching contributions totaling \$10.5 million in 2016, \$9.5 million in 2015 and \$8.5 million in 2014.

17. Stock Repurchases

We record the repurchase of our shares of common stock at cost based on the settlement date of the transaction. These shares are classified as treasury stock, which is a reduction to stockholders' equity. Treasury shares are included in authorized and issued shares but excluded from outstanding shares.

In 2008, we established a stock repurchase program authorizing the repurchase of up to \$100.0 million of our common stock. In November 2013, we announced an increase of \$51.0 million to our stock repurchase program. As of December 31, 2016, we had repurchased a total of 3,307,911 shares of our common stock for approximately \$126.0 million under this program, resulting in \$25.0 million of available authorization remaining. Purchases may be made at our discretion in the form of open market repurchase programs, privately negotiated transactions, accelerated share repurchase programs or a combination of these methods. The actual timing and amount of our repurchases will depend on Company and market conditions.

In addition, we repurchased 297,569 and 140,198 shares of common stock from management, in connection with the vesting of equity awards to pay the statutory tax withholdings of employees, at an average price of \$37.89 per share in 2016 and \$46.54 per share in 2015, and held the shares as treasury shares.

18. Earnings Per Share

Basic earnings per share ("EPS") represent net income divided by the weighted average number of common shares outstanding during the measurement period. Diluted EPS represent net income divided by the weighted average number of common shares outstanding during the measurement period while also giving effect to all potentially dilutive common shares that were outstanding during the period using the treasury stock method. Anti-dilutive shares related to warrants and stock options that were out of the money and excluded for 2016 were 3.3 million, 2015 were 3.0 million, and were de minimis for 2014.

The calculations of basic and diluted EPS were as follows:

	For the Years Ended December 31,		
	2016	2015	2014
Numerator:			
Income from continuing operations, net of taxes	\$42,625	\$ 7,286	\$102,227
Denominator:			
Basic EPS weighted average shares outstanding	24,843	24,833	25,031
Effect of dilutive stock options and restricted stock	277	185	96
Diluted EPS weighted average shares outstanding	25,120	25,018	25,127
Earnings per share from continuing operations:			
Basic	\$ 1.72	\$ 0.29	\$ 4.08
Diluted	\$ 1.70	\$ 0.29	\$ 4.07
Loss per share from discontinued operations:			
Basic	\$ (0.04)	\$ —	\$ —
Diluted	\$ (0.04)	\$ —	\$ —
Earnings per share:			
Basic	\$ 1.67	\$ 0.29	\$ 4.08
Diluted	\$ 1.65	\$ 0.29	\$ 4.07

Diluted shares reflect the potential dilution that could occur from stock options and restricted shares using the treasury stock method. The calculation of EPS does not include restricted share units and warrants in which performance or market conditions were not satisfied of 7.5 million in 2016, 0.3 million in 2015 and 0.4 million in 2014.

19. Accumulated Other Comprehensive Income (Loss)

The following table summarizes the components of Accumulated other comprehensive income (loss):

	Interest Rate Derivatives	Foreign Currency Translation	Total
Balance as of December 31, 2014	\$(9,924)	\$ 352	\$(9,572)
Reclassification to interest expense	6,129	—	6,129
Translation adjustment	—	(343)	(343)
Tax effect	(2,277)	—	(2,277)
Balance as of December 31, 2015	(6,072)	9	(6,063)
Reclassification to interest expense	1,770	—	1,770
Translation adjustment	(700)	—	(700)
Balance as of December 31, 2016	\$(5,002)	\$ 9	\$(4,993)

Interest Rate Derivatives

As of December 31, 2016, there was \$8.1 million of net unamortized realized loss before taxes remaining in Accumulated other comprehensive income (loss) related to forward-starting interest rate swaps terminated in prior years, which had been designated as cash flow hedges to effectively fix the interest rates on two 747-8F financings in 2011 and three 777-200LRF financings in 2014. The net loss is amortized and reclassified into Interest expense over the remaining life of the related debt. Net realized loss reclassified into earnings was \$1.8 million in 2016 and \$6.1 million in 2015. Net realized loss expected to be reclassified into earnings within the next 12 months is \$1.6 million as of December 31, 2016.

20. Selected Quarterly Financial Information (unaudited)

The following tables summarize the 2016 and 2015 quarterly results:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2016*				
Total Operating Revenue	\$418,615	\$443,272	\$448,015	\$529,725
Operating Income	20,057	20,824	25,998	101,432
Income (Loss) from continuing operations, net of taxes	471	20,919	(7,501)	28,736
Loss from discontinued operations, net of taxes	—	(345)	(445)	(319)
Net Income (Loss)	\$ 471	\$ 20,574	\$ (7,946)	\$ 28,417
Earnings (Loss) per share from continuing operations:				
Basic	\$ 0.02	\$ 0.84	\$ (0.30)	\$ 1.15
Diluted**	\$ 0.02	\$ (0.26)	\$ (0.30)	\$ 1.12
Loss per share from discontinued operations:				
Basic	\$ —	\$ (0.01)	\$ (0.02)	\$ (0.01)
Diluted	\$ —	\$ (0.01)	\$ (0.02)	\$ (0.01)
Earnings (Loss) per share:				
Basic	\$ 0.02	\$ 0.83	\$ (0.32)	\$ 1.14
Diluted**	\$ 0.02	\$ (0.28)	\$ (0.32)	\$ 1.11
2015***				
Total Operating Revenue	\$444,845	\$455,833	\$449,904	\$472,077
Operating Income (Loss)	56,970	61,284	48,995	(43,744)
Income (Loss) from continuing operations, net of taxes	29,232	28,390	(12,754)	(37,582)
Loss from discontinued operations, net of taxes	—	—	—	—
Net Income (Loss)	\$ 29,232	\$ 28,390	\$ (12,754)	\$ (37,582)
Earnings (Loss) per share from continuing operations:				
Basic	\$ 1.18	\$ 1.13	\$ (0.51)	\$ (1.53)
Diluted	\$ 1.17	\$ 1.13	\$ (0.51)	\$ (1.53)
Loss per share from discontinued operations:				
Basic	\$ —	\$ —	\$ —	\$ —
Diluted	\$ —	\$ —	\$ —	\$ —
Earnings (Loss) per share:				
Basic	\$ 1.18	\$ 1.13	\$ (0.51)	\$ (1.53)
Diluted	\$ 1.17	\$ 1.13	\$ (0.51)	\$ (1.53)

* Included in the first quarter was a special charge of \$6.6 million. Included in the second quarter were an unrealized gain on financial instruments of \$26.5 million, transaction-related expenses of \$16.8 million and an accrual for legal matters of \$6.7 million. Included in the third quarter were compensation costs related to a

change in control as defined under certain benefit plans of \$26.2 million, transaction-related expenses of \$3.9 million and an unrealized loss on financial instruments of \$1.5 million. Included in the fourth quarter were an unrealized loss on financial instruments of \$27.9 million, a special charge of \$3.5 million and transaction-related expenses of \$0.6 million.

