

AMERICAN AIRLINES GROUP INC.

FORM 10-K (Annual Report)

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 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, 2022

- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Transition Period From _____ to _____

Commission file number 1-8400

American Airlines Group Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

75-1825172

(I.R.S. Employer Identification No.)

1 Skyview Drive, Fort Worth, Texas 76155

(682) 278-9000

(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code

Securities registered pursuant to Section 12(b) of the Act:

Title of each class

Trading Symbol(s)

Name of each exchange on which registered

Common Stock, \$0.01 par value per share

AAL

The Nasdaq Global Select Market

Preferred Stock Purchase Rights

(1)

⁽¹⁾ Attached to the Common Stock

Securities registered pursuant to Section 12(g) of the Act: None

Commission file number 1-2691

American Airlines, Inc.

(Exact name of registrant as specified in its charter)

Delaware

13-1502798

(I.R.S. Employer Identification No.)

(682) 278-9000

(State or other jurisdiction of incorporation or organization)

Registrant's telephone number, including area code

1 Skyview Drive, Fort Worth, Texas 76155

(Address of principal executive offices, including zip code)

Securities registered pursuant to Section 12(b) of the Act: None

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.

American Airlines Group Inc. Yes No
American Airlines, Inc. 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 Act.

American Airlines Group Inc. Yes No
American Airlines, Inc. 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 the past 90 days.

American Airlines Group Inc. Yes No
American Airlines, Inc. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

American Airlines Group Inc. Yes No
American Airlines, Inc. Yes No

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

American Airlines Group Inc. Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company
American Airlines, Inc. Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

American Airlines Group Inc.
American Airlines, Inc.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

American Airlines Group Inc. Yes No
American Airlines, Inc. Yes No

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

American Airlines Group Inc. Yes No
American Airlines, Inc. Yes No

As of February 17, 2023, there were 651,430,518 shares of American Airlines Group Inc. common stock outstanding. The aggregate market value of the voting stock held by non-affiliates of the registrant as of June 30, 2022, was approximately \$8.2 billion.

As of February 17, 2023, there were 1,000 shares of American Airlines, Inc. common stock outstanding, all of which were held by American Airlines Group Inc.

OMISSION OF CERTAIN INFORMATION

American Airlines, Inc. meets the conditions set forth in General Instruction I(1)(a) and (b) of Form 10-K and has therefore omitted the information otherwise called for by Items 10-13 of Form 10-K as allowed under General Instruction I(2)(c).

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the proxy statement related to American Airlines Group Inc.'s 2023 Annual Meeting of Stockholders, which proxy statement will be filed under the Securities Exchange Act of 1934 within 120 days of the end of American Airlines Group Inc.'s fiscal year ended December 31, 2022, are incorporated by reference into Part III of this Annual Report on Form 10-K.

**American Airlines Group Inc.
American Airlines, Inc.
Form 10-K
Year Ended December 31, 2022
Table of Contents**

	<u>Page</u>
<u>PART I</u>	
Item 1. Business	7
Item 1A. Risk Factors	28
Item 1B. Unresolved Staff Comments	56
Item 2. Properties	57
Item 3. Legal Proceedings	59
Item 4. Mine Safety Disclosures	59
<u>PART II</u>	
Item 5. Market for American Airlines Group's Common Stock, Related Stockholder Matters and Issuer Purchases of Equity Securities	60
Item 6. Selected Consolidated Financial Data	63
Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations	67
Item 7A. Quantitative and Qualitative Disclosures About Market Risk	83
Item 8A. Consolidated Financial Statements and Supplementary Data of American Airlines Group Inc.	85
Item 8B. Consolidated Financial Statements and Supplementary Data of American Airlines, Inc.	132
Item 9. Changes In and Disagreements with Accountants on Accounting and Financial Disclosure	176
Item 9A. Controls and Procedures	176
Item 9B. Other Information	180
Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	180
<u>PART III</u>	
Item 10. Directors, Executive Officers and Corporate Governance	180
Item 11. Executive Compensation	180
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	180
Item 13. Certain Relationships and Related Transactions, and Director Independence	180
Item 14. Principal Accountant Fees and Services	180
<u>PART IV</u>	
Item 15. Exhibits and Financial Statement Schedules	181
Item 16. Form 10-K Summary	206
<u>SIGNATURES</u>	<u>207</u>

[Table of Contents](#)

General

This report is filed by American Airlines Group Inc. (AAG) and its wholly-owned subsidiary American Airlines, Inc. (American). References in this Annual Report on Form 10-K to "we," "us," "our," the "Company" and similar terms refer to AAG and its consolidated subsidiaries. References in this report to "mainline" refer to the operations of American only and exclude regional operations.

Glossary of Terms

For the convenience of the reader, the definitions of certain capitalized industry and other terms used in this report have been consolidated into a glossary beginning on page [20](#).

Note Concerning Forward-Looking Statements

Certain of the statements contained in this report should be considered forward-looking statements within the meaning of the Securities Act of 1933, as amended (the Securities Act), the Securities Exchange Act of 1934, as amended (the Exchange Act), and the Private Securities Litigation Reform Act of 1995. These forward-looking statements may be identified by words such as "may," "will," "expect," "intend," "anticipate," "believe," "estimate," "plan," "project," "could," "should," "would," "continue," "seek," "target," "guidance," "outlook," "if current trends continue," "optimistic," "forecast" and other similar words. Such statements include, but are not limited to, statements about our plans, objectives, expectations, intentions, estimates and strategies for the future, the continuing availability of borrowings under revolving lines of credit, and other statements that are not historical facts. These forward-looking statements are based on our current objectives, beliefs and expectations, and they are subject to significant risks and uncertainties that may cause actual results and financial position and timing of certain events to differ materially from the information in the forward-looking statements. These risks and uncertainties include, but are not limited to, those described below under Part I, Item 1A. Risk Factors, Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and other risks and uncertainties listed from time to time in our filings with the Securities and Exchange Commission (the SEC).

All of the forward-looking statements are qualified in their entirety by reference to the factors discussed in Part I, Item 1A. Risk Factors and elsewhere in this report. There may be other factors of which we are not currently aware that may affect matters discussed in the forward-looking statements and may also cause actual results to differ materially from those discussed. We do not assume any obligation to publicly update or supplement any forward-looking statement to reflect actual results, changes in assumptions or changes in other factors affecting such statements other than as required by law. Any forward-looking statements speak only as of the date of this report or as of the dates indicated in the statements.

Table of Contents

Summary of Risk Factors

Our business is subject to a number of risks and uncertainties that may affect our business, results of operations and financial condition, or the trading price of our common stock or other securities. We caution the reader that these risk factors may not be exhaustive. We operate in a continually changing business environment, and new risks and uncertainties emerge from time to time. Management cannot predict such new risks and uncertainties, nor can it assess the extent to which any of the risk factors below or any such new risks and uncertainties, or any combination thereof, may impact our business. These risks are more fully described in Part I, Item 1A. Risk Factors. These risks include, among others, the following:

Risks Related to our Business and Industry

- Downturns in economic conditions could adversely affect our business.
- We will need to obtain sufficient financing or other capital to operate successfully.
- Our high level of debt and other obligations may limit our ability to fund general corporate requirements and obtain additional financing, may limit our flexibility in responding to competitive developments and may cause our business to be vulnerable to adverse economic and industry conditions.
- We have significant pension and other postretirement benefit funding obligations, which may adversely affect our liquidity, results of operations and financial condition.
- If our financial condition worsens, provisions in our credit card processing and other commercial agreements may adversely affect our liquidity.
- The loss of key personnel upon whom we depend to operate our business or the inability to attract and develop additional qualified personnel could adversely affect our business.
- Our business has been and will continue to be affected by many changing economic and other conditions beyond our control, including global events that affect travel behavior, and our results of operations could be volatile and fluctuate due to seasonality.
- Union disputes, employee strikes and other labor-related disruptions, or our inability to otherwise maintain labor costs at competitive levels and hire and retain a sufficient number of employees may adversely affect our operations and financial performance.
- If we encounter problems with any of our third-party regional operators or third-party service providers, our operations could be adversely affected by a resulting decline in revenue or negative public perception about our services.
- Any damage to our reputation or brand image could adversely affect our business or financial results.
- Changes to our business model that are designed to increase revenues may not be successful and may cause operational difficulties or decreased demand.
- Our intellectual property rights, particularly our branding rights, are valuable, and any inability to protect them may adversely affect our business and financial results.
- We may be a party to litigation in the normal course of business or otherwise, which could affect our financial position and liquidity.
- Our ability to utilize our NOLs and other carryforwards may be limited.

Table of Contents

- We have a significant amount of goodwill, which is assessed for impairment at least annually. In addition, we may never realize the full value of our intangible assets or long-lived assets, causing us to record material impairment charges.
- The airline industry is intensely competitive and dynamic.
- The commercial relationships that we have with other companies, including any related equity investments, may not produce the returns or results we expect.
- Our business is very dependent on the price and availability of aircraft fuel. Continued periods of high volatility in fuel costs, increased fuel prices or significant disruptions in the supply of aircraft fuel could have a significant negative impact on consumer demand, our operating results and liquidity.
- Our business is subject to extensive government regulation, which may result in increases in our costs, disruptions to our operations, limits on our operating flexibility, reductions in the demand for air travel, and competitive disadvantages.
- We operate a global business with international operations that are subject to economic and political instability and have been, and in the future may continue to be, adversely affected by numerous events, circumstances or government actions beyond our control.
- We may be adversely affected by conflicts overseas or terrorist attacks; the travel industry continues to face ongoing security concerns.
- We are subject to risks associated with climate change, including increased regulation of our CO₂ emissions, changing consumer preferences and the potential increased impacts of severe weather events on our operations and infrastructure.
- A shortage of pilots or other personnel has in the past and could continue to materially adversely affect our business.
- We depend on a limited number of suppliers for aircraft, aircraft engines and parts.
- Delays in scheduled aircraft deliveries or other loss of anticipated fleet capacity, and failure of new aircraft to perform as expected, may adversely impact our business, results of operations and financial condition.
- We rely heavily on technology and automated systems to operate our business, and any failure of these technologies or systems could harm our business, results of operations and financial condition.
- Evolving data security and privacy requirements (in particular, compliance with applicable federal, state and foreign laws relating to handling of personal information about individuals) could increase our costs, and any significant data security or privacy incident could disrupt our operations, harm our reputation, expose us to legal risks and otherwise materially adversely affect our business, results of operations and financial condition.
- We rely on third-party distribution channels and must manage effectively the costs, rights and functionality of these channels.
- If we are unable to obtain and maintain adequate facilities and infrastructure throughout our system and, at some airports, adequate slots, we may be unable to operate our existing flight schedule and to expand or change our route network in the future, which may have a material adverse impact on our operations.

Table of Contents

PART I

ITEM 1. BUSINESS

Overview

American Airlines Group Inc. (AAG), a Delaware corporation, is a holding company and its principal, wholly-owned subsidiaries are American Airlines, Inc. (American), Envoy Aviation Group Inc., PSA Airlines, Inc. (PSA) and Piedmont Airlines, Inc. (Piedmont). AAG was formed in 1982, under the name AMR Corporation (AMR), as the parent company of American, which was founded in 1934.

AAG's and American's principal executive offices are located at 1 Skyview Drive, Fort Worth, Texas 76155 and their telephone number is 682-278-9000.

Airline Operations

Together with our wholly-owned regional airline subsidiaries and third-party regional carriers operating as American Eagle, our primary business activity is the operation of a major network air carrier, providing scheduled air transportation for passengers and cargo through our hubs in Charlotte, Chicago, Dallas/Fort Worth, Los Angeles, Miami, New York, Philadelphia, Phoenix and Washington, D.C. and partner gateways, including in London, Doha, Madrid, Seattle/Tacoma, Sydney and Tokyo (among others). In 2022, over 199 million passengers boarded our flights. During 2022, we announced the return of several international routes that had been cut due to the COVID-19 pandemic and aircraft delivery delays.

As of December 31, 2022, we operated 925 mainline aircraft supported by our regional airline subsidiaries and third-party regional carriers, which together operated an additional 536 regional aircraft. See Part I, Item 2. Properties for further discussion of our mainline and regional aircraft and "Regional" below for further discussion of our regional operations.

American is a founding member of the **oneworld**® Alliance, which brings together a global network of 13 world-class member airlines and their affiliates, working together to provide a superior and seamless travel experience. See "*Distribution and Marketing Agreements*" below for further discussion on the **oneworld** Alliance and other agreements with domestic and international airlines.

See Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – "*2022 Financial Overview*," "*AAG's Results of Operations*" and "*American's Results of Operations*" for further discussion of AAG's and American's operating results and operating performance. Also, see Note 1(m) to each of AAG's and American's Consolidated Financial Statements in Part II, Items 8A and 8B, respectively, for passenger revenue by geographic region and Note 13 to AAG's Consolidated Financial Statements in Part II, Item 8A and Note 12 to American's Consolidated Financial Statements in Part II, Item 8B for information regarding operating segments.

Regional

Our regional carriers provide scheduled air transportation under the brand name "American Eagle." The American Eagle carriers include our wholly-owned regional carriers Envoy Air Inc. (Envoy), PSA and Piedmont, as well as third-party regional carriers including Republic Airways Inc. (Republic), SkyWest Airlines, Inc. (SkyWest), Mesa Airlines, Inc. (Mesa) and Air Wisconsin Airlines LLC (Air Wisconsin). Our regional carriers are an integral component of our operating network. We rely heavily on regional carriers to drive feeder traffic to our hubs from low-density markets that are not economical for us to serve with larger, mainline aircraft. In addition, regional carriers offer complementary service in many of our mainline markets. All American Eagle carriers use logos, service marks, aircraft paint schemes and uniforms similar to those of our mainline operations. In 2022, 48 million passengers boarded our regional flights, approximately 44% of whom connected to or from our mainline flights.

Our regional carrier arrangements are in the form of capacity purchase agreements. The capacity purchase agreements provide that all revenues, including passenger, in-flight, ancillary, mail and freight revenues, go to us. We control marketing, scheduling, ticketing, pricing and seat inventories. In return, we agree to pay predetermined fees to these airlines for operating an agreed-upon number of aircraft, without regard to the number of passengers on board. In addition, these agreements provide that we either reimburse or pay 100% of certain variable costs, such as airport landing fees, fuel and passenger liability insurance. We previously announced that we had entered into an agreement with Air Wisconsin, pursuant to which Air Wisconsin is expected to begin operating scheduled flights under the American Eagle name in the first quarter of 2023. Additionally, in December 2022, we announced a wind-down of our relationship with Mesa, which we expect to conclude in the second quarter of 2023.