** In 2016, the sum of quarterly diluted EPS amounts differs from the full year diluted EPS. The difference primarily relates to the exclusion from the calculation of diluted EPS of an unrealized gain on financial instruments in the second quarter and anti-dilutive shares in the third quarter, both related to the Amazon Warrant.

*** Included in the third quarter was a pretax loss on early extinguishment of debt of \$66.7 million, a gain on investments of \$13.4 million and a special charge of \$7.7 million. Included in the fourth quarter was a pretax charge for a legal settlement of \$99.8 million included in Other operating expenses (see Note 14), the reclassification of a derivative loss into earnings of \$3.7 million, a loss on early extinguishment of debt of \$3.0 million and a special charge of \$9.8 million.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

We carried out an evaluation, under the supervision and with the participation of our management, including our President and Chief Executive Officer (“Principal Executive Officer”) and our Executive Vice President and Chief Financial Officer (“Principal Financial Officer”), of the effectiveness of our disclosure controls and procedures, as such term is defined under Rules 13a-15(e) and 15d-15(e) promulgated under the Exchange Act, as of the end of the period covered by this Report. Based on this evaluation, our Principal Executive Officer and our Principal Financial Officer concluded that our disclosure controls and procedures were effective as of December 31, 2016.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining an adequate system of internal control over financial reporting, as defined in the Exchange Act Rule 13a-15(f). Management conducted an assessment of our internal control over financial reporting based on the framework established by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control — Integrated Framework (2013)*. Based on the assessment, management concluded that, as of December 31, 2016, our internal control over financial reporting is effective. Our internal control over financial reporting as of December 31, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Changes in Internal Control over Financial Reporting.

As a result of the Southern Air Acquisition, we are integrating Southern Air into our overall internal controls over financial reporting and have implemented internal controls over the accounting for the Southern Air Acquisition and acquisition-related transactions.

Except as described above, there has been no change in our internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended December 31, 2016, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The required information is incorporated by reference from our Proxy Statement to be filed with respect to our 2017 Annual Meeting of Stockholders. Information concerning the executive officers is included below. We have adopted a code of conduct that applies to all of our employees, along with a Code of Ethics applicable to our Chief Executive Officer, Chief Financial Officer and members of the board of directors (the “Code of Ethics”). The Code of Ethics is monitored by our Audit Committee, and includes certain provisions regarding disclosure of violations and waivers of, and amendments to, the Code of Ethics by covered parties. A copy of the Code of Ethics is available on our website at www.atlasair.com.

The following is a list of the names, ages and background of our current executive officers:

William J. Flynn. Mr. Flynn, age 63, has been our President and Chief Executive Officer since June 2006. Mr. Flynn has over a 40 year career in international supply chain management and freight transportation. Prior to joining us, Mr. Flynn served as President and Chief Executive Officer of GeoLogistics Corporation since 2002 where he led a successful turnaround of the company’s profitability and the sale of the company in September 2005. Prior to his tenure at GeoLogistics, Mr. Flynn served as a Senior Vice President at CSX Transportation, one of the largest Class 1 railroads operating in the U. S., from 2000 to 2002. Mr. Flynn spent over 20 years with Sea-Land Service, Inc., a global provider of container shipping services. He served in roles of increasing responsibility in the U.S., Latin America and Asia. Mr. Flynn ultimately served as head of the company’s Asia operations. Mr. Flynn is also a director of Republic Services, Inc. During the previous five years, he served as a director of Horizon Lines, Inc. Mr. Flynn holds a Bachelors degree in Latin American studies from the University of Rhode Island and a Masters degree in the same field from the University of Arizona.

John W. Dietrich. Mr. Dietrich, age 52, has been Executive Vice President and Chief Operating Officer since September 2006. In addition, he was named President and Chief Operating Officer of Atlas Air, Inc. effective October 2014. Prior to September 2006, Mr. Dietrich was Senior Vice President, General Counsel and Chief Human Resources Officer from February 2004. He was named Vice President and General Counsel in March 2003, where he was also responsible for our Human Resources and Corporate Communications functions. Mr. Dietrich joined Atlas in 1999 as Associate General Counsel. Prior to joining us, he was a litigation attorney at United Airlines from 1992 to 1999, where he provided legal counsel to all levels of management, particularly on employment and commercial litigation issues. He also serves as a director on the National Defense Transportation Association and the National Air Courier Association. Mr. Dietrich earned a Bachelors of Science degree from Southern Illinois University and received his Juris Doctorate, *cum laude*, from John Marshall Law School. He is a member of the New York, Illinois and Colorado Bars.

Adam R. Kokas. Mr. Kokas, age 45, has been Executive Vice President since January 2014 and General Counsel and Secretary since October 2006 and our Chief Human Resources Officer since November 2007. Prior to January 2014, he was Senior Vice President from October 2006. Mr. Kokas joined us from Ropes & Gray LLP, where he was a partner in their Corporate Department, focusing on general corporate, securities, transactions and business law matters. Prior to joining Ropes & Gray, Mr. Kokas was a partner at Kelley Drye & Warren LLP, where he joined as an associate in 2001. At both Kelley Drye and Ropes & Gray, Mr. Kokas represented us in a variety of matters, including corporate finance and merger and acquisition transactions, corporate governance matters, strategic alliances, securities matters, and other general corporate issues. Mr. Kokas earned a Bachelor of Arts degree from Rutgers University and is a *cum laude* graduate of the Boston University School of Law, where he was an Edward M. Hennessey scholar. Mr. Kokas is a member of the New York and New Jersey Bars. Mr. Kokas has also been the Chairman of the Board of the Cargo Airline Association (a non-profit trade organization) since June 2011.

Michael T. Steen. Mr. Steen, age 50, has been Executive Vice President and Chief Commercial Officer since November 2010. In addition, he was named President and Chief Executive Officer of Titan Aviation

Holdings, Inc. effective October 2014. Prior to November 2010, he was our Senior Vice President and Chief Marketing Officer from April 2007. Mr. Steen joined us from Exel plc where he served as Senior Vice President of Sales and Marketing. Mr. Steen led the sales and marketing activities for Exel Freight’s management and technology sector. Following Exel’s acquisition by Deutsche Post World Net, he held senior-level positions with the merged company in global supply chain logistics. Prior to joining Exel, he served in a variety of roles with KLM Cargo over 11 years, including Vice President of the Americas, Head of Global Sales and Marketing for the Logistics Unit and Director of Sales for EMEA. Mr. Steen has also been a member of the Board of Directors of TIACA (a not-for-profit trade association for the air cargo industry) since November 2007 and served as its Chairman from 2010 to 2013. Mr. Steen earned a degree in economic science from Katrinelund in Gothenburg, Sweden, and is an alumnus of the Advanced Executive Program at the Kellogg School of Management at Northwestern University.