Table of Contents

Cargo

Our cargo division provides a wide range of freight and mail services, with facilities and interline connections available across the globe. In 2022, we served more than 20,000 unique origin and destination pairs, transporting over 890 million pounds of time-sensitive freight and mail across our network. Also in 2022, we were named Best Cargo Airline from the Americas by *Air Cargo News*.

Distribution and Marketing Agreements

Passengers can purchase tickets for travel on American through several distribution channels, including our website (www.aa.com), our mobile app, our reservations centers and third-party distribution channels, including those provided by or through global distribution systems (e.g., Amadeus, Sabre and Travelport), conventional travel agents, travel management companies and online travel agents (e.g., Expedia, including its booking sites Orbitz and Travelocity, and Booking Holdings, including its booking sites Kayak and Priceline). In 2022, American entered into new long-term distribution agreements with Amadeus, Sabre and Travelport which will allow us to continue to provide convenient ways for customers to purchase travel from American. To remain competitive, we will need to manage our distribution costs and rights effectively, increase our distribution flexibility and improve the functionality of our proprietary and third-party distribution channels, while maintaining an industry-competitive cost structure. For more discussion, see Part I, Item 1A. Risk Factors – “*We rely on third-party distribution channels and must manage effectively the costs, rights and functionality of these channels.*”

In general, beyond nonstop city pairs, carriers that have the greatest ability to seamlessly connect passengers to and from markets have a competitive advantage. In some cases, however, foreign governments limit U.S. air carriers’ rights to transport passengers beyond designated gateway cities in foreign countries. In order to improve access to domestic and foreign markets, we have arrangements with other airlines including through the **oneworld** Alliance, other cooperation agreements, joint business agreements and marketing relationships, as further discussed below.

Member of oneworld Alliance

American is a founding member of the **oneworld** Alliance, which currently includes Alaska Airlines, British Airways, Cathay Pacific, Finnair, Iberia, Japan Airlines, Malaysia Airlines, Qantas Airways (Qantas), Qatar Airways, Royal Air Maroc, Royal Jordanian Airlines and SriLankan Airlines. Fiji Airways is a **oneworld** connect partner and Oman Air is expected to join the **oneworld** Alliance in 2024. The **oneworld** Alliance links the networks of member carriers and their respective affiliates to enhance customer service and provide smooth connections to the destinations served by the alliance, including linking member carriers’ loyalty programs and providing reciprocal access to the carriers’ airport lounge facilities.

Cooperation and Joint Business Agreements

American has established a transatlantic joint business with British Airways, Aer Lingus, Iberia and Finnair, a transpacific joint business with Japan Airlines and a joint business relating to Australia and New Zealand with Qantas. Joint business agreements enable the carriers involved to cooperate on flights between particular destinations and allow pooling and sharing of certain revenues and costs, enhanced loyalty program reciprocity and cooperation in other areas. Joint business agreements have become a common approach among major carriers to address key regulatory restrictions typically applicable to international airline service, including limitations on the foreign ownership of airlines and national laws prohibiting foreign airlines from carrying passengers beyond specific gateway cities. American and its joint business partners received regulatory approval to enter into each of these cooperation agreements and each has been granted antitrust immunity. Our competitors, including Delta Air Lines and United Airlines, are party to similar arrangements.

The business relationship under the transatlantic joint business benefits from a grant of antitrust immunity from the U.S. Department of Transportation (DOT) and was reviewed by the European Commission (EC) in July 2010. In connection with this review, we provided certain commitments to the EC regarding, among other things, the availability of take-off and landing slots at London Heathrow (LHR) or London Gatwick (LGW) airports. The commitments accepted by the EC were binding for 10 years. In October 2018, in anticipation of the exit of the United Kingdom from the European Union (EU), commonly referred to as Brexit, and the expiry of the EC commitments in July 2020, the United Kingdom Competition and Markets Authority (CMA) opened an investigation into the transatlantic joint business. We continue to fully cooperate with the CMA and, in September 2020 and April 2022, the CMA adopted interim measures that effectively extend the EC commitments until March 2026 in light of the uncertainty and other impacts resulting from the COVID-19 pandemic. The CMA plans to complete its investigation before the scheduled expiration of the interim measures in March 2026.

Table of Contents

Marketing Relationships

To improve access to each other's markets, various U.S. and foreign air carriers, including American, have established marketing agreements with other airlines. These marketing agreements are intended to provide enhanced customer choice by means of an expanded network with reciprocal loyalty program participation and joint sales cooperation. As of December 31, 2022, American had codeshare, marketing and/or loyalty program relationships with Aer Lingus, Air Tahiti Nui, Alaska Airlines, British Airways, Cape Air, Cathay Pacific, China Southern Airlines Company Limited (China Southern Airlines), EL AL Israel Airlines, Etihad Airways, Fiji Airways, Finnair, GOL Linhas Aéreas Inteligentes S.A. (GOL), Gulf Air, Hawaiian Airlines, Iberia, IndiGo, Japan Airlines, JetBlue Airways Corporation (JetBlue), Jetstar, Jetstar Japan, Malaysia Airlines, Qantas, Qatar Airways, Royal Air Maroc, Royal Jordanian Airlines, Silver Airways, SriLankan Airlines and Vueling Airlines.

In 2022, we entered into an investment agreement with GOL, a Brazilian low-cost airline. This expanded partnership with GOL includes an exclusive codeshare agreement allowing customers access to more than 30 destinations served by American in the U.S. and more than 30 destinations served by GOL in South America. Members of GOL's SMILES and American's AAdvantage loyalty programs will also benefit from a deeper loyalty program partnership. In addition, the expanded partnership with GOL will allow further commercial cooperation in areas such as purchasing, sales tools and systems integration, subject to relevant regulatory and contractual limitations.

Also in 2022, we expanded our strategic alliance with Qatar Airways, enabling American's customers to book travel on Qatar Airways flights between the U.S. and Doha, Qatar and connecting to and from select destinations throughout the Middle East, East Africa, South Asia and Southeast Asia gateways. In addition to this expanded codeshare, we launched new service in 2022 from New York's John F. Kennedy International Airport (JFK) to Doha's Hamad International Airport.

Additionally, in December 2022, we completed an investment agreement with JetSmart Airlines SpA (JetSMART), an ultra-low-cost carrier operating in South America, which includes a codeshare agreement that remains to be implemented.

In 2021, we began implementing key aspects of our marketing relationship with JetBlue, creating seamless connectivity for travelers in the U.S. Northeast and more choice for customers across our complementary domestic and international networks. This arrangement includes an alliance agreement with reciprocal codesharing on certain domestic and international routes from New York (JFK, LaGuardia Airport (LGA) and Newark Liberty International Airport (EWR)) and Boston Logan International Airport (BOS), and provides for reciprocal loyalty program benefits. The arrangement does not include JetBlue's transatlantic flying. Pursuant to federal law, American and JetBlue submitted this proposed alliance arrangement to the DOT for review. After American, JetBlue and the DOT agreed to a series of commitments, the DOT terminated its review of the proposed alliance in January 2021. The commitments include growth commitments to ensure capacity expansion, slot divestitures at JFK and at Ronald Reagan Washington National Airport (DCA) near Washington, D.C. and antitrust compliance measures. Beyond this agreement with the DOT (the DOT Agreement), American and JetBlue will also refrain from certain kinds of coordination on certain city pair markets. Upon the DOT's termination of its review of the proposed alliance, American and JetBlue implemented the proposed alliance subject to these commitments. On September 21, 2021, the United States Department of Justice (the DOJ), joined by Attorneys General from six states and the District of Columbia, filed an antitrust complaint against American and JetBlue in the District of Massachusetts alleging that American and JetBlue violated U.S. antitrust law in connection with the Northeast Alliance arrangement (the NEA). The parties presented their respective cases in a bench trial that commenced on September 27, 2022. Closing arguments from both parties were presented on November 18, 2022. A decision is expected in the first quarter of 2023. Separately, in December 2022, two putative class action lawsuits were filed in the Eastern District of New York also alleging that the NEA violated the antitrust law. Those lawsuits, which have been consolidated, seek monetary and injunctive relief. In February 2023, private party plaintiffs filed two additional putative class action antitrust complaints against American and JetBlue in the District of Massachusetts and the Eastern District of New York, respectively. We believe these complaints are without merit and are defending against them vigorously.

We also have a marketing relationship with Alaska Airlines which includes an expanded codeshare agreement (including codeshare on certain of our international routes from Seattle-Tacoma International Airport and Los Angeles International Airport (LAX)), reciprocal loyalty program benefits and shared lounge access. Prior to its implementation, American and Alaska Airlines submitted this arrangement to the DOT for review pursuant to federal law. After the DOT allowed the review period to expire with no further actions, American and Alaska Airlines commenced implementation of this arrangement.

[Table of Contents](#)

Loyalty Program

Our loyalty program, AAdvantage®, was established to develop passenger loyalty by offering benefits and awards to travelers for their continued patronage with American and our partners. AAdvantage members earn mileage credits for flying on American, any oneworld Alliance airline or other partner airlines. For every dollar spent by flying on American, members earn mileage credits, and Gold, Platinum, Platinum Pro and Executive Platinum status holders earn additional bonus mileage credits of 40%, 60%, 80% and 120%, respectively. Members also earn mileage credits by using the services of more than 1,000 non-flight partners, such as our co-branded credit cards, and certain hotel and car rental companies. The AAdvantage program in general, and our co-branded credit cards in particular, are significant assets of our business and have become increasingly important to our company over time.

Mileage credits can be redeemed for free or upgraded travel on American and participating airlines, membership to our Admirals Club® or for other non-flight awards, such as car rentals and hotels, from our program partners. Travel awards are available on all flights operated by American and at times are subject to capacity-controlled seating on flights operated by our partners. A member's mileage credits generally do not expire if that member has any type of qualifying activity at least once every 24 months or if the AAdvantage member is the primary holder of a co-branded credit card. Starting in 2022, AAdvantage members have more pathways to status and only one metric to track: Loyalty Points, which can be earned through a variety of qualifying travel and non-travel activities, including use of our co-branded credit cards. Loyalty Points are used for measuring status qualification in the AAdvantage program over a 12-month period beginning on March 1 of each year. Status members can enjoy additional travel benefits of the AAdvantage program, including complimentary upgrades, checked bags, and Preferred and Main Cabin Extra seats, as well as priority check-in, security, boarding and baggage delivery when traveling on American, any oneworld Alliance airline or other partner airlines. In addition, we introduced Loyalty Point Rewards, which, starting in March 2023, will allow members to unlock benefits, rewards and choices before, between and beyond the traditional status tiers.

In 2022, AAdvantage was recognized as the Best Elite Program in the Americas by the 2022 Freddie Awards, which is based entirely on votes from travelers around the world. In addition, the editorial staff of the digital news outlet, *The Points Guy*, selected AAdvantage Executive Platinum Status as the Best U.S. Airline Elite Status and awarded Loyalty Points with the Innovation Award for Loyalty.

Under our agreements with AAdvantage members and program partners, we reserve the right to change the terms of the AAdvantage program at any time and without notice, and may end the program with six months' notice. Program rules, partners, special offers, awards and requisite mileage levels for awards are subject to change.

During 2022, our members redeemed approximately 13 million awards, including travel redemptions for flights and upgrades on American and other air carriers, as well as redemption of car and hotel awards, club memberships and merchandise. Approximately 7% of our 2022 total revenue passenger miles flown were from award travel.

See Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – “*Critical Accounting Policies and Estimates*” for more information on our loyalty program.

Industry Competition

Domestic

The markets in which we operate are highly competitive. On most of our domestic nonstop routes, we face competing service from other domestic airlines, including major network airlines, low-cost carriers and ultra-low-cost carriers such as Alaska Airlines, Allegiant Air, Delta Air Lines, Frontier Airlines, Hawaiian Airlines, JetBlue, Southwest Airlines, Spirit Airlines and United Airlines. Between cities that require a connection, where the major airlines compete via their respective hubs, competition is significant. In addition, we face competition on some of our connecting routes from airlines operating point-to-point service on such routes. We also compete with all-cargo and charter airlines and, particularly on shorter segments, ground and rail transportation.

On all of our routes, pricing decisions are affected, in large part, by the need to meet competition from other airlines. Price competition occurs on a market-by-market basis through price discounts, changes in pricing structures, fare matching, targeted promotions and loyalty program initiatives. Airlines typically use discounted fares and other promotions to stimulate traffic during normally weak travel periods, when they begin service to new cities, when they have excess capacity, to generate cash flow, to maximize revenue per available seat mile or to establish, increase or preserve market share. Most airlines will quickly match price reductions in a particular market, and we have often elected to match discounted or promotional fares initiated by other air carriers in certain markets in order to compete in those markets. In addition, we face pricing pressures from so-called ultra-low-cost carriers, such as Allegiant Air, Frontier Airlines and Spirit

Table of Contents

Airlines, which compete in many of the markets in which we operate, with competition from these carriers increasing and new entrants regularly announcing their intention to start up new ultra-low-cost carriers.

In addition to price competition, airlines compete for market share by increasing the size of their route system and the number of markets they serve. The American Eagle regional carriers increase the number of markets we serve by flying to smaller markets and providing connections at our hubs. Many of our competitors also own or have agreements with regional airlines that provide similar services at their hubs and other locations. We also compete on the basis of scheduling (frequency and flight times), availability of nonstop flights, on-time performance, type of equipment, cabin configuration, amenities provided to passengers, loyalty programs, the automation of travel agent reservation systems, onboard products, health and safety, sustainability initiatives and other services.

International

In addition to our extensive domestic service, we provide international service to Canada, Mexico, the Caribbean, Central and South America, Europe, China, Japan, Korea, India, Australia and New Zealand. In 2022, we launched service to Doha, Qatar, allowing customers to connect to and from select destinations throughout the Middle East, East Africa, South Asia and Southeast Asia gateways. In providing international air transportation, we compete with other U.S. airlines, foreign investor-owned airlines and foreign state-owned or state-affiliated airlines. Competition has also been increasing from low-cost airlines executing international long-haul expansion strategies, a trend we also expect to continue, in particular with the planned introduction of long-range narrowbody aircraft in the coming years.