Spencer Schwartz. Mr. Schwartz, age 50, has been Executive Vice President since January 2014 and Chief Financial Officer since June 2010. Prior to January 2014, he was Senior Vice President from June 2010. Prior to June 2010, he was our Vice President and Corporate Controller from November 2008. Mr. Schwartz joined us from MasterCard Incorporated, where he was employed for over 12 years and served as Group Head of Global Risk Management; Senior Vice President and Business Financial Officer; Senior Vice President, Corporate Controller and Chief Accounting Officer; and Vice President of Taxation. Prior to joining MasterCard, Mr. Schwartz held financial positions of increasing responsibility with Price Waterhouse LLP (now PricewaterhouseCoopers LLP) and Carl Zeiss, Inc. Mr. Schwartz earned a Bachelors degree in Accounting from The Pennsylvania State University and a Masters degree in Business Administration, with a concentration in management, with honors, from New York University’s Leonard N. Stern School of Business. He is a certified public accountant.

Keith H. Mayer. Mr. Mayer, age 51, has been Vice President and Corporate Controller since November 2010. Mr. Mayer joined us from PepsiCo, Inc. (“PepsiCo”). In his most recent role at PepsiCo, he served as Chief Financial Officer of an international coffee partnership between PepsiCo and Starbucks Corporation. Mr. Mayer also served PepsiCo in a variety of roles since 1999, including Director of External Reporting, Assistant Controller for PepsiCo International, Senior Group Manager of Financial Accounting for Frito-Lay North America, and Group Manager of Technical Accounting. Prior to joining PepsiCo, Mr. Mayer held financial positions of increasing responsibility with Coopers & Lybrand LLP (now PricewaterhouseCoopers LLP). Mr. Mayer earned a Bachelors degree in Accounting from the University of Bridgeport where he graduated *magna cum laude*. He is a certified public accountant.

Executive Officers are elected by our board of directors, and their terms of office continue until the next annual meeting of the board of directors or until their successors are elected and have qualified. There are no family relationships among our executive officers.

ITEM 11. EXECUTIVE COMPENSATION

The required information is incorporated by reference from our Proxy Statement to be filed with respect to our 2017 Annual Meeting of Stockholders.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The required information is incorporated by reference from our Proxy Statement to be filed with respect to our 2017 Annual Meeting of Stockholders.

The following table summarizes the securities authorized for issuance under our equity compensation plans at December 31, 2016:

<u>Plan Category</u>	<u>Number of securities to be issued upon exercise of outstanding options, warrants and rights</u> (a)	<u>Weighted-average exercise price of outstanding options, warrants and rights</u> (b)	<u>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))</u> (c)
Equity compensation plans approved by security holders	1,310,812	\$0.20(1)	—
Total	<u>1,310,812</u>	<u>\$0.20</u>	<u>—</u>

(1) Includes 1,306,312 of restricted and performance shares and units, which have no exercise price and 4,500 stock options having an average exercise price of \$58.89

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The required information is incorporated by reference from our Proxy Statement to be filed with respect to our 2017 Annual Meeting of Stockholders.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The required information is incorporated by reference from our Proxy Statement to be filed with respect to our 2017 Annual Meeting of Stockholders.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a)1. Financial Statements:

- Report of Independent Registered Public Accounting Firm
- Consolidated Balance Sheets as of December 31, 2016 and 2015
- Consolidated Statements of Operations for the years ended December 31, 2016, 2015 and 2014
- Consolidated Statements of Comprehensive Income for the years ended December 31, 2016, 2015 and 2014
- Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2015 and 2014
- Consolidated Statements of Stockholders' Equity for the years ended December 31, 2016, 2015 and 2014
- Notes to Consolidated Financial Statements

2. Financial Statement Schedule:

- Schedule II—Valuation of Qualifying Accounts

All other schedules have been omitted because they are not applicable, not required or the information is included elsewhere in the Financial Statements or Notes thereto.

3. Exhibits: (see accompanying Exhibit Index included after the signature page of this Report for a list of exhibits filed or furnished with or incorporated by reference in this Report).

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized on February 23, 2017.

ATLAS AIR WORLDWIDE HOLDINGS, INC.
(Registrant)

By: /s/ William J. Flynn
William J. Flynn
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on February 23, 2017 on behalf of the Registrant and in the capacities indicated.

<u>Signature</u>	<u>Capacity</u>
<u>* Frederick McCorkle</u> Frederick McCorkle	Chairman of the Board
<u>/s/ William J. Flynn</u> William J. Flynn	President, Chief Executive Officer and Director (Principal Executive Officer)
<u>/s/ Spencer Schwartz</u> Spencer Schwartz	Executive Vice President and Chief Financial Officer (Principal Financial Officer)
<u>/s/ Keith H. Mayer</u> Keith H. Mayer	Vice President and Corporate Controller (Principal Accounting Officer)
<u>* Robert F. Agnew</u> Robert F. Agnew	Director
<u>* Timothy J. Bernlohr</u> Timothy J. Bernlohr	Director
<u>* Charles F. Bolden, Jr.</u> Charles F. Bolden, Jr.	Director
<u>* James S. Gilmore, III</u> James S. Gilmore, III	Director
<u>* Bobby J. Griffin</u> Bobby J. Griffin	Director
<u>* Carol B. Hallett</u> Carol B. Hallett	Director
<u>* Duncan J. McNabb</u> Duncan J. McNabb	Director

<u>Signature</u>	<u>Capacity</u>
<u>* John K. Wulff</u> John K. Wulff	Director
<u>*By: /s/ William J. Flynn</u> William J. Flynn, as Attorney-in-fact for each of the persons indicated	

SCHEDULE II
VALUATION AND QUALIFYING ACCOUNTS
(in thousands)

<u>Description</u>	<u>Balance at Beginning of Period</u>	<u>Additions Charged to Costs and Expenses</u>	<u>Deductions</u>	<u>Balance at End of Period</u>
For the Year ended December 31, 2016				
Allowances deducted in the balance sheet from the assets to which they apply:				
Allowance for doubtful accounts	\$1,247	\$508	\$(758)(a)	\$ 997
For the Year ended December 31, 2015				
Allowances deducted in the balance sheet from the assets to which they apply:				
Allowance for doubtful accounts	\$1,658	\$171	\$(582)(a)	\$1,247
For the Year ended December 31, 2014				
Allowances deducted in the balance sheet from the assets to which they apply:				
Allowance for doubtful accounts	\$1,402	\$643	\$(387)(a)	\$1,658

(a) Primarily represents the write-off of accounts net of recoveries

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Description</u>
3.1(4)	Certificate of Incorporation of the Company.
3.1.1(32)	Atlas Air Worldwide Holdings, Inc. Certificate of Amendment of Certificate of Incorporation.
3.2(16)	Atlas Air Worldwide Holdings, Inc. By-Laws, Amended and Restated as of September 19, 2014 and as Further Amended as of December 12, 2016.
4.1.1(1)	Form of 8.707% Atlas Air Pass Through Certificates, Series 2000-1A (included in Exhibit 4.1.21).
4.1.2(1)	Form of 9.057% Atlas Air Pass Through Certificates, Series 2000-1B (included in Exhibit 4.1.22).
4.1.3(1)	Form of 9.702% Atlas Air Pass Through Certificates, Series 2000-1C (included in Exhibit 4.1.23).
4.1.4(3)	7.20% Atlas Air Pass Through Certificate 1999-1A-1, Certificate No. A-1-1.
4.1.5(3)	7.20% Atlas Air Pass Through Certificate 1999-1A-1, Certificate No. A-1-2.
4.1.6(3)	6.88% Atlas Air Pass Through Certificate 1999-1A-2, Certificate No. A-2-1.
4.1.7(3)	7.63% Atlas Air Pass Through Certificate 1999-1B-1, Certificate No. B-1.
4.1.8(3)	8.77% Atlas Air Pass Through Certificate 1999-1C-1, Certificate No. C-1.
4.1.9(2)	Pass Through Trust Agreement, dated as of February 9, 1998, between Atlas Air, Inc. and Wilmington Trust Company, as Trustee, relating to the Atlas Air Pass Through Trust 1998-1A-0.
4.1.10(2)	Pass Through Trust Agreement, dated as of February 9, 1998, between Atlas Air, Inc. and Wilmington Trust Company, as Trustee, relating to the Atlas Air Pass Through Trust 1998-1A-S.
4.1.11(2)	Pass Through Trust Agreement, dated as of February 9, 1998, between Atlas Air, Inc. and Wilmington Trust Company, as Trustee, relating to the Atlas Air Pass Through Trust 1998-1B-0.
4.1.12(2)	Pass Through Trust Agreement, dated as of February 9, 1998, between Atlas Air, Inc. and Wilmington Trust Company, as Trustee, relating to the Atlas Air Pass Through Trust 1998-1B-S.
4.1.13(2)	Pass Through Trust Agreement, dated as of February 9, 1998, between Atlas Air, Inc. and Wilmington Trust Company, as Trustee, relating to the Atlas Air Pass Through Trust 1998-1C-0.
4.1.14(2)	Pass Through Trust Agreement, dated as of February 9, 1998, between Atlas Air, Inc. and Wilmington Trust Company, as Trustee, relating to the Atlas Air Pass Through Trust 1998-1C-S.
4.1.15(3)	Pass Through Trust Agreement, dated as of April 13, 1999, between Wilmington Trust Company, as Trustee, and Atlas Air, Inc..
4.1.16(3)	Trust Supplement No. 1999-1A-1, dated April 13, 1999, between Wilmington Trust Company, as Trustee, and Atlas Air, Inc. to Pass Through Trust Agreement, dated as of April 1, 1999.
4.1.17(3)	Trust Supplement No. 1999-1A-2, dated April 13, 1999, between Wilmington Trust Company, as Trustee, and Atlas Air, Inc. to Pass Through Trust Agreement, dated as of April 1, 1999.
4.1.18(3)	Trust Supplement No. 1999-1B, dated April 13, 1999, between Wilmington Trust Company, as Trustee, and Atlas Air, Inc. to Pass Through Trust Agreement, dated as of April 1, 1999.
4.1.19(3)	Trust Supplement No. 1999-1C, dated April 13, 1999, between Wilmington Trust Company, as Trustee, and Atlas Air, Inc. to Pass Through Trust Agreement, dated as of April 1, 1999.
4.1.20(1)	Pass Through Trust Agreement, dated as of January 28, 2000, between Wilmington Trust Company, as Trustee and Atlas Air, Inc..
4.1.21(1)	Trust Supplement No. 2000-1A, dated January 28, 2000, between Wilmington Trust Company, as Trustee, and Atlas Air, Inc. to Pass Through Trust Agreement, dated as of January 28, 2000.