In order to increase our ability to compete in the market for international air transportation service, which is subject to extensive government regulation, U.S. and foreign carriers have entered into bilateral and multilateral marketing relationships, alliances, cooperation agreements and joint business agreements to exchange traffic among each other's flights and route networks. See "*Distribution and Marketing Agreements*" above for further discussion.

Sustainability

Our purpose is to care for people on life's journey. Conducting our business with a view towards operating a sustainable business that has the ability to serve our stakeholders over the long-term is an important part of this purpose. We have increased our focus over time on a number of elements that we view as important to build a more sustainable company, including those described below.

Climate

We recognize the challenge of climate change and have set ambitious goals to transition to operating a low-carbon airline over time.

Our aim is to achieve net zero greenhouse gas (GHG) emissions by 2050, and we have set an intermediate target to drive progress toward that goal. In April 2022, we received validation from the Science Based Targets initiative (SBTi) that our 2035 GHG reduction target complies with the SBTi criteria.

The vast majority of our direct GHG emissions comes from the use of jet fuel in our operations. Our current strategy for reaching net zero emissions by 2050 is focused on running a more fuel-efficient operation, with more fuel-efficient aircraft, powered by low-carbon fuel. To do so, we are working to drive progress across several key levers, including:

- Continuing to replace older, less fuel-efficient aircraft with new, more efficient aircraft over time;
- Helping scale the production of sustainable aviation fuel (SAF) with the aim of transitioning to lower-carbon fuels. Currently, SAF is not available at the cost or scale necessary to meet our industry's needs. We continue to enter into agreements to purchase SAF as part of our goal to replace 10% of our conventional jet fuel with SAF in 2030 and to encourage investment in SAF; and
- Evaluating and investing in innovations that may enable commercial aircraft to be powered by low- and no-carbon fuel sources over the long term. For example, in 2022 we made direct investments in ZeroAvia and Universal Hydrogen, companies working to develop hydrogen-electric propulsion technology and green hydrogen distribution, respectively. We are also an anchor partner of Breakthrough Energy Catalyst, which aims to make investments to accelerate the development of new clean energy technologies.

[Table of Contents](#)

Achieving our ambitious goals will require significant action and investments by governments, manufacturers and other stakeholders. We are committed to engaging with our stakeholders to seek to advance these initiatives, and we have dedicated resources to advance our own progress. Our Board and Corporate Governance, Public Responsibility and Safety Committee receive updates on our climate strategy, progress and key risks regularly. And, in 2022, we formally assigned responsibility for oversight of our climate change strategy at the management level to our Chief Executive Officer.

Safety

The safety of our customers and team members is a top priority. Our approach to safety is guided by our Safety Management System (SMS), an organization-wide approach to identifying and managing risk. The SMS is comprised of four components: Safety Policy, Safety Assurance, Safety Risk Management and Safety Promotion. Our Safety Policy sets safety objectives while striving to comply with applicable regulatory requirements and laws in the countries where we operate and establishing standards for acceptable operational behaviors.

The Safety Assurance component of our SMS specifies how we use data and conduct quality assurance and internal oversight to validate the effectiveness of risk controls and the performance of the SMS. The Safety Risk Management (SRM) element of our SMS provides a decision-making process for identifying hazards and mitigating risk based on a thorough understanding of our systems and their operating environment. We employ SRM whenever there is a significant change to our operations, such as delivery of new aircraft. Lastly, the Safety Promotion component includes training and raising awareness among team members so that they can spot potential safety events.

Customers

We fly to more than 300 destinations in the United States and internationally, and we are committed to providing our customers with a world-class travel experience. We continued to rigorously measure and track customer satisfaction through passenger surveys in 2022, efforts that led to further improvements in our operations and the services we provide.

In 2022:

- We recorded a record Likelihood to Recommend score based on our internal customer data derived from approximately three million surveys completed by our customers in 2022; and
- We were recognized for the fifth consecutive year with the prestigious Five Star rating in The APEX Official Airline Ratings – Global Airline category. This rating is based on verified customer feedback on the overall travel experience.

Our People

The airline business is labor intensive, and our team members are critical to delivering for our customers. The operational complexity of our business requires a diverse team of personnel trained and experienced in a variety of technical areas such as flight operations, ground operations, safety and maintenance, customer service and airline scheduling and planning. We believe that if we create an environment where our team members feel supported, they will take care of our customers and thereby support the success of our business. To do this, we must continue to build a diverse and inclusive environment, helping all team members reach their full potential and providing them with the right resources and support.

Talent Development

We focus on providing our team members the tools, training and resources they need to do their best work. We maintain a suite of programs aimed at helping our people develop the skills and experience they need to succeed in their roles and build rewarding, long-term careers within our company. Additionally, we have partnered with leading online learning platforms to make professional development available on-demand to all of our team members.

Diversity, Equity and Inclusion

Cultivating an environment that celebrates diversity, equity and inclusion (DEI) is a priority for us, and we seek to create a workplace where diverse perspectives and experiences are welcomed and encouraged, where team members feel comfortable to be their authentic selves and where we are always learning from one another. Our goal is to make culture a competitive advantage so people will want to work with us, fly with us and invest in us. We are implementing a multiyear strategy focused on embedding DEI throughout our company by:

Table of Contents

- Hiring, engaging and retaining talent for growth;
- Delivering excellence in our operations to serve and expand our global markets;
- Striving to have our teams reflect the diversity of our global customer base; and
- Driving innovation to build competitive advantages.

In 2022, we received a perfect score on the 2022 Disability Equality Index and were designated a Human Rights Campaign's 2022 Best Place to Work for LGBTQ+ Equality. We also launched the Selection, Onboarding, Advancement and Retention program, an expansion of our Executive Sponsorship Program, which creates a sustainable foundation for supporting diverse talent and underrepresented groups across our company.

Competitive Pay and Comprehensive Benefits

We seek to offer competitive pay, comprehensive benefits and a wide variety of resources designed to support the physical, behavioral and financial well-being of our team members and their families, including medical coverage that is intended to be affordable and flexible along with healthcare navigation and support tools.

Our internal recognition programs give team members and customers the opportunity to show their appreciation for a job well done, including through our Nonstop Thanks program whereby team members can award each other points for exceptional service or as an expression of gratitude. Recognition points earned through the recognition program can be redeemed for items in an online catalog. In 2022, our team members were recognized by customers, peers and company leaders over two million times and hundreds of team members were nominated for the annual Chairman's Award, the highest honor that we bestow upon our team members.

Our future success depends in large part on our ability to attract, develop and retain highly qualified management, technical and other personnel. Retaining and recruiting people with the appropriate skills has been particularly challenging as the economy in general, and the airline industry in particular, have continued to recover from the COVID-19 pandemic. A rapid return of demand for air travel and the corresponding need for airlines to staff expanding operations resulted in a period of intense competition for the human resources necessary to operate our business successfully. Like many other airlines, we have experienced and continue to experience periodic shortages of frontline team members as a result. Certain of these personnel shortages, such as pilots, are systemic and could persist for some time. For more discussion, see Part I, Item 1A. Risk Factors – *"The loss of key personnel upon whom we depend to operate our business or the inability to attract and develop additional qualified personnel could adversely affect our business."*

Labor Relations

In 2022, mainline and regional salaries, wages and benefits were our largest expense and represented 32% of our total operating expenses. As of December 31, 2022, we had approximately 129,700 active full-time equivalent employees, approximately 87% of whom were represented by various labor unions responsible for negotiating the collective bargaining agreements (CBAs) governing their compensation and job duties, among other things.

Labor relations in the air transportation industry are regulated under the Railway Labor Act (RLA), which vests in the National Mediation Board (NMB) certain functions with respect to disputes between airlines and labor unions relating to union representation and CBAs.

Table of Contents

The following table shows our domestic airline employee groups that are represented by unions:

Union	Class or Craft	Employees ⁽¹⁾	Contract Amendable Date
Mainline:			
Allied Pilots Association (APA)	Pilots	13,450	2020
Association of Professional Flight Attendants (APFA)	Flight Attendants	23,200	2019
Airline Customer Service Employee Association – Communications Workers of America and International Brotherhood of Teamsters (CWA-IBT)	Passenger Service	14,650	2020
Transport Workers Union and International Association of Machinists & Aerospace Workers (TWU-IAM Association)	Mechanics and Related	11,850	2025
TWU-IAM Association	Fleet Service	18,700	2025
TWU-IAM Association	Stock Clerks	1,950	2025
TWU-IAM Association	Flight Simulator Engineers	140	2025
TWU-IAM Association	Maintenance Control Technicians	180	2025
TWU-IAM Association	Maintenance Training Instructors	100	2025
Professional Airline Flight Control Association (PAFCA)	Dispatchers	560	2025
Transport Workers Union (TWU)	Flight Crew Training Instructors	390	2025
Envoy:			
Air Line Pilots Associations (ALPA)	Pilots	1,850	2029
Association of Flight Attendants-CWA (AFA)	Flight Attendants	1,800	2026
TWU	Ground School Instructors	10	2027
TWU	Mechanics and Related	1,150	2021
TWU	Stock Clerks	120	2021
TWU	Simulator Instructors	20	2026
TWU	Fleet Service	3,950	2026
TWU	Dispatchers	70	2025
Communications Workers of America (CWA)	Passenger Service	6,500	2026
Piedmont:			
ALPA	Pilots	740	2029
AFA	Flight Attendants	310	2026
International Brotherhood of Teamsters (IBT)	Mechanics and Related	400	2026
IBT	Stock Clerks	60	2026
CWA	Fleet and Passenger Service	6,300	2023
IBT	Dispatchers	30	2025
ALPA	Flight Crew Training Instructors	70	2029
PSA:			
ALPA	Pilots	1,550	2028
AFA	Flight Attendants	1,200	2023
International Association of Machinists & Aerospace Workers (IAM)	Mechanics and Related	620	2022
TWU	Dispatchers	50	2024
ALPA	Flight Crew Training Instructors	120	2028

⁽¹⁾ Represents approximate number of active employees as of December 31, 2022.

Table of Contents

CBAAs covering our mainline pilots, flight attendants and passenger service are now amendable and negotiations involving these workgroups continue. Among our wholly-owned regional subsidiaries, the Envoy mechanics and related, Envoy stock clerks and PSA mechanics and related have agreements that are now amendable and are engaged in traditional RLA negotiations.

For more discussion, see Part I, Item 1A. Risk Factors – “*Union disputes, employee strikes and other labor-related disruptions, or our inability to otherwise maintain labor costs at competitive levels and hire and retain a sufficient number of employees may adversely affect our operations and financial performance.*”

Aircraft Fuel

Our operations and financial results are materially affected by the availability and price of aircraft fuel, which represents one of the largest single cost items in our business. Based on our 2023 forecasted mainline and regional fuel consumption, we estimate that a one cent per gallon increase in the price of aircraft fuel would increase our 2023 annual fuel expense by approximately \$40 million.

The following table shows annual aircraft fuel consumption and costs, including taxes, for our mainline and regional operations for 2022 and 2021 (gallons and aircraft fuel expense in millions).

Year	Gallons	Average Price per Gallon	Aircraft Fuel Expense	Percent of Total Operating Expenses
2022	3,901	\$3.54	\$13,791	29%
2021	3,324	\$2.04	\$6,792	22%

As of December 31, 2022, we did not have any fuel hedging contracts outstanding to hedge our fuel consumption. Our current policy is not to enter into transactions to hedge our fuel consumption, although we review that policy from time to time based on market conditions and other factors. As such, and assuming we do not enter into any future transactions to hedge our fuel consumption, we will continue to be fully exposed to fluctuations in aircraft fuel prices.

Aircraft fuel prices have in the past, and may in the future, experience substantial volatility. We cannot predict the future availability, price volatility or cost of aircraft fuel. For more discussion, see Part I, Item 1A. Risk Factors – “*Our business is very dependent on the price and availability of aircraft fuel. Continued periods of high volatility in fuel costs, increased fuel prices or significant disruptions in the supply of aircraft fuel could have a significant negative impact on consumer demand, our operating results and liquidity.*”

Seasonality and Other Factors

Due to the greater demand for air travel during the summer months, revenues in the airline industry in the second and third quarters of the year tend to be greater than revenues in the first and fourth quarters of the year. General economic conditions, fears of terrorism or war, fare initiatives, fluctuations in fuel prices, labor actions, weather, natural disasters, outbreaks of disease and other factors could impact this seasonal pattern. Therefore, our quarterly results of operations are not necessarily indicative of operating results for the entire year, and historical operating results in a quarterly or annual period are not necessarily indicative of future operating results.

Domestic and Global Regulatory Landscape

General

Airlines are subject to extensive domestic and international regulatory requirements. Domestically, the DOT and the Federal Aviation Administration (FAA) exercise significant regulatory authority over air carriers.

The DOT, among other things, oversees and regulates domestic and international codeshare agreements, international route authorities, competition and consumer protection matters including accessibility, the display and sharing of ancillary fee information and refund practices. The Antitrust Division of the DOJ, along with the DOT in certain instances, have jurisdiction over airline antitrust matters.

Table of Contents

The FAA similarly exercises safety oversight and regulates most operational matters of our business, including how we operate and maintain our aircraft. FAA requirements cover, among other things, required technology and necessary onboard equipment; systems, procedures and training necessary to ensure the continuous airworthiness of our fleet of aircraft; safety measures and equipment; crew scheduling limitations and experience requirements; and many other technical aspects of airline operations. Additionally, our pilots and other employees are subject to rigorous certification standards, and our pilots and other crew members must adhere to flight time and rest requirements.

The FAA also controls the national airspace system, including operational rules and fees for air traffic control (ATC) services. The efficiency, reliability and capacity of the ATC network has a significant impact on our costs and on the timeliness of our operations.

The U.S. Postal Service has jurisdiction over certain aspects of the transportation of mail and related services.