<u>Exhibit Number</u>	<u>Description</u>	<u>Exhibit Number</u>	<u>Description</u>
4.1.22(1)	Trust Supplement No. 2000-1B, dated January 28, 2000, between Wilmington Trust Company, as Trustee, and Atlas Air, Inc. to Pass Through Trust Agreement, dated as of January 28, 2000.	4.1.40(7)	1998 Class A Pass Through Trust Supplement, dated July 27, 2004, between the Company and Wilmington Trust Company as Class A Trustee.
4.1.23(1)	Trust Supplement No. 2000-1C, dated January 28, 2000, between Wilmington Trust Company, as Trustee, and Atlas Air, Inc. to Pass Through Trust Agreement, dated as of January 28, 2000	4.1.41(7)	Amendment to 1999 Class A-1 Pass Through Trust Supplement, dated July 27, 2004, between the Company and Wilmington Trust Company as Class A-1 Trustee
4.1.24(2)	Note Purchase Agreement, dated as of February 9, 1998, among the Company, Wilmington Trust Company and First Security Bank, National Association (“Note Purchase Agreement 1998”)	4.1.42(7)	Amendment to 2000 Class A Pass Through Trust Supplement between the Company and Wilmington Trust Company as Class A Trustee dated July 27, 2004.
4.1.25(1)	Form of Leased Aircraft Participation Agreement (Participation Agreement among Atlas Air, Inc., Lessee, First Security Bank, National Association, Owner Trustee, and Wilmington Trust Company, Mortgagee and Loan Participant) (Exhibit A-1 to Note Purchase Agreement 1998).	4.1.43(8)	Trust Indenture and Mortgage Supplement No. 3, dated July 27, 2004, by and between Wells Fargo Bank Northwest, National Association (f/k/a First Security Bank, National Association), Owner Trustee, and Wilmington Trust Company, Mortgagee, pertaining to Aircraft N491MC, together with schedule of substantially identical documents omitted from filing pursuant to Rule 12b-31 promulgated under the Exchange Act.
4.1.26(1)	Form of Owned Aircraft Participation Agreement (Participation Agreement between Atlas Air, Inc., Owner, and Wilmington Trust Company, as Mortgagee, Subordination Agent and Trustee) (Exhibit C-1 to Note Purchase Agreement 1998).	4.2(18)	Facility Agreement, among Atlas Air, Inc. (as Borrower), Each Loan Participant Identified on Schedule I thereto, Norddeutsche Landesbank Girozentrale (as Agent) and Bank of Utah (as Security Agent).
4.1.27(1)	Form of Lease (Lease Agreement between First Security Bank, National Association, Lessor, and Atlas Air, Inc., Lessee) (Exhibit A-2 to Note Purchase Agreement 1998).	4.3(19)	Participation Agreement, dated as of January 30, 2012, among Helios Leasing I LLC, as Lessor, Helios Leasing Trust, as Lessor Parent, Wilmington Trust Company, as Trustee, Atlas Air, Inc., as Lessee, Wilmington Trust Company, as Indenture Trustee, Apple Bank for Savings, as Initial Guaranteed Lender, Wells Fargo Bank Northwest, National Association, as Security Trustee, and Export-Import Bank of the United States. (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.).
4.1.28(3)	Note Purchase Agreement, dated as of April 13, 1999, among Atlas Air, Inc., Wilmington Trust Company, as Trustee, Wilmington Trust Company, as Subordination Agent, First Security Bank, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (“Note Purchase Agreement 1999”).	4.4(20)	Indenture, dated as of May 1, 2012, by and among Helios Leasing I LLC, Apple Bank for Savings, Wilmington Trust Company, not in its individual capacity but solely as Indenture Trustee, Wells Fargo Bank Northwest, National Association, and Export-Import Bank of the United States.
4.1.29(3)	Form of Leased Aircraft Participation Agreement (Participation Agreement among Atlas Air, Inc., Lessee, First Security Bank, National Association, Owner Trustee, and Wilmington Trust Company, Mortgagee and Loan Participant) (Exhibit A-1 to Note Purchase Agreement 1999).	4.5(20)	Secured Fixed Rate Global Note, dated June 19, 2012.
4.1.30(3)	Form of Lease (Lease Agreement between First Security Bank, National Association, Lessor, and Atlas Air, Inc., Lessee) (Exhibit A-2 to Note Purchase Agreement 1999).	4.6(20)	Secured Fixed Rate Global Note, dated July 31, 2012.
4.1.31(3)	Form of Owned Aircraft Participation Agreement (Participation Agreement between Atlas Air, Inc., Owner, and Wilmington Trust Company, as Mortgagee, Subordination Agent and Trustee) (Exhibit C-1 to Note Purchase Agreement 1999).	4.7(21)	Secured Fixed Rate Global Note, dated October 10, 2012.
4.1.32(1)	Note Purchase Agreement, dated as of January 28, 2000, among Atlas Air, Inc., Wilmington Trust Company, as Trustee, Wilmington Trust Company, as Subordination Agent, First Security Bank, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (“Note Purchase Agreement 2000”).	4.8(21)	Secured Fixed Rate Global Note dated, December 12, 2012.
4.1.33(1)	Form of Leased Aircraft Indenture (Trust Indenture and Mortgage between First Security Bank, National Association, Owner Trustee, and Wilmington Trust Company, Mortgagee) (Exhibit A-3 to Note Purchase Agreement 2000).	4.9(22)	Secured Fixed Rate Global Note, dated May 28, 2013.
4.1.34(1)	Form of Leased Aircraft Trust Agreement (Exhibit A-5 to Note Purchase Agreement 2000).	4.10(24)	Secured Fixed Rate Global Note, dated January 30, 2014.
4.1.35(1)	Form of Owned Aircraft Indenture (Trust Indenture and Mortgage between Atlas Air, Inc., Owner, and Wilmington Trust Company, as Mortgagee) (Exhibit C-2 to Note Purchase Agreement 2000).	4.11.1(26)	Indenture, dated June 3, 2015, between the Company and Wilmington Trust, National Association, as Trustee.
4.1.36(3)	Form of Leased Aircraft Indenture (Trust Indenture and Mortgage between First Security Bank, National Association, Owner Trustee, and Wilmington Trust Company, Mortgagee) (Exhibit A-3 to Note Purchase Agreement 2000).	4.11.2(26)	First Supplemental Indenture, dated June 3, 2015, between the Company and Wilmington Trust, National Association, as Trustee.
4.1.37(3)	Form of Leased Aircraft Trust Agreement (Exhibit A-5 to Note Purchase Agreement 2000).	4.11.3(26)	2.25% Convertible Senior Note due 2022.
4.1.38(3)	Form of Owned Aircraft Indenture (Trust Indenture and Mortgage between Atlas Air, Inc., Owner, and Wilmington Trust Company, as Mortgagee) (Exhibit C-2 to Note Purchase Agreement 2000).	10.1(8)	Lease Agreement, dated July 29, 1998, between First Security Bank, National Association and Atlas Air, Inc. with respect to Aircraft N491MC, together with schedule of substantially identical documents omitted from filing pursuant to Rule 12b-31 promulgated under the Exchange Act.
4.1.39(8)	Leased Aircraft Restructure Agreement with regard to Aircraft N491MC, dated July 27, 2004, by and among Atlas Air, Inc., Wells Fargo Bank Northwest, National Association as Owner Trustee, Wilmington Trust Company as Mortgagee, Class A Trustee and Subordination Agent, and DAF Investments, Ltd. as Owner Participant, together with schedule of substantially identical documents omitted from filing pursuant to Rule 12b-31 promulgated under the Exchange Act.	10.1.1(8)	Amendment No. 1 to Lease Agreement dated as of July 27, 2004 between Wells Fargo Bank Northwest, National Association (f/k/a First Security Bank, National Association), as Lessor and Atlas Air, Inc., as Lessee with respect to Aircraft N491MC, together with schedule of substantially identical documents omitted from filing pursuant to Rule 12b-31 promulgated under the Exchange Act.