Airport Access and Operations

Domestically, any U.S. airline authorized by the DOT is generally free to operate scheduled passenger service between any two points within the U.S. and its territories, with the exception of certain airports that require landing and take-off rights and authorizations (slots) and other facilities, and certain airports that impose geographic limitations on operations or curtail operations based on the time of day. Operations at three major domestic airports we serve (JFK and LGA in New York City, and DCA near Washington, D.C.) and many foreign airports we serve (including LHR) are regulated by governmental entities through allocations of slots or similar regulatory mechanisms that limit the rights of carriers to conduct operations at those airports. Each slot represents the authorization to land at or take off from the particular airport during a specified time period. In addition to slot restrictions, operations at DCA and LGA are also limited based on a so-called “perimeter rule” which generally limits the stage length of the flights that can be operated from those airports to 1,250 and 1,500 miles, respectively. Generally, our ability to retain slots is conditioned on the continued use of such slots, and in the absence of use, the slots are subject to forfeiture. In certain circumstances, such as during the COVID-19 pandemic, regulators may issue slot waivers which temporarily suspend or amend slot usage requirements, and we have used slot waivers at times to reduce flying levels given limited demand for travel. We cannot guarantee that such waivers will be made available to us, or that upon expiration or cancellation of such waivers it will be economical for us to resume prior levels of flying to destinations where we have operated a reduced service. If we are forced to surrender slots, we may be unable to provide our desired level of service to or from certain destinations in the future. For more discussion, see Part I, Item 1A. Risk Factors – *If we are unable to obtain and maintain adequate facilities and infrastructure throughout our system and, at some airports, adequate slots, we may be unable to operate our existing flight schedule and to expand or change our route network in the future, which may have a material adverse impact on our operations.*”

Our ability to provide service can also be impaired at airports, such as Chicago O’Hare International Airport (ORD) and LAX, where the airport gate and other facilities are currently inadequate to accommodate all of the service that we would like to provide, or airports such as Dallas Love Field Airport where we have no access to gates at all.

Existing law also permits domestic local airport authorities to implement procedures and impose restrictions designed to abate noise, provided such procedures and restrictions do not unreasonably interfere with interstate or foreign commerce or the national transportation system. In some instances, these restrictions have caused curtailments in service or increases in operating costs.

Airline Fares, Taxes and User Fees

Airlines are permitted to establish their own domestic fares without governmental regulation. The DOT maintains authority over certain international fares, rates and charges, but only applies this authority on a limited basis. In addition, international fares and rates are sometimes subject to the jurisdiction of the governments of the foreign countries which we serve.

Airlines are obligated to collect a federal excise tax, commonly referred to as the “ticket tax,” on domestic and international air transportation, and to collect other taxes and charge other fees, such as foreign taxes, security fees and passenger facility charges. Although these taxes and fees are not our operating expenses, they represent an additional cost to our customers. These taxes and fees are subject to increase from time to time.

Table of Contents

DOT Passenger Protection Rules

The DOT regulates airline interactions with passengers through the ticketing process, at the airport and onboard the aircraft. Among other things, these regulations govern how our fares are displayed online, required customer disclosures, access by disabled passengers, handling of long onboard flight delays and reporting of mishandled bags. In 2023, the DOT is expected to propose or implement a number of new disability regulations that will impact us, including rules for accessible lavatories on single-aisle aircraft, penalties for wheelchair loss or damage and prompt wheelchair assistance. The DOT is also expected to finalize rules requiring refunds for cancellations and significant delays and rules mandating the display of ancillary fees during the initial itinerary search.

International

International air transportation is subject to extensive government regulation, including aviation agreements between the U.S. and other countries or governmental authorities, such as the EU. Moreover, our alliances with international carriers may be subject to the jurisdiction and regulations of various foreign agencies. The U.S. government has negotiated "open skies" agreements with 131 trading partners, which allow unrestricted route authority access between the U.S. and the foreign markets.

In addition, foreign countries impose passenger protection rules, which are analogous to, and often meet or exceed the requirements of, the DOT passenger protection rules discussed above. In cases where these foreign requirements exceed the DOT rules, we may bear additional burdens and liabilities. Further, various foreign airport authorities impose noise and curfew restrictions at their local airports.

Security

Substantially all aspects of civil aviation security in the U.S. or affecting U.S. carriers are controlled or regulated by the federal government through the Transportation Security Administration (TSA). Requirements include flight deck security; carriage of federal air marshals at no charge; enhanced security screening of passengers, baggage, cargo, mail, employees and vendors; fingerprint-based background checks of all employees and vendor employees with access to secure areas of airports; and the provision of certain passenger data to the federal government and other international border security authorities, for security and immigration controls. Funding for the TSA is provided by a combination of air carrier fees, passenger fees and taxpayer funds. Customs and Border Protection, which, like the TSA, is part of the Department of Homeland Security, also promulgates requirements, performs services and collects fees that impact our provision of services. Additionally, we have at times found it necessary or desirable to make significant expenditures to comply with security-related requirements while seeking to reduce their impact on our customers, such as expenditures for automated security screening lines at airports. Our international service further requires us to comply with the civil aviation security regimes imposed at the foreign airports we serve.

Environmental Matters

Environmental Regulation

The airline industry is subject to various laws and government regulations concerning environmental matters in the U.S. and other countries. U.S. federal laws that have a particular impact on our operations include the Airport Noise and Capacity Act of 1990, the Clean Air Act, the Resource Conservation and Recovery Act, the Clean Water Act, the Safe Drinking Water Act and the Comprehensive Environmental Response, Compensation and Liability Act (Superfund Act). The U.S. Environmental Protection Agency (EPA) and other federal agencies have been authorized to promulgate regulations that have an impact on our operations. In addition to these federal activities, various states have been delegated certain authorities under the aforementioned federal statutes. Many state and local governments have adopted environmental laws and regulations which are similar to or stricter than federal requirements.

Revised underground storage tank regulations issued by the EPA in 2015 have affected certain airport fuel hydrant systems, with modifications of such systems needed in order to comply with applicable portions of the revised regulations. In addition, related to the EPA and state regulations pertaining to storm water management, several U.S. airport authorities are actively engaged in efforts to limit discharges of deicing fluid into the environment, often by requiring airlines to participate in the building or reconfiguring of airport deicing facilities. Additionally, compliance with updated federal and state regulations governing fire extinguishing foams are expected to require modification to fire suppression systems that we operate, as well as those maintained by airports. We are evaluating the costs and potential impacts to our business of complying with these new regulations. On November 23, 2022, the EPA also published the final rule for particulate matter emission standards and test procedures for civil aircraft engines, which took effect on December 23, 2022.

Table of Contents

The environmental laws to which we are subject include those related to responsibility for potential soil and groundwater contamination. We are conducting investigation and remediation activities to address soil and groundwater conditions at several sites, including airports and maintenance bases. We presently anticipate that the ongoing costs of such activities will not have a material impact on our operations.

We employ an environmental management system that provides a systematic approach for compliance with environmental regulations and management of a broad range of environmental issues, including but not limited to air emissions, hazardous waste, underground tanks, and aircraft water quality.

Aircraft Emissions and Climate Change Requirements

American is subject to the requirements of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), an international, market-based emissions reduction program adopted by the International Civil Aviation Organization (ICAO) in 2016. CORSIA is intended to achieve carbon-neutral growth in the international aviation sector from 2021 through 2035 by requiring airlines to compensate for the growth in carbon dioxide (CO₂) emissions, relative to a predetermined baseline determined by ICAO, of a significant majority of international flights through the purchase of carbon offsets or the use of low-carbon fuels.

Currently, we expect to be required to purchase carbon offset credits to comply with CORSIA's first "implementation phase" (2024-2026). We do not expect to be required to purchase carbon offset credits beforehand, unless during 2023 the demand for international travel is stronger than expected and exceeds that of 2019.

Our future costs of CORSIA compliance are uncertain because of the difficulty in estimating the return of demand for international air travel in the recovery from the COVID-19 pandemic and the uncertainty with respect to the future supply and price of carbon offset credits and lower-carbon aircraft fuels.

In January 2021, the EPA adopted GHG emission standards for new aircraft engines, which are aligned with the 2017 ICAO aircraft engine GHG emission standards. Like the ICAO standards, the final EPA standards for new aircraft engines would not apply retroactively to engines already on in-service aircraft. These final standards have been challenged by several states and environmental groups, and the Biden Administration has issued an executive order requiring a review of these final standards. On November 15, 2021, the EPA announced that it would not rewrite the existing aircraft engine GHG emissions standards but would seek more ambitious new aircraft GHG emission standards within the ICAO process. The outcome of the legal challenge and whether there will be any development of new aircraft GHG emissions standards cannot be predicted at this time.

The EC's ReFuelEU Aviation initiative (part of its "Fit for 55" program) included a proposal for the creation of a SAF blending mandate for aviation fuel suppliers set at 2% beginning in 2025 and rising to 63% by 2050, among other requirements. The European Parliament (which has proposed stricter targets in relation to SAF blending percentages for 2050) and the European Council have adopted initial negotiating positions with respect to the ReFuelEU Aviation initiative and are currently in negotiations in relation to the final text of the proposed regulation. Individual EU member states have been developing their own requirements including, for example, a 1% SAF mandate in France that came into force on January 1, 2022. Whether and in what form these regulations will be finalized and the potential effects on our business are uncertain at this time.

All such climate change-related regulatory activity and developments may adversely affect our business and financial results by requiring us to reduce our emissions before cost-effective emissions reduction technologies are available, for example, through requirements to make capital investments to purchase specific types of equipment or technologies, purchase carbon offset credits or otherwise incur additional costs related to our emissions. Such activity may also impact us indirectly by increasing our operating costs, including fuel costs.

For more information on our approach to ESG issues, see our 2021 ESG Report at our website www.aa.com under "Environmental, Social and Governance." None of the information or contents of our 2021 ESG Report are incorporated into this Annual Report on Form 10-K.

Table of Contents

Impact of Regulatory Requirements on Our Business

Regulatory requirements, including but not limited to those discussed above, affect operations and increase operating costs for the airline industry, including our airline subsidiaries, and future regulatory developments may continue to do the same. For additional information, see Part I, Item 1A. Risk Factors – “*Evolving data security and privacy requirements (in particular, compliance with applicable federal, state and foreign laws relating to handling of personal information about individuals) could increase our costs, and any significant data security or privacy incident could disrupt our operations, harm our reputation, expose us to legal risks and otherwise materially adversely affect our business, results of operations and financial condition,*” “*If we are unable to obtain and maintain adequate facilities and infrastructure throughout our system and, at some airports, adequate slots, we may be unable to operate our existing flight schedule and to expand or change our route network in the future, which may have a material adverse impact on our operations,*” “*Our business is subject to extensive government regulation, which may result in increases in our costs, disruptions to our operations, limits on our operating flexibility, reductions in the demand for air travel, and competitive disadvantages,*” “*The airline industry is heavily taxed,*” “*We are subject to many forms of environmental and noise regulation and may incur substantial costs as a result,*” and “*We are subject to risks associated with climate change, including increased regulation of our CO₂ emissions, changing consumer preferences and the potential increased impacts of severe weather events on our operations and infrastructure.*”

Available Information

Use of Websites to Disclose Information

Our website is located at www.aa.com. We have made and expect in the future to make public disclosures to investors and the general public of information regarding AAG and its subsidiaries by means of the investor relations section of our website as well as through the use of our social media sites, including Facebook and Twitter. In order to receive notifications regarding new postings to our website, investors are encouraged to enroll on our website to receive automatic email alerts (see <https://americanairlines.gcs-web.com/email-alerts>), “follow” American (@AmericanAir) on Twitter and “like” American on our Facebook page (www.facebook.com/AmericanAirlines). None of the information or contents of our website or social media postings is incorporated into this Annual Report on Form 10-K.

Availability of SEC Reports

A copy of this Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports are available free of charge on our website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The SEC also maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov.

Table of Contents

GLOSSARY OF TERMS

“2013 Credit Agreement” means the Amended and Restated Credit and Guaranty Agreement dated as of May 21, 2015, among American, AAG, the lenders from time to time party thereto, Deutsche Bank AG New York Branch, as administrative agent, and certain other parties thereto, as amended.

“2013 Credit Facilities” means the 2013 Revolving Facility and 2013 Term Loan Facility provided for by the 2013 Credit Agreement.

“2013 Plan” means the AAG 2013 Incentive Award Plan.

“2013 Revolving Facility” means the revolving credit facility provided for by the 2013 Credit Agreement.

“2013 Term Loan Facility” means the term loan facility provided for under the 2013 Credit Agreement.

“2014 Credit Agreement” means the Amended and Restated Credit and Guaranty Agreement, dated as of April 20, 2015, among American, AAG, the lenders from time to time party thereto, Citibank N.A., as administrative agent, and certain other parties thereto, as amended.

“2014 Credit Facilities” means the 2014 Revolving Facility and the 2014 Term Loan Facility provided for by the 2014 Credit Agreement.

“2014 Revolving Facility” means the revolving credit facility provided for by the 2014 Credit Agreement.

“2014 Term Loan Facility” means the term loan facility provided for by the 2014 Credit Agreement.

“2020 JFK Bonds” means special facility revenue bonds issued on behalf of American by NYTDC in June 2020.

“2021 Form 10-K” means AAG’s and American’s Annual Report on Form 10-K for the year ended December 31, 2021.

“2021 JFK Bonds” means special facility revenue bonds NYTDC issued in June 2021.

“2021-1 Aircraft” means the 26 aircraft financed or to be financed by American under the 2021-1 Aircraft EETCs.

“2021-1 Aircraft EETCs” means the two pass-through trusts created by American in November 2021 that have issued approximately \$960 million aggregate face amount of Series 2021-1 Class A and Class B EETCs.

“2026 Notes” means the AAdvantage Issuers’ 5.50% senior secured notes due 2026.

“2029 Notes” means the AAdvantage Issuers’ 5.75% senior secured notes due 2029.

“3.75% Senior Notes” mean 3.75% senior notes due 2025 with an aggregate principal amount of \$500 million.

“5.000% Senior Notes” means the 5.000% senior notes due in 2022 with an aggregate principal amount of \$750 million.

“10.75% Senior Secured Notes” means, collectively, the LGA/DCA Notes and the IP Notes.

“10.75% Senior Secured Notes Closing Date” means September 25, 2020.

“10.75% Senior Secured Notes Collateral” means the IP Collateral and LGA/DCA Collateral.

“11.75% Senior Secured Notes” means the 11.75% senior secured notes due in 2025 with an aggregate principal amount of \$2.5 billion.

“11.75% Senior Secured Notes Collateral” means the First Lien 11.75% Senior Secured Notes Collateral and the Second Lien 11.75% Senior Secured Notes Collateral.

“AAdvantage” means the AAdvantage® frequent flyer program.

“AAdvantage Agreements” means the AAdvantage program agreements provided as collateral under the AAdvantage Financing.

Table of Contents

“AAdvantage Collateral” means the AAdvantage Agreements (including all payments thereunder) and rights under an intercompany agreement and American’s rights to certain data and other intellectual property used in the AAdvantage program (subject to certain exceptions), certain rights under the AAdvantage program, certain deposit accounts that will receive cash under the AAdvantage Agreements, certain reserve accounts, the equity of each of Loyalty Issuer and the SPV Guarantors and substantially all other assets of Loyalty Issuer and the SPV Guarantors.

“AAdvantage Financing” means, collectively, the AAdvantage Notes and the AAdvantage Term Loan Facility.

“AAdvantage Financing Closing Date” means March 24, 2021.

“AAdvantage Guarantees” means the AAdvantage Note Guarantees, together with the full and unconditional guarantee of the AAdvantage Loans by the AAdvantage Guarantors.

“AAdvantage Guarantors” means the SPV Guarantors and AAG.

“AAdvantage Indenture” means the indenture, dated as of March 24, 2021, by and among the AAdvantage Issuers, the AAdvantage Guarantors and Wilmington Trust, National Association, as trustee and as collateral custodian.

“AAdvantage Issuers” means the Loyalty Issuer and American.

“AAdvantage Loans” means the \$3.5 billion of term loans provided pursuant to the AAdvantage Term Loan Facility.

“AAdvantage Note Guarantees” means the full and unconditional guarantee of the AAdvantage Notes by the AAdvantage Guarantors.

“AAdvantage Notes” means, collectively, the 2026 Notes and the 2029 Notes.

“AAdvantage Payment Date” means, with respect to the payment of interest on the AAdvantage Notes and AAdvantage Loans, the 20th day of each January, April, July and October.

“AAdvantage Term Loan Facility” means the \$3.5 billion term loan facility provided pursuant to the term loan credit and guaranty agreement, dated as of March 24, 2021, with Barclays Bank PLC, as administrative agent, Wilmington Trust, National Association, as collateral administrator, and the lenders party thereto.

“AAG”, “we”, “us”, “our” and similar terms means American Airlines Group Inc. and its consolidated subsidiaries.

“AAL” means the trading symbol under which AAG common stock is listed and traded on the Nasdaq Global Select Market.

“AFA” means Association of Flight Attendants-CWA.

“Air Wisconsin” means Air Wisconsin Airlines LLC.

“ALPA” means Air Line Pilots Association.

“American” means American Airlines, Inc., a wholly-owned subsidiary of AAG.

“American Eagle” means our regional carriers, including our wholly-owned regional carriers Envoy, PSA and Piedmont, as well as third-party regional carriers including Air Wisconsin, Mesa, Republic and SkyWest.

“AMR” or “AMR Corporation” means AMR Corporation and is used to reference AAG during the period of time prior to its emergence from Chapter 11 and the Merger.

“AOCL” means accumulated other comprehensive income (loss).

“APA” means Allied Pilots Association.

“APFA” means Association of Professional Flight Attendants.

“April 2016 Credit Agreement” means the Credit and Guaranty Agreement, dated as of April 29, 2016, among American, AAG, the lenders from time to time party thereto, Barclays Bank PLC, as administrative agent, and certain other parties thereto, as amended.

Table of Contents

“April 2016 Credit Facilities” means the April 2016 Revolving Facility and April 2016 Spare Parts Term Loan Facility provided for by the 2016 Credit Agreement.

“April 2016 Revolving Facility” means the revolving credit facility provided for by the April 2016 Credit Agreement.

“April 2016 Spare Parts Term Loan Facility” means the term loan facility provided for by the April 2016 Credit Agreement.

“ARP” means the American Rescue Plan Act of 2021.

“ASM” means available seat mile and is a basic measure of production. One ASM represents one seat flown one mile.

“ASU” means Accounting Standards Update.

“ATC” means air traffic control.

“ATC system” means the U.S. National Airspace System.

“Aviation Act” means subtitle VII of Title 49 of the United States Code, as amended.

“Bankruptcy Court” means the United States Bankruptcy Court for the Southern District of New York.

“Base Indenture” means the indenture, dated as of June 25, 2020, between AAG and the Convertible Notes Trustee.

“BOS” means Boston Logan International Airport.

“Bylaws” means AAG’s Amended and Restated Bylaws, as amended.

“CARES Act” means the Coronavirus Aid, Relief, and Economic Security Act.

“CASM” means total operating cost per available seat mile and is equal to total operating expenses divided by ASMs.

“CBAs” means collective bargaining agreements.

“CEO” means Chief Executive Officer.

“CFO” means Chief Financial Officer.

“China Southern Airlines” means China Southern Airlines Company Limited.

“CMA” means the United Kingdom Competition and Markets Authority.

“CO₂” means carbon dioxide.

“Code” means the Internal Revenue Code of 1986, as amended.

“Company” means AAG and its consolidated subsidiaries.

“Convertible Notes” means AAG’s 6.50% convertible senior notes due 2025.

“Convertible Notes Indenture” means the Base Indenture and the Convertible Notes Supplemental Indenture.

“Convertible Notes Guarantee” means the full and unconditional guarantee of the Convertible Notes by American.

“Convertible Notes Supplemental Indenture” means the first supplemental indenture, dated as of June 25, 2020, among AAG, American and the Convertible Notes Trustee.

“Convertible Notes Trustee” means Wilmington Trust, National Association, as trustee with respect to the Convertible Notes.

“CORSIA” means the Carbon Offsetting and Reduction Scheme for International Aviation.

“COVID-19” refers to a respiratory illness first detected in 2019 and the ensuing global pandemic that remains ongoing as of the date of this report.

“Credit Facilities” means, collectively, the 2013 Credit Facilities, 2014 Credit Facilities and April 2016 Credit Facilities.

Table of Contents

"CWA" means Communications Workers of America.

"CWA-IBT" means the Airline Employees Customer Service Association – Communications Workers of America and International Brotherhood of Teamsters.

"DCA" means Ronald Reagan Washington National Airport.

"DCR" means disputed claims reserve, a reserve established by the Bankruptcy Court, pursuant to the Plan, to hold shares of AAG common stock for issuance to disputed claimholders as of the Effective Date or, alternatively, to former holders of AMR common stock or former holders of certain AMR convertible notes.

"DC Court" means the Federal District Court for the District of Columbia.

"December 2016 Credit Agreement" means the Credit and Guaranty Agreement dated as of December 15, 2016, among American, AAG, the lenders from time to time party thereto, Citibank N.A., as administrative agent, and certain other parties thereto, as amended.

"December 2016 Term Loan Facility" means the term loan facility provided for under the December 2016 Credit Agreement.

"DEI" means diversity, equity and inclusion.

"DOJ" means the United States Department of Justice.

"DOT" means the United States Department of Transportation.

"DOT Agreement" means the agreement reached between the DOT, American, and JetBlue in January 2021, following the termination of DOT's review of the NEA.

"EC" means the European Commission.

"EETC" means enhanced equipment trust certificate.

"Effective Date" means December 9, 2013.

"Eighth Amendment" means the Eighth Amendment entered into in January 2020 to the 2014 Credit Agreement.

"Envoy" means Envoy Air Inc.

"EPA" means the U.S. Environmental Protection Agency.

"EPS" means earnings (loss) per common share.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended.

"Ethics Standards" means AAG's and American's Standards of Business Conduct.

"EU" means European Union.

"EU-UK Trade and Cooperation Agreement" means the trade and cooperation agreement between the EU and United Kingdom.

"EWR" means Newark Liberty International Airport.

"Exchange Act" means Securities Exchange Act of 1934, as amended.

"FAA" means Federal Aviation Administration.

"First Lien 11.75% Senior Secured Notes Collateral" means certain assets, rights and properties utilized by American in providing its scheduled air carrier services to and from certain airports in the United States and certain airports in Australia, Canada, the Caribbean, Central America, China, Hong Kong, Japan, Mexico, South Korea, and Switzerland which are used to secure the 11.75% Senior Secured Notes on a first-lien basis.

"GAAP" means generally accepted accounting principles in the U.S.

Table of Contents

“GDS” means global distribution system.

“GHG” means greenhouse gas.

“GOL” means GOL Linhas Aéreas Inteligentes S.A.

“holdback” means an amount of cash held by our credit card processors in certain circumstances (including, with respect to certain agreements, our failure to maintain certain levels of liquidity).

“HoldCo2” means AAdvantage Holdings 2, Ltd., a Cayman Islands exempted company incorporated with limited liability and an indirect wholly owned subsidiary of American and the direct parent of Loyalty Issuer.

“IAM” means International Association of Machinists & Aerospace Workers.

“IAM Pension Fund” means the IAM National Pension Fund.

“IBT” means International Brotherhood of Teamsters.

“ICAO” means International Civil Aviation Organization.

“IP Collateral” means certain intellectual property of American, including the “American Airlines” trademark and the “aa.com” domain name in the United States and certain foreign jurisdictions, to which American has given a first lien security interest to secure the IP Notes.

“IP Licenses” means the series of intercompany license agreements pursuant to which an exclusive, irrevocable (subject to certain termination rights), perpetual, worldwide, royalty-bearing sublicense to use American’s rights to certain data and other intellectual property used in the AAdvantage program (subject to certain exceptions) which was granted indirectly by Loyalty Issuer to American.

“IP Notes” means American’s \$1.0 billion in initial principal amount of 10.75% senior secured IP notes.

“IP Notes Indenture” means the indenture, dated as of September 25, 2020, by and among American, AAG and Wilmington Trust, National Association, as trustee and as collateral trustee, pursuant to which the IP Notes were issued.

“IRA” means the Inflation Reduction Act.

“JetBlue” means JetBlue Airways Corporation.

“JetSMART” means JetSmart Airlines SpA.

“JFK” means John F. Kennedy International Airport.

“LAWA” means the Los Angeles World Airports.

“LAX” means Los Angeles International Airport.

“LGA/DCA Collateral” means certain slots related to American’s operations at LGA and DCA and certain other assets that are used as (a) a first lien security interest to secure the LGA/DCA Notes and (b) a second lien security interest to secure the IP Notes.

“LGA/DCA Notes” means American’s \$200 million in initial principal amount of 10.75% senior secured LGA/DCA notes.

“LGA/DCA Notes Indenture” means the indenture, dated as of September 25, 2020, by and among American, AAG and Wilmington Trust, National Association, as trustee and as collateral trustee, pursuant to which the LGA/DCA Notes were issued.

“LGA” means LaGuardia Airport.

“LGW” or “London Gatwick” means London Gatwick Airport.

“LHR” or “London Heathrow” means London Heathrow Airport.

“LIBOR” means the London interbank offered rate for deposits of U.S. dollars.

Table of Contents

"Loyalty Issuer" means AAdvantage Loyalty IP Ltd., a Cayman Islands exempted company incorporated with limited liability and an indirect wholly owned subsidiary of American and co-issuer of the AAdvantage Notes.

"LTV" means loan to value ratio.

"Mainline" means the operations of American and excludes regional operations.

"Merger" means the merger of US Airways Group and AMR Corporation on December 9, 2013.

"Mesa" means Mesa Airlines, Inc.

"NEA" means Northeast Alliance arrangement between American and JetBlue.

"NMB" means National Mediation Board.

"NOLs" means net operating losses.

"NYTDC" means the New York Transportation Development Corporation.

"ORD" means Chicago O'Hare International Airport.

"OSHA" means Occupational Health and Safety Administration.

"OTAs" means online travel agents.

"PAFCA" means Professional Airline Flight Control Association.

"Passenger load factor" means the percentage of available seats that are filled with revenue passengers.

"PCAOB" means the Public Company Accounting Oversight Board in the U.S.

"PEB" means Presidential Emergency Board.

"PFAS" means per- and polyfluoroalkyl substances.

"Piedmont" means Piedmont Airlines, Inc.

"PRASM" means passenger revenue per available seat mile and is equal to passenger revenues divided by ASMs.

"Proxy Statement" means American Airlines Group Inc.'s Proxy Statement for the 2023 Annual Meeting of Stockholders of American Airlines Group Inc., certain sections of which are incorporated by reference into this report.

"PSA" means PSA Airlines, Inc.

"PSP Agreements" means the payroll support program agreements entered into by the Subsidiaries with Treasury under the CARES Act, PSP Extension Law and ARP.

"PSP Financial Assistance" means the portion of financial assistance received from Treasury pursuant to the PSP Agreements that is not allocated to the PSP Warrants or the PSP Promissory Notes.

"PSP Promissory Notes" means the promissory notes issued to Treasury in connection with the PSP Agreements.

"PSP Warrants" means the warrants issued or to be issued to Treasury pursuant to the PSP Agreements.

"PSP1" means the payroll support program established under the CARES Act.

"PSP1 Promissory Note" means the promissory note issued to Treasury in connection with PSP1.

"PSP1 Warrant Agreement" means the agreement entered into between AAG and Treasury in connection with the Payroll Support Program Agreement entered into by the Subsidiaries with Treasury on April 20, 2020, pursuant to which AAG issued PSP1 Warrants to Treasury to purchase up to an aggregate of approximately 14.0 million shares of AAG common stock.

"PSP1 Warrants" means the warrants issued or to be issued to Treasury pursuant to the PSP1 Warrant Agreement.

Table of Contents

“PSP2” means the payroll support program established under the PSP Extension Law.

“PSP2 Promissory Note” means the promissory note issued to Treasury in connection with PSP2.

“PSP2 Warrant Agreement” means the agreement entered into between AAG and Treasury in connection with the Payroll Support Program Extension Agreement entered into by the Subsidiaries with Treasury on January 15, 2021, pursuant to which AAG issued PSP2 Warrants to Treasury to purchase up to an aggregate of approximately 6.6 million shares of AAG common stock.

“PSP2 Warrants” means the warrants issued or to be issued to Treasury pursuant to the PSP2 Warrant Agreement.

“PSP3” means the payroll support program established under the ARP.

“PSP3 Promissory Note” means the promissory note issued to Treasury in connection with PSP3.

“PSP3 Warrant Agreement” means the agreement entered into between AAG and Treasury in connection with the Payroll Support Program Agreement entered into by the Subsidiaries with Treasury on April 23, 2021, pursuant to which AAG issued PSP3 Warrants to Treasury to purchase up to an aggregate of approximately 4.4 million shares of AAG common stock.