<u>Exhibit Number</u>	<u>Description</u>	<u>Exhibit Number</u>	<u>Description</u>
10.2(9)	Employment Agreement, dated April 21, 2006, between Atlas Air, Inc. and William J. Flynn.	10.8(10)	Amended and Restated Employment Agreement, dated as September 19, 2006, between Atlas Air, Inc. and John W. Dietrich.
10.2.1(14)	Amendment, dated as of December 31, 2008, to the Employment Agreement between Atlas Air, Inc. and William J. Flynn.	10.8.1(14)	Amendment, dated as of December 31, 2008, to the Amended and Restated Employment Agreement between Atlas Air, Inc. and John W. Dietrich.
10.2.2(15)	Amendment, dated as of July 1, 2011, to the Employment Agreement between Atlas Air, Inc. and William J. Flynn.	10.8.2(15)	Amendment, dated as of July 1, 2011, to the Employment Agreement between Atlas Air, Inc. and John W. Dietrich.
10.3(8)	Lease, dated July 16, 2002, between Tuolumne River Aircraft Finance, Inc. as Lessor and Atlas Air, Inc., as Lessee with respect to Aircraft N416MC, together with schedule of substantially identical documents omitted from filing pursuant to Rule 12b-31 promulgated under the Exchange Act.	10.9	Atlas Air Worldwide Holdings, Inc. Annual Incentive Program for Senior Executives, amended as of February 24, 2015, which is filed herewith as Exhibit 10.9.
10.3.1(8)	Amendment Agreement, dated August 1, 2003, between Tuolumne River Aircraft Finance, Inc., as Lessor and Atlas Air, Inc. as Lessee in respect of Lease dated July 16, 2002 with respect to Aircraft N416MC, together with schedule of substantially identical documents omitted from filing pursuant to Rule 12b-31 promulgated under the Exchange Act.	10.10(8)	Contract, dated October 1, 2004, between HQ AMC/A34TM and the Company.
10.4(8)	Sublease, dated October 24, 2001, between General Electric Capital Corporation, as Sublessor and Polar Air Cargo, Inc. as Sublessee with respect to Aircraft N450PA, together with schedule of substantially identical documents omitted from filing pursuant to Rule 12b-31 promulgated under the Exchange Act	10.11(23)	Atlas Air Worldwide Holdings, Inc. 2007 Incentive Plan (as amended).
10.4.1(8)	Amendment Agreement, dated August 1, 2003, between General Electric Capital Corporation, as Sublessor and Polar Air Cargo, Inc. as Sublessee in respect of Sublease, dated October 24, 2001, with respect to Aircraft N450PA, together with schedule of substantially identical documents omitted from filing pursuant to Rule 12b-31 promulgated under the Exchange Act.	10.11.1(28)	Atlas Air Worldwide Holdings, Inc. 2016 Incentive Plan.
10.4.2(7)	Second Amendment Agreement, dated January 31, 2005, between General Electric Capital Corporation, as Sublessor and Polar Air Cargo, Inc. as Sublessee in respect of Sublease, dated October 24, 2001, with respect to Aircraft N450PA, together with schedule of substantially identical documents omitted from filing pursuant to Rule 12b-31 promulgated under the Exchange Act.	10.11.2(29)	Atlas Air Worldwide Holdings, Inc. 2016 Long Term Cash Incentive Plan.
10.5(8)	Lease Agreement, dated July 24, 2002, between Charles River Aircraft Finance, Inc. as Lessor and Polar Air Cargo, Inc. as Lessee with respect to Aircraft N454PA	10.11.3(33)	Atlas Air Worldwide Holdings, Inc. 2015 Long Term Cash Incentive Program.
10.5.1(8)	Amendment Agreement, dated August 1, 2003, between Charles River Aircraft Finance, Inc. as Lessor and Polar Air Cargo, Inc. as Lessee in respect of Lease Agreement dated July 24, 2002 with respect to Aircraft N454PA.	10.11.4(25)	Atlas Air Worldwide Holdings, Inc. 2014 Long Term Cash Incentive Program.
10.5.2(8)	Second Amendment Agreement, dated January 31, 2005, between Charles River Aircraft Finance, Inc. as Lessor and Polar Air Cargo, Inc. as Lessee in respect of Lease Agreement, dated July 24, 2002, with respect to Aircraft N454PA.	10.11.5(25)	Form of Restricted Stock Unit Agreement.
10.6.1(10)	Purchase Agreement No. 3134, dated as of September 8, 2006, between The Boeing Company and Atlas Air, Inc. (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission).	10.11.6(29)	Form of Amended and Restated Restricted Stock Unit Agreement for Named Executive Officers.
10.6.2(17)	Supplemental Agreement No. 1 to Purchase Agreement No. 3134 between The Boeing Company and Atlas Air, Inc. (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission).	10.11.7(25)	Form of Performance Share Unit Agreement.
10.6.3(17)	Supplemental Agreement No. 2 to Purchase Agreement No. 3134 between The Boeing Company and Atlas Air, Inc. (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission).	10.11.8(29)	Form of Amended and Restated Performance Share Unit Agreement for Named Executive Officers.
10.7(8)	Engine Maintenance Contract, dated April 30, 2004, between the Company and MTU Maintenance Hannover GmbH, with regard to CF6 80C2 Engines in the 1998 EETC Transaction together with schedule of substantially identical documents omitted from filing pursuant to Rule 12b-31 promulgated under the Exchange Act.	10.11.9(29)	Atlas Air Worldwide Holdings, Inc. 2016 Acquisition Incentive Program.
		10.12(27)	Benefits Program for Senior Executives, Amended and Restated as of January 1, 2015.
		10.13	Board of Directors Compensation Program, which is filed herewith as Exhibit 10.13.
		10.14(13)	Atlas Air, Inc. Profit Sharing Plan.
		10.14.1(14)	Amendment, dated as of December 31, 2008, to Atlas Air, Inc. Profit Sharing Plan.
		10.15(6)	Form of Directors and Officers Indemnification Agreement.
		10.16(5)	Amendment No. 1 to Stock Purchase Agreement/Amendment No. 1 to Transaction Guarantee Agreement, dated as of April 13, 2007, among Polar Air Cargo Worldwide, Inc., DHL Network Operations (USA), Inc. and Deutsche Post AG.
		10.17(11)	Stock Purchase Agreement with DHL.
		10.18(12)	Blocked Space Agreement, dated June 28, 2007, between Polar Air Cargo Worldwide, Inc. and DHL Network Operations (USA), Inc. (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.).
		10.19(12)	Amendment No. 1, dated as of July 30, 2007, to Blocked Space Agreement between Polar Air Cargo Worldwide, Inc. and DHL Network Operations (USA), Inc.
		10.20(12)	Flight Services Agreement, dated as of June 28, 2007, between Atlas Air, Inc. and Polar Air Cargo Worldwide, Inc. (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.).
		10.21(12)	Indemnity Agreement, dated as of June 28, 2007, among Atlas Air Worldwide Holdings, Inc., Polar Air Cargo Worldwide, Inc. and DHL Network Operations (USA), Inc.