“PSP3 Warrants” means the warrants issued or to be issued to Treasury pursuant to the PSP3 Warrant Agreement.

“PSP Extension Law” means Subtitle A of Title IV of Division N of the Consolidated Appropriations Act, 2021.

“Rehabilitation Plan” means the rehabilitation plan adopted by the IAM Pension Fund on April 17, 2019.

“Republic” means Republic Airways Inc.

“Republic Holdings” means Republic Airways Holdings Inc., the parent company of Republic.

“RLA” means Railway Labor Act.

“ROU” means right-of-use.

“RPM” or “RPMs” means revenue passenger mile or miles and is a basic measure of sales volume. One RPM represents one passenger flown one mile.

“RSUs” means restricted stock units.

“S&P” means Standard and Poor’s Financial Services, LLC.

“SAF” means sustainable aviation fuel.

“SAIB” means special airworthiness information bulletin.

“SBTi” means Science Based Targets initiative.

“SEC” means Securities and Exchange Commission.

“Second Lien 11.75% Senior Secured Notes Collateral” means certain assets, rights and properties utilized by American in providing its scheduled air carrier services to and from certain airports in the United States and certain airports in the European Union and the United Kingdom which are used to secure the 11.75% Senior Secured Notes on a second-lien basis.

“Section 382” means Section 382 of the Internal Revenue Code.

“Securities Act” means the Securities Act of 1933, as amended.

“SkyWest” means SkyWest Airlines, Inc.

“slots” means landing and take-off rights and authorizations, as required by certain airports.

“SMS” means Safety Management System.

Table of Contents

“SOFR” means the Secured Overnight Financing Rate.

“SPV Guarantors” means AAdvantage Holdings 1, Ltd. a Cayman Islands exempted company incorporated with limited liability and a direct wholly-owned subsidiary of American, (ii) AAdvantage Holdings 2, Ltd., a Cayman Islands exempted company incorporated with limited liability and an indirect wholly-owned subsidiary of American and the direct parent of Loyalty Issuer, and (iii) certain Luxembourg limited liability companies and partnerships that are direct or indirect subsidiaries of Loyalty Issuer and which fully and unconditionally guarantee the AAdvantage Financing.

“SRM” means Safety Risk Management.

“Subsidiaries” means American, Envoy, PSA and Piedmont, each a wholly-owned subsidiary of AAG.

“Superfund Act” means Comprehensive Environmental Response, Compensation and Liability Act.

“Tax Benefits Preservation Plan” means the tax benefits preservation plan adopted by the Board of Directors of AAG in December 2021 in order to preserve the Company’s ability to use its NOLs and certain other tax attributes to reduce potential future income tax obligations.

“TRASM” means the total revenue per available seat mile and is equal to the total revenues divided by total mainline and third-party regional carrier ASMs.

“Treasury” means the U.S. Department of the Treasury.

“Treasury Loan Agreement” means the Loan and Guarantee Agreement, dated as of September 25, 2020, between AAG, American and Treasury which provides for the Treasury Term Loan Facility.

“Treasury Loan Closing Date” means September 25, 2020.

“Treasury Loan Warrant Agreement” means the warrant agreement, dated as of September 25, 2020, between AAG and Treasury entered into in connection with the Treasury Loan Agreement, pursuant to which AAG issued Treasury Loan Warrants to Treasury to purchase shares of AAG common stock.

“Treasury Loan Warrants” means the warrants issued to Treasury pursuant to the Treasury Loan Warrant Agreement.

“Treasury Loan Warrant Shares” means the shares of AAG common stock which Treasury will have the right to purchase pursuant to Treasury Loan Warrants issued by AAG in accordance with the Treasury Loan Warrant Agreement.

“Treasury Term Loan Facility” means the term loan facility provided for under the Treasury Loan Agreement.

“TSA” means Transportation Security Administration.

“TWU” means Transport Workers Union.

“TWU-IAM Association” means Transport Workers Union and International Association of Machinists & Aerospace Workers.

“US Airways Group” means US Airways Group, Inc. and its consolidated subsidiaries.

“Vertical” means Vertical Aerospace Ltd.

“Yield” means a measure of airline revenue derived by dividing passenger revenue by RPMs.

Table of Contents

ITEM 1A. RISK FACTORS

Below are certain risk factors that may affect our business, results of operations and financial condition, or the trading price of our common stock or other securities. We caution the reader that these risk factors may not be exhaustive. We operate in a continually changing business environment, and new risks and uncertainties emerge from time to time. Management cannot predict such new risks and uncertainties, nor can it assess the extent to which any of the risk factors below or any such new risks and uncertainties, or any combination thereof, may impact our business.

Risks Related to our Business and Industry

Downturns in economic conditions could adversely affect our business.

Due to the discretionary nature of business and leisure travel spending and the highly competitive nature of the airline industry, our revenues are heavily influenced by the condition of the U.S. economy and economies in other regions of the world. Unfavorable conditions in these broader economies have resulted, and may result in the future, in decreased passenger demand for air travel, changes in booking practices and related reactions by our competitors, all of which in turn have had, and may have in the future, a strong negative effect on our business. For example, the COVID-19 pandemic and associated decline in economic activity and increase in unemployment levels had a severe and prolonged effect on the global economy generally and, in turn, resulted in a prolonged period of depressed demand for air travel. In addition, a rapid economic expansion following the height of the COVID-19 pandemic resulted in significant inflationary pressures and volatility in certain currencies, which have increased our costs for aircraft fuel, wages and benefits and other goods and services we require to operate our business, as well as increasing the interest expense on our variable-rate indebtedness.

We will need to obtain sufficient financing or other capital to operate successfully.

Our business plan contemplates continued significant investments related to our fleet, improving the experience of our customers and updating our facilities. Significant capital resources will be required to execute this plan. We estimate that, based on our commitments as of December 31, 2022, our planned aggregate expenditures for aircraft purchase commitments and certain engines on a consolidated basis for calendar years 2023 through 2027 would be approximately \$12.3 billion. We may also require financing to refinance maturing obligations and to provide liquidity to fund other corporate requirements. Accordingly, we will need substantial liquidity, financing or other capital resources to finance such aircraft and engines and meet such other liquidity needs. If needed, it may be difficult for us to raise additional capital on acceptable terms, or at all, due to, among other factors: our substantial level of existing indebtedness, particularly following the additional liquidity transactions completed in response to the impact of the COVID-19 pandemic; our non-investment grade credit rating; volatile or otherwise unfavorable market conditions; and the availability of assets to use as collateral for loans or other indebtedness, which has been reduced significantly as a result of certain financing transactions we have undertaken since the beginning of 2020 and may be further reduced. If we are unable to arrange any such required financing at customary advance rates and on terms and conditions acceptable to us, we may need to use cash from operations or cash on hand to purchase aircraft and engines or fund our other corporate requirements, or may seek to negotiate deferrals for such aircraft and engines with the applicable manufacturers or otherwise defer corporate obligations. Depending on numerous factors applicable at the time we seek capital, many of which are out of our control, such as the state of the domestic and global economies, the capital and credit markets' view of our prospects and the airline industry in general, and the general availability of debt and equity capital, the financing or other capital resources that we will need may not be available to us, or may be available only on onerous terms and conditions. There can be no assurance that we will be successful in obtaining financing or other needed sources of capital to operate successfully or to fund our committed expenditures. An inability to obtain necessary financing on acceptable terms would limit our ability to execute necessary capital projects and would have a material adverse impact on our business, results of operations and financial condition.

Table of Contents

Our high level of debt and other obligations may limit our ability to fund general corporate requirements and obtain additional financing, may limit our flexibility in responding to competitive developments and may cause our business to be vulnerable to adverse economic and industry conditions.

We have significant amounts of indebtedness and other financial obligations, including pension obligations, obligations to make future payments on flight equipment and property leases related to airport and other facilities, and substantial non-cancelable obligations under aircraft and related spare engine purchase agreements. Moreover, currently a very significant portion of our assets are pledged to secure our indebtedness. Our substantial indebtedness and other obligations, which are generally greater than the indebtedness and other obligations of our competitors, could have important consequences. For example, they may:

- make it more difficult for us to satisfy our obligations under our indebtedness;
- limit our ability to obtain additional funding for working capital, capital expenditures, acquisitions, investments and general corporate purposes, and adversely affect the terms on which such funding can be obtained;
- require us to dedicate a substantial portion of our liquidity or cash flow from operations to payments on our indebtedness and other obligations, thereby reducing the funds available for other purposes;
- make us more vulnerable to economic downturns, industry conditions and catastrophic external events, particularly relative to competitors with lower relative levels of financial leverage;
- significantly constrain our ability to respond, or respond quickly, to unexpected disruptions in our own operations, the U.S. or global economies, or the businesses in which we operate, or to take advantage of opportunities that would improve our business, operations, or competitive position versus other airlines;
- limit our ability to withstand competitive pressures and reduce our flexibility in responding to changing business and economic conditions;
- bear interest at floating rates, subjecting us to volatility in interest expenses as interest rates fluctuate;
- contain covenants requiring us to maintain an aggregate of at least \$2.0 billion of unrestricted cash and cash equivalents and amounts available to be drawn under revolving credit facilities and collateral coverage ratios and peak debt service coverage ratios; and
- contain restrictive covenants that could, among other things:
 - limit our ability to merge, consolidate, sell assets, incur additional indebtedness, issue preferred stock, make investments and pay dividends; and
 - if breached, result in an event of default under our indebtedness.

In addition, since the onset of the COVID-19 pandemic we have been required to obtain a significant amount of additional financing from a variety of sources and we cannot guarantee that we will not need to obtain additional financing in the future. Such financing may include the issuance of additional unsecured or secured debt securities, equity securities and equity-linked securities as well as additional bilateral and syndicated secured and/or unsecured credit facilities, among other items. There can be no assurance as to the timing of any such financing transactions, which may be in the near term, or that we will be able to obtain such additional financing on favorable terms, or at all. Any such actions may be material in nature, could result in the incurrence and issuance of significant additional indebtedness or equity and could impose significant covenants and restrictions to which we are not currently subject. In particular, in connection with the financial assistance we have received through the payroll support program established under the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) (PSP1), the payroll support program established under the Subtitle A of Title IV of Division N of the Consolidated Appropriations Act, 2021 (PSP Extension Law) (PSP2) and the payroll support program established under the American Rescue Plan Act of 2021 (ARP) (PSP3), we are required to comply with the relevant provisions of the CARES Act, the PSP Extension Law and the ARP, respectively, including the requirement that funds provided pursuant to PSP1, PSP2 and PSP3 be used exclusively for the continuation of payment of eligible employee wages, salaries and benefits; and restrictions on the payment of certain executive compensation until April 1, 2023. Additionally, under PSP1, PSP2 and PSP3, we and certain of our subsidiaries are subject to substantial and continuing reporting obligations. The substance and duration of these restrictions may materially affect our operations, and we may not be successful in managing these impacts. Moreover, as a result of the financing activities we undertook in response to

[Table of Contents](#)

the COVID-19 pandemic, the number of financings with respect to which such covenants and provisions apply has increased, thereby subjecting us to more substantial risk of cross-default and cross-acceleration in the event of breach, and additional covenants and provisions could become binding on us as we continue to seek additional liquidity.

The obligations discussed above, including those imposed as a result of the CARES Act, the PSP Extension Law, the ARP and any additional financings we may be required to undertake, could also impact our ability to obtain additional financing, if needed, and our flexibility in the conduct of our business, and could materially adversely affect our liquidity, results of operations and financial condition.

Further, a substantial amount of our long-term indebtedness bears interest at fluctuating interest rates, primarily based on the London interbank offered rate (LIBOR) for deposits of U.S. dollars. LIBOR tends to fluctuate based on general short-term interest rates, rates set by the U.S. Federal Reserve and other central banks, the supply of and demand for credit in the London interbank market and general economic conditions. We have not hedged our interest rate exposure with respect to our floating rate debt. Accordingly, our interest expense for any particular period will fluctuate based on LIBOR and other variable interest rates. In 2022, in response to rising inflation which coincided with a rapid rebound of economic activity as governments lifted restrictions and economies reopened following the COVID-19 pandemic, central banks around the world—including the U.S. Federal Reserve, the European Central Bank and the Bank of England—commenced a cycle of raising interest rates, which has consequently increased the interest we pay on our floating-rate indebtedness. To the extent the interest rates applicable to our floating rate debt increase, our interest expense will increase, in which event we may have difficulties making interest payments and funding our other fixed costs, and our available cash flow for general corporate requirements may be adversely affected.

On July 27, 2017, the U.K. Financial Conduct Authority (the authority that regulates LIBOR) announced that it intends to stop compelling banks to submit rates for the calculation of LIBOR after 2021. The discontinuation date for submission and publication of rates for certain tenors of USD LIBOR (1-month, 3-month, 6-month and 12-month) was subsequently extended by the ICE Benchmark Administration (the administrator of LIBOR) until June 30, 2023. It is not possible to predict what rate or rates may become the predominant alternative to LIBOR, or what effect these changes in views or alternatives may have on financial markets for LIBOR-linked financial instruments. While the U.S. Federal Reserve, in conjunction with the Alternative Reference Rates Committee, has chosen the Secured Overnight Financing Rate (SOFR), and specifically Term SOFR, as the recommended risk-free reference rate for the U.S. (calculated based on repurchase agreements backed by treasury securities), we cannot currently predict the extent to which this index will gain widespread acceptance as a replacement for LIBOR. It is not possible to predict the effect of these changes, other reforms or the establishment of alternative reference rates in the United Kingdom, the United States or elsewhere. See also the discussion of interest rate risk in Part II, Item 7A. Quantitative and Qualitative Disclosures About Market Risk – “Interest.”

As of December 31, 2022, we had \$9.2 billion of borrowings with interest rates linked to LIBOR. We have commenced the process of amending our LIBOR-based financing agreements to transition them to successor reference rates in anticipation of LIBOR’s discontinuation, but we may not be able to reach agreements with all affected lenders, or to do so on favorable terms. Additionally, the replacement of LIBOR with a comparable or successor rate could cause the amount of interest payable on our long-term debt to be different or higher than expected.

We have significant pension and other postretirement benefit funding obligations, which may adversely affect our liquidity, results of operations and financial condition.