<u>Exhibit Number</u>	<u>Description</u>	<u>Exhibit Number</u>	<u>Description</u>
10.22(12)	Contribution Agreement, dated as of June 28, 2007, between Atlas Air Worldwide Holdings, Inc. and Polar Air Cargo Worldwide, Inc. (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.)	10.33.2(26)	Base warrant transaction confirmation, dated as of May 28, 2015, between Morgan Stanley & Co. International plc and the Company.
10.23(30)	Atlas Air, Inc. 401(K) Restoration and Voluntary Deferral Plan, Restated effective as of February 11, 2011, and as Further Amended effective January 1, 2015.	10.33.3(26)	Additional convertible note hedge transaction confirmation, dated as of June 1, 2015, between Morgan Stanley & Co. International plc and the Company.
10.24(24)	Loan Agreement [37138], dated as of December 20, 2013, among MSN 37138 Ltd. (as Borrower), BNP Paribas (New York Branch), Landesbank Hessen-Thüringer Girozentrale and Norddeutsche Landesbank Girozentrale (as Lenders) and BNP Paribas (New York Branch) (as Agent). (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.)	10.33.4(26)	Additional warrant transaction confirmation, dated as of June 1, 2015, between Morgan Stanley & Co. International plc and the Company.
10.25(24)	Loan Agreement [38969], dated as of December 20, 2013, among MSN 38969 Ltd. (as Borrower), BNP Paribas (New York Branch), Landesbank Hessen-Thüringer Girozentrale and Norddeutsche Landesbank Girozentrale (as Lenders) and BNP Paribas (New York Branch) (as Agent). (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.)	10.33.5(26)	Base convertible note hedge transaction confirmation, dated as of May 28, 2015, between BNP Paribas and the Company.
10.26(24)	Loan Agreement [39286], dated as of December 20, 2013, among MSN 39286 Pte. Ltd., BNP Paribas (Singapore Branch), Norddeutsche Landesbank Girozentrale (Singapore Branch) (as Lenders) and BNP Paribas (New York Branch) (as Agent). (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.)	10.33.6(26)	Base warrant transaction confirmation, dated as of May 28, 2015, between BNP Paribas and the Company.
10.27(24)	Loan Agreement [37138], dated as of December 20, 2013, among MSN 37138 Ltd. (as Borrower), Investec Bank plc (as Lender) and Investec Bank plc (as Agent). (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.)	10.33.7(26)	Additional convertible note hedge transaction confirmation, dated as of June 1, 2015, between BNP Paribas and the Company.
10.28(24)	Loan Agreement [38969], dated as of December 20, 2013, among MSN 38969 Ltd. (as Borrower), Investec Bank plc (as Lender) and Investec Bank plc (as Agent). (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.)	10.33.8(26)	Additional warrant transaction confirmation, dated as of June 1, 2015, between BNP Paribas and the Company.
10.29(24)	Loan Agreement [39286], dated as of December 20, 2013, among MSN 39286 Pte. Ltd. (as Borrower), Norddeutsche Landesbank Girozentrale (Singapore Branch) (as Lender) and Norddeutsche Landesbank Girozentrale (Singapore Branch) (as Agent). (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.)	10.34.1(31)	Investment Agreement, dated as of May 4, 2016, by and between Atlas Air Worldwide Holdings, Inc. and Amazon.com, Inc.
10.30(24)	Amended and Restated Sale Agreement between Wells Fargo Bank Northwest, National Association (not in its individual capacity but as owner trustee for GAIF II Investment Twenty-Eight, LLC) and MSN 38969 Ltd., an indirect subsidiary of the Company, relating to the purchase of one Boeing 777F airframe with manufacturer's serial number 38969 and two GE90 Engines with engine serial numbers 906970 and 906971. (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.)	10.34.2(31)	Stockholders Agreement, dated as of May 4, 2016, by and between Atlas Air Worldwide Holdings, Inc. and Amazon.com, Inc.
10.31(24)	Amended and Restated Sale Agreement between Wells Fargo Bank Northwest, National Association (not in its individual capacity but as owner trustee for GAIF II Investment Nineteen, LLC) and MSN 37138 Ltd., an indirect subsidiary of the Company, relating to the purchase of one Boeing 777F airframe with manufacturer's serial number 37138 and two GE90 Engines with engine serial numbers 907037 and 907038. (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.)	10.34.3(31)	Warrant to Purchase 7,500,000 shares of Common Stock of Atlas Air Worldwide Holdings, Inc., issued May 4, 2016.
10.32(24)	Amended and Restated Sale Agreement between Wells Fargo Bank Northwest, National Association (not in its individual capacity but as owner trustee for GAIF II Investment Sixteen, LLC) and MSN 39286 Pte. Ltd., an indirect subsidiary of the Company, relating to the purchase of one Boeing 777F airframe with manufacturer's serial number 39286 and two GE90 Engines with engine serial numbers 907006 and 907007. (Portions of this document have been redacted and filed separately with the Securities and Exchange Commission.)	10.34.4(31)	Warrant to Purchase 3,750,000 shares of Common Stock of Atlas Air Worldwide Holdings, Inc., issued May 4, 2016.
10.33.1(26)	Base convertible hedge transaction confirmation, dated as of May 28, 2015, between Morgan Stanley & Col. International plc and the Company.	10.35.1(32)	Atlas Air Worldwide Holdings, Inc. Amended and Restated 2014 Long Term Cash Incentive Program.
		10.35.2(32)	Amended and Restated 2014 Performance Share Unit Agreement between Atlas Air Worldwide Holdings, Inc. and William J. Flynn.
		10.35.3(32)	Amended and Restated 2014 Restricted Stock Unit Agreement between Atlas Air Worldwide Holdings, Inc. and William J. Flynn.
		10.35.4(32)	Atlas Air Worldwide Holdings, Inc. Amended and Restated 2015 Long Term Cash Incentive Program.
		10.35.5(32)	Amended and Restated 2015 Performance Share Unit Agreement between Atlas Air Worldwide Holdings, Inc. and William J. Flynn.
		10.35.6(32)	Amended and Restated 2015 Restricted Stock Unit Agreement between Atlas Air Worldwide Holdings, Inc. and William J. Flynn.
		10.35.7(32)	Atlas Air Worldwide Holdings, Inc. Amended and Restated 2016 Long Term Cash Incentive Program.
		10.35.8(32)	Amended and Restated 2016 Performance Share Unit Agreement between Atlas Air Worldwide Holdings, Inc. and William J. Flynn.
		14.1	Atlas Air Worldwide Holdings, Inc. Code of Ethics applicable to the Chief Executive Officer, Senior Financial Officers and members of the Board of Directors, which filed herewith as Exhibit 14.1.
		21.1	Subsidiaries' List, which is filed herewith as Exhibit 21.1.
		23.1	Consent of PricewaterhouseCoopers LLP, which is filed herewith as Exhibit 23.1.
		24.1	Power of Attorney, which is filed herewith as Exhibit 24.1.