Our pension funding obligations are significant. The amount of our pension funding obligations will depend on the performance of investments held in trust by the pension plans, interest rates for determining liabilities and actuarial experience. We also have significant obligations for retiree medical and other postretirement benefits.

Additionally, we participate in the IAM National Pension Fund (the IAM Pension Fund). The funding status of the IAM Pension Fund is subject to the risk that other employers may not meet their obligations, which under certain circumstances could cause our obligations to increase. On March 29, 2019, the actuary for the IAM Pension Fund certified that the fund was in “endangered” status despite reporting a funded status of over 80%. Additionally, the IAM Pension Fund’s Board voluntarily elected to enter into “critical” status on April 17, 2019. Upon entry into critical status, the IAM Pension Fund was required by law to adopt a rehabilitation plan aimed at restoring the financial health of the pension plan and did so on April 17, 2019 (the Rehabilitation Plan). Under the Rehabilitation Plan, American was subject to an immaterial contribution surcharge, which ceased to apply June 14, 2019 upon American’s mandatory adoption of a contribution schedule under the Rehabilitation Plan. The contribution schedule requires 2.5% annual increases to its contribution rate. This contribution schedule will remain in effect through the earlier of December 31, 2031 or the date the IAM Pension Fund emerges from critical status. Furthermore, if we were to withdraw from the IAM Pension Fund, if the

Table of Contents

IAM Pension fund were to terminate, or if the IAM Pension Fund were to undergo a mass withdrawal, we could be subject to liability as imposed by law.

If our financial condition worsens, provisions in our credit card processing and other commercial agreements may adversely affect our liquidity.

We have agreements with companies that process customer credit card transactions for the sale of air travel and other services. These agreements allow these credit card processing companies, under certain conditions (including, with respect to certain agreements, our failure to maintain certain levels of liquidity), to hold an amount of our cash (referred to as a holdback) equal to some or all of the advance ticket sales that have been processed by that credit card processor, but for which we have not yet provided the air transportation. Additionally, such credit card processing companies may require cash or other collateral reserves to be established. These credit card processing companies are not currently entitled to maintain any holdbacks pursuant to these requirements. These holdback requirements can be implemented at the discretion of the credit card processing companies upon the occurrence of specific events, including material adverse changes in our financial condition or the triggering of a liquidity covenant. The imposition of holdback requirements, up to and including 100% of relevant advanced ticket sales, would materially reduce our liquidity. Likewise, other of our commercial agreements contain provisions that allow other counterparties to impose less-favorable terms, including the acceleration of amounts due, in the event of material adverse changes in our financial condition. For example, we maintain certain letters of credit, insurance- and surety-related agreements under which counterparties may require collateral, including cash collateral.

The loss of key personnel upon whom we depend to operate our business or the inability to attract and develop additional qualified personnel could adversely affect our business.

We believe that our future success will depend in large part on our ability to attract, develop and retain highly qualified management, technical and other personnel. Retaining and recruiting people with the appropriate skills is particularly challenging as the economy in general, and the airline industry in particular, continue to recover from the COVID-19 pandemic, resulting in competition for the human resources necessary to operate our business successfully. We may not be successful in attracting, developing or retaining key personnel or other highly qualified personnel. Among other things, the CARES Act, the PSP Extension Law and the ARP impose significant restrictions on executive compensation, which will remain in place until April 1, 2023. Such restrictions, over time, will likely result in lower executive compensation in the airline industry than is prevailing in other industries, creating increasing retention challenges in the case of executives presented with alternative, non-airline opportunities. In addition, competition for skilled personnel has intensified and may continue to intensify if overall industry capacity continues to increase and/or we were to incur attrition at levels higher than we have historically. Any inability to attract, develop and retain significant numbers of qualified management and other personnel would have a material adverse effect on our business, results of operations and financial condition.

Our business has been and will continue to be affected by many changing economic and other conditions beyond our control, including global events that affect travel behavior, and our results of operations could be volatile and fluctuate due to seasonality.

Our business, results of operations and financial condition have been and will continue to be affected by many changing economic and other conditions beyond our control, including, among others:

- actual or potential changes in international, national, regional and local economic, business and financial conditions, including recession, inflation and higher interest rates;
- the occurrence of wars, terrorist attacks and political instability;
- changes in consumer preferences, perceptions, spending patterns and demographic trends;
- changes in the competitive environment due to industry consolidation, changes in airline alliance affiliations and other factors;
- actual or potential disruptions to the U.S. National Airspace System (the ATC system);
- increases in costs of safety, security and environmental measures;
- outbreaks of diseases that affect travel behavior, such as occurred during the COVID-19 pandemic; and

Table of Contents

- weather and natural disasters, including increases in frequency, severity or duration of such disasters, and related costs caused by more severe weather due to climate change.

The COVID-19 pandemic, along with the measures governments and private organizations worldwide implemented in an attempt to contain its spread, resulted in significant volatility in demand for air travel, which adversely affected our business, operations and financial condition to an unprecedented extent and for a prolonged period. Measures implemented during the COVID-19 pandemic—such as travel restrictions, including testing regimes, “stay at home” and quarantine orders, limitations on public gatherings, cancellation of public events and many others—initially resulted in a precipitous decline in demand for both domestic and international business and leisure travel. Additionally, the COVID-19 pandemic necessitated changes in business practices which may persist. For example, businesses and other travelers may continue to forego air travel in favor of remote or flexible working policies and communication alternatives such as videoconferencing. In addition, businesses may seek to reduce travel costs by requiring the purchase of less expensive tickets, thereby potentially impacting our average revenue per available seat mile. In response to this material deterioration in demand, we took a number of aggressive actions to ameliorate the impacts to our business, operations and financial condition. While cases have declined globally and many governments have loosened or lifted COVID-related travel restrictions, the duration and severity of the COVID-19 pandemic—including the emergence and spread of any new variants—and its after effects remain uncertain, and there can be no assurance that any mitigating actions we take in response will be sufficient to avert a deterioration in our business, financial condition and results of operations.

In addition to the effects of the COVID-19 pandemic, an outbreak of another contagious disease—such as has occurred in the past with the Ebola virus, Middle East Respiratory Syndrome, Severe Acute Respiratory Syndrome, H1N1 influenza virus, avian flu, Zika virus or any other similar illness—if it were to become associated with air travel or persist for an extended period, could materially affect the airline industry and us by reducing revenues and adversely impacting our operations and passengers’ travel behavior. As a result of these or other conditions beyond our control, our results of operations could be volatile and subject to rapid and unexpected change. In addition, due to generally weaker demand for air travel during the winter, our revenues in the first and fourth quarters of the year could be weaker than revenues in the second and third quarters of the year.

Union disputes, employee strikes and other labor-related disruptions, or our inability to otherwise maintain labor costs at competitive levels and hire and retain a sufficient number of employees may adversely affect our operations and financial performance.

Relations between air carriers and labor unions in the U.S. are governed by the RLA. Under the RLA, CBAs generally contain “amendable dates” rather than expiration dates, and the RLA requires that a carrier maintain the existing terms and conditions of employment following the amendable date through a multi-stage and usually lengthy series of bargaining processes overseen by the NMB. As of December 31, 2022, approximately 87% of our employees were represented for collective bargaining purposes by labor unions, and 48% were covered by CBAs that are currently amendable or that will become amendable within one year. For the dates that the CBAs with our major work groups become amendable under the RLA, see Part I, Item 1. Business – “Our People—Labor Relations.”

In the case of a CBA that is amendable under the RLA, if no agreement is reached during direct negotiations between the parties, either party may request that the NMB appoint a federal mediator. The RLA prescribes no timetable for the direct negotiation and mediation processes, and it is not unusual for those processes to last for many months or even several years. If no agreement is reached in mediation, the NMB in its discretion may declare that an impasse exists and proffer binding arbitration to the parties. Either party may decline to submit to arbitration, and if arbitration is rejected by either party, a 30-day “cooling off” period commences. During or after that period, a Presidential Emergency Board (PEB) may be established, which examines the parties’ positions and recommends a solution. The PEB process lasts for 30 days and is followed by another 30-day “cooling off” period. At the end of this “cooling off” period, unless an agreement is reached or action is taken by Congress, the labor organization may exercise “self-help,” such as a strike, which could materially adversely affect our business, results of operations and financial condition.

None of the unions representing our employees presently may lawfully engage in concerted slowdowns or refusals to work, such as strikes, sick-outs or other similar activity, against us. Nonetheless, there is a risk that employees, either with or without union involvement, could engage in one or more concerted refusals to work that could individually or collectively harm the operation of our airline and impair our financial performance. Additionally, some of our unions have brought and may continue to bring grievances to binding arbitration, including those related to wages. If successful, there is a risk these arbitral avenues could result in material additional costs that we did not anticipate. See also Part I, Item 1. Business – “Our People—Labor Relations.”

[Table of Contents](#)

Currently, we believe our labor costs are generally competitive relative to the other large network carriers. However, personnel shortages, in particular for pilots, and general wage inflation stand to impact our labor costs moving forward. Certain of our competitors have recently concluded agreements with their pilots' unions which include significant increases in pay and benefits. We are currently in negotiations for several important new labor agreements, including with our mainline pilots, and we anticipate that any new contracts we agree with our labor groups will likewise include material increases in salaries and other benefits, which will significantly increase our labor expense.

If we encounter problems with any of our third-party regional operators or third-party service providers, our operations could be adversely affected by a resulting decline in revenue or negative public perception about our services.

A significant portion of our regional operations are conducted by third-party operators on our behalf, substantially all of which are provided for under capacity purchase agreements. Due to our reliance on third parties to provide these essential services, we are subject to the risk of disruptions to their operations, which has in the past and may in the future result from many of the same risk factors disclosed in this report, such as the impact of adverse economic conditions, the inability of third parties to hire or retain skilled personnel, including in particular pilots and mechanics, and other risk factors, such as an out-of-court or bankruptcy restructuring of any of our regional operators. Several of these third-party regional operators provide significant regional capacity that we would be unable to replace in a short period of time should that operator fail to perform its obligations to us. Disruptions to capital markets, shortages of pilots, mechanics and other skilled personnel and adverse economic conditions in general have subjected certain of these third-party regional operators to significant financial pressures, which have in the past and may in the future lead to bankruptcies among these operators. In particular, the severe decline in demand for air travel resulting from the COVID-19 pandemic and related governmental restrictions on travel materially impacted demand for services provided by our regional carriers and, as a result, we temporarily significantly reduced our regional capacity. Further, as airlines attempt to restore capacity in line with increased demand for air travel following the height of the COVID-19 pandemic, these third-party operators have experienced difficulties in recruiting and retaining sufficient personnel to operate significantly increased schedules, and have in some instances been required to offer significant increases in pay and other benefits to recruit and retain pilots and other personnel. Ongoing volatility in travel demand has the potential to continue to adversely affect our regional operators, some of whom may experience significant financial stress, declare bankruptcy or otherwise cease to operate. We may also experience disruption to our regional operations or incur financial damages if we terminate the capacity purchase agreement with one or more of our current operators or transition the services to another provider. Any significant disruption to our regional operations would have a material adverse effect on our business, results of operations and financial condition.

In addition, our reliance upon others to provide essential services on behalf of our operations may result in our relative inability to control the efficiency and timeliness of contract services. We have entered into agreements with contractors to provide various facilities and services required for our operations, including distribution and sale of airline seat inventory, reservations, provision of information technology and services, regional operations, aircraft maintenance, fueling, catering, ground services and facilities and baggage handling. Similar agreements may be entered into in any new markets we decide to serve. These agreements are generally subject to termination after notice by the third-party service provider. We are also at risk should one of these service providers cease operations, and there is no guarantee that we could replace these providers on a timely basis with comparably priced providers, or at all. These third parties are also facing challenges retaining and recruiting people with the appropriate skills to meet our requirements as the economy in general, and the airline industry in particular, continue to recover from the COVID-19 pandemic. The COVID-19 pandemic also caused significant disruption in global supply chains and staffing shortages, which have affected and may continue to affect the availability and timely delivery and fulfillment of many goods, including certain of those that we purchase directly or which are required by third parties to perform contracted services for us. We rely on the operation of complex supply chains and a large number of third parties for the procurement and fulfillment of parts, components, consumable or disposable goods and other products and services essential to our business. Following a faster than expected return of demand for air travel as COVID-19 cases declined worldwide and governments lifted travel restrictions, suppliers and many of the airports we serve experienced acute shortages of personnel, resulting in increased delays, cancellations and, in certain cases, restrictions on passenger numbers or the number of flights to or from certain airports. We cannot guarantee that, as a result of ongoing or future supply chain disruptions or staffing shortages, we, our third-party partners, or the airports we serve will be able to timely source all of the products and services we require in the course of our business, or that we will be successful in procuring suitable alternatives. Any material problems with the adequacy, efficiency and timeliness of contract services, resulting from financial hardships, personnel shortages or otherwise, could have a material adverse effect on our business, results of operations and financial condition.

[**Table of Contents**](#)

Any damage to our reputation or brand image could adversely affect our business or financial results.

Maintaining a good reputation globally is critical to our business. Our reputation or brand image could be adversely impacted by, among other things, any failure to maintain high ethical, social and environmental sustainability practices for all of our operations and activities, our impact on the environment, public pressure from investors or policy groups to change our policies, such as movements to institute a “living wage,” customer perceptions of our advertising campaigns, sponsorship arrangements or marketing programs, customer perceptions of our use of social media, or customer perceptions of statements made by us, our employees and executives, agents or other third parties. In addition, we operate in a highly visible industry that has significant exposure to social media. Negative publicity, including as a result of misconduct by our customers, vendors or employees, can spread rapidly through social media. Should we not respond in a timely and appropriate manner to address negative publicity, our brand and reputation may be significantly harmed. Damage to our reputation or brand image or loss of customer confidence in our services could adversely affect our business and financial results, as well as require additional resources to rebuild our reputation.