<u>Exhibit Number</u>	<u>Description</u>
31.1	Rule 13a-14(a)/15d-14(a) Certification of the Chief Executive Officer, furnished herewith.
31.2	Rule 13a-14(a)/15d-14(a) Certification of the Chief Financial Officer, furnished herewith.
32.1	Certification of periodic financial report pursuant to Section 906 of Sarbanes Oxley Act of 2002, furnished herewith.
32.2	Certification of periodic financial report pursuant to Section 906 of Sarbanes Oxley Act of 2002, furnished herewith.
101.INS	XBRL Instance Document. *
101.SCH	XBRL Taxonomy Extension Schema Document. *
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document. *
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document. *
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document. *
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document. *

* Attached as Exhibit 101 to this report are the following, formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Balance Sheets at December 31, 2016 and December 31, 2015, (ii) Consolidated Statements of Operations for the years ended December 31, 2016, 2015 and 2014, (iii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2016, 2015 and 2014, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2015 and 2014, (v) Consolidated Statements of Stockholders' Equity for the years ended December 31, 2016, 2015 and 2014 and (vi) Notes to Consolidated Financial Statements. In accordance with Rule 406T of Regulation S-T, the XBRL related information in Exhibit 101 to this Annual Report on Form 10-K shall not be deemed to be "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, and shall not be part of any registration statement or other document filed under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

- (1) Incorporated by reference to the exhibits to Atlas Air's Registration Statement on Form S-4 (No. 333-36268).
- (2) Incorporated by reference to the exhibits to Atlas Air's Annual Report on Form 10-K for the year ended December 31, 1997.
- (3) Incorporated by reference to the exhibits to Atlas Air's Registration Statement on Form S-3 (No. 333-71833).
- (4) Incorporated by reference to the exhibits the Company's Current Report on Form 8-K dated February 16, 2001.
- (5) Incorporated by reference to the exhibits to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2007.
- (6) Incorporated by reference to the exhibits to the Company's Current Report on Form 8-K dated November 14, 2005.
- (7) Incorporated by reference to exhibits to the Company's Annual Report on Form 10-K for the year ended December 31, 2004.
- (8) Incorporated by reference to the exhibits to the Company's Annual Report on Form 10-K/A for the year ended December 31, 2004.
- (9) Incorporated by reference to the exhibits to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2006.
- (10) Incorporated by reference to the exhibits to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2006.
- (11) Incorporated by reference to the exhibits to the Company's Annual Report on Form 10-K for the year ended December 31, 2006.

- (12) Incorporated by reference to the exhibits to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2007.
- (13) Incorporated by reference to the exhibits to the Company's Annual Report on Form 10-K for the year ended December 31, 2007.
- (14) Incorporated by reference to the exhibits to the Company's Annual Report on Form 10-K for the year ended December 31, 2008.
- (15) Incorporated by reference to the exhibits to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2011.
- (16) Incorporated by reference to Exhibit 3 to the Company's Current Report on Form 8-K dated December 12, 2016.
- (17) Incorporated by reference to the exhibits to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010.
- (18) Incorporated by reference to Exhibit 4.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2011.
- (19) Incorporated by reference to the exhibits to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2012.
- (20) Incorporated by reference to the exhibits in the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012.
- (21) Incorporated by reference to the exhibits in the Company's Annual Report on Form 10-K for the year ended December 31, 2012.
- (22) Incorporated by reference to the exhibits in the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013.
- (23) Incorporated by reference to Exhibit 10 to the Company's Current Report on Form 8-K dated May 22, 2013.
- (24) Incorporated by reference to the exhibits in the Company's Annual Report on Form 10-K for the year ended December 31, 2013.
- (25) Incorporated by reference to the exhibits in the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014.
- (26) Incorporated by reference to the exhibits in the Company's Current Report on Form 8-K dated June 3, 2015.
- (27) Incorporated by reference to the exhibits in the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015.
- (28) Incorporated by reference to exhibits in the Company's Current Report on Form 8-K dated April 20, 2016.
- (29) Incorporated by reference to the exhibits in the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2016.
- (30) Incorporated by reference to the exhibits in the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015.
- (31) Incorporated by reference to the exhibits in the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016.
- (32) Incorporated by reference to the exhibits in the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2016.
- (33) Incorporated by reference to the exhibits in the Company's Annual Report on Form 10-K for the year ended December 31, 2015.

CORPORATE INFORMATION

BOARD OF DIRECTORS

FREDERICK MCCORKLE

Chairman of the Board
Atlas Air Worldwide Holdings, Inc.
Independent Businessman,
Lieutenant General, Retired
United States Marine Corps

ROBERT F. AGNEW

President & Chief Executive Officer
Morten Beyer & Agnew

TIMOTHY J. BERNLOHR

Managing Member
TJB Management Consulting, LLC

CHARLES F. BOLDEN, JR.

Independent Businessman,
Major General, Retired
United States Marine Corps

WILLIAM J. FLYNN

President & Chief Executive Officer
Atlas Air Worldwide Holdings, Inc.

JAMES S. GILMORE, III

Attorney at Law & Business Consultant
Former Governor of Virginia

BOBBY J. GRIFFIN

Former President,
International Operations
Ryder System, Inc.

CAROL B. HALLETT

Of Counsel
U.S. Chamber of Commerce

DUNCAN J. MCNABB

Independent Businessman,
General, Retired
United States Air Force

JOHN K. WULFF

Former Chairman
Hercules Incorporated,
Former Chief Financial Officer
Union Carbide Corporation

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EXECUTIVE MANAGEMENT

WILLIAM J. FLYNN

President & Chief Executive Officer

JOHN W. DIETRICH

Executive Vice President &
Chief Operating Officer;
President & Chief Operating Officer,
Atlas Air, Inc.

ADAM R. KOKAS

Executive Vice President,
General Counsel, Chief Human Resources
Officer & Secretary

SPENCER SCHWARTZ

Executive Vice President &
Chief Financial Officer

MICHAEL T. STEEN

Executive Vice President &
Chief Commercial Officer;
President & Chief Executive
Officer, Titan Aviation Holdings, Inc.

COMPANY INFORMATION

STOCK EXCHANGE

The common stock of Atlas Air Worldwide Holdings, Inc. is traded on the NASDAQ Global Select MarketSM under the symbol AAWW.

CORPORATE OFFICE

Atlas Air Worldwide Holdings, Inc.
2000 Westchester Avenue
Purchase, New York 10577-2543

INDEPENDENT ACCOUNTANTS

PricewaterhouseCoopers LLP
New York, New York

STOCK TRANSFER AGENT

Computershare
P.O. Box 43078
Providence, RI 02940-3078
Telephone: 1-877-296-3711
[Inside U.S., U.S. territories & Canada]
Telephone: 1-201-680-6578
[Outside U.S., U.S. territories & Canada]
www.computershare.com/investor

WEBSITE

www.atlasair.com

INVESTOR INFORMATION

Securities analysts and investors may write to Investor Relations at the Corporate Office, call 1-914-701-8200, or email InvestorRelations@atlasair.com.



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Purchase, NY 10577-2543
www.atlasair.com