Moreover, an outbreak and spread of an infectious disease could adversely impact consumer perceptions of the health and safety of travel, and in particular airline travel, such as occurred during the COVID-19 pandemic. Actual or perceived risk of infection on our flights could have a material adverse effect on the public's perception of us and may harm our reputation and business. We have in the past, and may in the future be required to take extensive measures to reassure our team members and the traveling public of the safety of air travel, and we could incur significant costs implementing safety, hygiene-related or other actions to limit the actual or perceived threat of infection among our employees and passengers. However, we cannot assure that any actions we might take in response to an infectious disease outbreak will be sufficient to restore the confidence of consumers in the safety of air travel. In addition, as a result of mask mandates and other mitigating measures that airports and carriers were required by law to implement to limit the spread of COVID-19, we experienced an increase in the incidence of aggressive customer behavior and physical confrontation on our flights, certain of which resulted in injuries to our personnel. If our employees feel unsafe or believe that we are not doing enough to prevent and prosecute these incidents, we could experience higher rates of employee absence and we may suffer reputational harm which could make it more difficult to attract and retain employees, and which could in turn negatively affect our business, financial condition and results of operations.

We are at risk of losses and adverse publicity stemming from any public incident involving our company, our people or our brand, including any accident or other public incident involving our personnel or aircraft, or the personnel or aircraft of our regional, codeshare or joint business operators.

We are at risk of adverse publicity stemming from any public incident involving our company, our people or our brand, particularly given the ease with which individuals can now capture and rapidly disseminate information via social media. Such an incident could involve the actual or alleged behavior of any of our employees, contractors or passengers. Further, if our personnel, one of our aircraft, a type of aircraft in our fleet, or personnel of, or an aircraft that is operated under our brand by, one of our regional operators or an airline with which we have a marketing alliance, joint business or codeshare relationship, were to be involved in a public incident, accident, catastrophe or regulatory enforcement action, we could be exposed to significant reputational harm and potential legal liability. The insurance we carry may be inapplicable or inadequate to cover any such incident, accident, catastrophe or action. In the event that our insurance is inapplicable or inadequate, we may be forced to bear substantial losses from an incident or accident. In addition, any such incident, accident, catastrophe or action involving our personnel, one of our aircraft (or personnel and aircraft of our regional operators and our codeshare partners), or a type of aircraft in our fleet could create an adverse public perception, which could harm our reputation, result in air travelers being reluctant to fly on our aircraft or those of our regional operators or codeshare partners, and adversely impact our business, results of operations and financial condition.

Changes to our business model that are designed to increase revenues may not be successful and may cause operational difficulties or decreased demand.

We have in the past instituted, and intend to institute in the future, changes to our business model designed to increase revenues and offset costs. These measures include further segmentation of the classes of service we offer, such as Premium Economy service and Basic Economy service, enhancements to our AAdvantage loyalty program, charging separately for services that had previously been included within the price of a ticket, changes to our practices and contracts with providers of distribution systems to provide additional content flexibility, changing (whether it be increasing, decreasing or eliminating) other pre-existing fees, reconfiguration of our aircraft cabins, and efforts to optimize our network including by focusing growth on a limited number of large hubs and entering into agreements with other airlines. For example, in 2020, we eliminated change fees for most domestic and international tickets, which has reduced our change fee revenue, a trend which is expected to continue assuming this policy remains in place. We may introduce additional

Table of Contents

initiatives in the future; however, as time goes on, we expect that it will be more difficult to identify and implement additional initiatives. We cannot assure that these measures or any future initiatives will be successful in increasing our revenues or offsetting our costs. Additionally, the implementation of these initiatives may create logistical challenges that could harm the operational performance of our airline or result in decreased demand. Also, our implementation of any new or increased fees might result in adverse brand perceptions, reputational harm or regulatory scrutiny, and could reduce the demand for air travel on our airline or across the industry in general, particularly if weakened economic conditions make our customers more sensitive to increased travel costs or provide a significant competitive advantage to other carriers that determine not to institute similar charges.

Our intellectual property rights, particularly our branding rights, are valuable, and any inability to protect them may adversely affect our business and financial results.

We consider our intellectual property rights, particularly our branding rights such as our trademarks applicable to our airline and AAdvantage loyalty program, to be a significant and valuable aspect of our business. We protect our intellectual property rights through a combination of trademark, copyright and other forms of legal protection, contractual agreements and policing of third-party misuses of our intellectual property. Our failure to obtain or adequately protect our intellectual property or any change in law that lessens or removes the current legal protections of our intellectual property may diminish our competitiveness and adversely affect our business and financial results. Any litigation or disputes regarding intellectual property may be costly and time-consuming and may divert the attention of our management and key personnel from our business operations, either of which may adversely affect our business and financial results.

In addition, we have used certain of our branding and AAdvantage loyalty program intellectual property as collateral for various financings (including the AAdvantage Financing), which contain covenants that impose restrictions on the use of such intellectual property and, in the case of the AAdvantage Financing, on certain amendments or changes to our AAdvantage loyalty program. These covenants may have an adverse effect on our ability to use such intellectual property.

We may be a party to litigation in the normal course of business or otherwise, which could affect our financial position and liquidity.

From time to time, we are a party to or otherwise involved in legal proceedings, claims and government inspections or investigations and other legal matters, both inside and outside the United States, arising in the ordinary course of our business or otherwise. We are currently involved in various legal proceedings and claims that have not yet been fully resolved, and additional claims may arise in the future. Legal proceedings can be complex and take many months, or even years, to reach resolution, with the final outcome depending on a number of variables, some of which are not within our control. Litigation is subject to significant uncertainty and may be expensive, time-consuming, and disruptive to our operations. Although we will vigorously defend ourselves in such legal proceedings, their ultimate resolution and potential financial and other impacts on us are uncertain. For these and other reasons, we may choose to settle legal proceedings and claims, regardless of their actual merit. If a legal proceeding is resolved against us, it could result in significant compensatory damages, and in certain circumstances punitive or trebled damages, disgorgement of revenue or profits, remedial corporate measures or injunctive relief imposed on us. If our existing insurance does not cover the amount or types of damages awarded, or if other resolution or actions taken as a result of the legal proceeding were to restrain our ability to operate or market our services, our consolidated financial position, results of operations or cash flows could be materially adversely affected. In addition, legal proceedings, and any adverse resolution thereof, can result in adverse publicity and damage to our reputation, which could adversely impact our business. Additional information regarding certain legal matters in which we are involved can be found in Note 11(e) to AAG's Consolidated Financial Statements in Part II, Item 8A and Note 10(e) to American's Consolidated Financial Statements in Part II, Item 8B.

Our ability to utilize our NOLs and other carryforwards may be limited.

Under the Internal Revenue Code of 1986, as amended (the Code), a corporation is generally allowed a deduction for net operating losses (NOLs) carried over from prior taxable years. As of December 31, 2022, we had approximately \$16.2 billion of gross federal NOLs and \$4.3 billion of other carryforwards available to reduce future federal taxable income, of which \$5.9 billion will expire beginning in 2024 if unused and \$14.6 billion can be carried forward indefinitely. We also had approximately \$6.0 billion of NOL carryforwards to reduce future state taxable income at December 31, 2022, which will expire in taxable years 2022 through 2042 if unused. Our NOL carryforwards are subject to adjustment on audit by the Internal Revenue Service and the respective state taxing authorities. Additionally, due to the impact of the COVID-19 pandemic and other economic factors, certain of the NOL carryforwards may expire before we can generate sufficient taxable income to use them.

Table of Contents

Our ability to use our NOLs and other carryforwards depends on the amount of taxable income generated in future periods. There can be no assurance that an additional valuation allowance on our net deferred tax assets will not be required should our financial performance be negatively impacted in the future. Such valuation allowance could be material.

A corporation's ability to deduct its federal NOL carryforwards and to utilize certain other available tax attributes can be substantially constrained under the general annual limitation rules of Section 382 of the Code (Section 382) if it undergoes an "ownership change" as defined in Section 382 (generally where cumulative stock ownership changes among material stockholders exceed 50% during a rolling three-year period). In 2013, we experienced an ownership change in connection with our emergence from bankruptcy and US Airways Group, Inc. (US Airways Group) experienced an ownership change in connection with the merger of US Airways Group and AMR Corporation (the Merger). The general limitation rules for a debtor in a bankruptcy case are liberalized where the ownership change occurs upon emergence from bankruptcy. We elected to be covered by certain special rules for federal income tax purposes that permitted approximately \$9.0 billion (with \$4.4 billion of unlimited NOLs still remaining at December 31, 2022) of our federal NOL carryforwards to be utilized without regard to the annual limitation generally imposed by Section 382. If the special rules are determined not to apply, our ability to utilize such federal NOL carryforwards may be subject to limitation. In addition, under the loan program of the CARES Act, the warrants (and common stock issuable upon exercise thereof) we issued to Treasury did not and will not result in an "ownership change" for purposes of Section 382. This exception does not apply for companies issuing warrants, stock options, common or preferred stock or other equity pursuant to PSP1, PSP2 and PSP3 and accordingly will not apply to the warrants issued by us under PSP1, PSP2 and PSP3. Substantially all of our remaining federal NOL carryforwards attributable to US Airways Group and its subsidiaries are subject to limitation under Section 382 as a result of the Merger; however, our ability to utilize such NOL carryforwards is not anticipated to be effectively constrained as a result of such limitation. Similar limitations may apply for state income tax purposes.

Notwithstanding the foregoing, an ownership change may severely limit or effectively eliminate our ability to utilize our NOL carryforwards and other tax attributes. In connection with the expiration in December 2021 of certain transfer restrictions applicable to substantial shareholders contained in our Certificate of Incorporation, the Board of Directors of AAG adopted a tax benefits preservation plan (the Tax Benefits Preservation Plan) in order to preserve our ability to use our NOLs and certain other tax attributes to reduce potential future income tax obligations. The Tax Benefits Preservation Plan was subsequently ratified by our stockholders at the 2022 Annual Meeting of Stockholders of AAG. The Tax Benefits Preservation Plan is designed to reduce the likelihood that we experience an ownership change by deterring certain acquisitions of AAG common stock. There is no assurance, however, that the deterrent mechanism will be effective, and such acquisitions may still occur. In addition, the Tax Benefits Preservation Plan may adversely affect the marketability of AAG common stock by discouraging existing or potential investors from acquiring AAG common stock or additional shares of AAG common stock, because any non-exempt third party that acquires 4.9% or more of the then-outstanding shares of AAG common stock would suffer substantial dilution of its ownership interest in AAG.

New U.S. tax legislation may adversely affect our financial condition, results of operations and cash flows.

On August 16, 2022, the Inflation Reduction Act (the IRA) was signed into law in the U.S. Among other changes, the IRA introduced a corporate minimum tax on certain corporations with average adjusted financial statement income over a three-tax year period in excess of \$1.0 billion and an excise tax on certain stock repurchases by certain covered corporations for taxable years beginning after December 31, 2022. The corporate minimum tax and any excise tax imposed on any repurchases of AAG common stock made after December 31, 2022 may adversely affect our financial condition in the future. The U.S. government may enact additional significant changes to the taxation of business entities including, among others, an increase in the corporate income tax rate, significant changes to the taxation of income derived from international operations, and an addition of further limitations on the deductibility of business interest. We are currently unable to predict whether such additional changes will occur. If such changes are enacted or implemented, we are currently unable to predict the ultimate impact on our business and therefore there can be no assurance our business will not be adversely affected.

[Table of Contents](#)

We have a significant amount of goodwill, which is assessed for impairment at least annually. In addition, we may never realize the full value of our intangible assets or long-lived assets, causing us to record material impairment charges.

Goodwill and indefinite-lived intangible assets are not amortized, but are assessed for impairment at least annually, or more frequently if conditions indicate that an impairment may have occurred. In accordance with applicable accounting standards, we first assess qualitative factors to determine whether it is necessary to perform a quantitative impairment test. In addition, we are required to assess certain of our other long-lived assets for impairment if conditions indicate that an impairment may have occurred.

Future impairment of goodwill or other long-lived assets could be recorded in results of operations as a result of changes in assumptions, estimates, or circumstances, some of which are beyond our control. There can be no assurance that a material impairment charge of goodwill or tangible or intangible assets will be avoided. The value of our aircraft could be impacted in future periods by changes in supply and demand for these aircraft. Such changes in supply and demand for certain aircraft types could result from grounding of aircraft by us or other airlines, including as a result of significant or prolonged declines in demand for air travel and corresponding reductions to capacity. We can provide no assurance that a material impairment loss of tangible or intangible assets will not occur in a future period; we have previously incurred significant impairment charges associated with our decision to retire certain aircraft as a result of the severe decline in demand for air travel due to the COVID-19 pandemic, and the risk of future material impairments remains uncertain. Such impairment charges could have a material adverse effect on our business, results of operations and financial condition.

The airline industry is intensely competitive and dynamic.

Our competitors include other major domestic airlines and foreign, regional and new entrant airlines, as well as joint ventures formed by some of these airlines, many of which have greater financial or other resources and/or lower cost structures than ours, as well as other forms of transportation, such as rail and private automobiles or alternatives to commuting or business travel including remote or flexible working policies and communication alternatives such as videoconferencing. In many of our markets, we compete with at least one low-cost carrier (including so-called ultra-low-cost carriers). Our revenues are sensitive to the actions of other carriers in many areas, including pricing, scheduling, capacity, fees (including cancellation, change and baggage fees), amenities, loyalty benefits and promotions, which can have a substantial adverse impact not only on our revenues, but on overall industry revenues. These factors may become even more significant in periods when the industry experiences large losses (such as occurred recently during the COVID-19 pandemic), as airlines under financial stress, or in bankruptcy, may institute pricing or fee structures intended to attract more customers to achieve near-term survival at the expense of long-term viability.

Low-cost carriers (including so-called ultra-low-cost carriers) have a profound impact on industry revenues. Using the advantage of low unit costs, these carriers offer lower fares in order to shift demand from larger, more established airlines, and represent significant competitors, particularly for customers who fly infrequently, are price sensitive and therefore tend not to be loyal to any one particular carrier. A number of these low-cost carriers have recently commenced operations with the stated intention to grow rapidly. Many of these new and existing carriers have announced growth strategies including commitments to acquire significant numbers of new aircraft for delivery in the next few years. These low-cost carriers are attempting to continue to increase their market share through growth and consolidation, and are expected to continue to have an impact on our revenues and overall performance. We and several other large network carriers have implemented "Basic Economy" fares designed to more effectively compete against low-cost carriers, but we cannot predict whether these initiatives will be successful. While historically these carriers have provided competition in domestic markets, we have recently experienced new competition from low-cost carriers on international routes, including low-cost airlines executing international long-haul expansion strategies, a trend likely to continue, in particular with the planned introduction of long-range narrowbody aircraft in coming years. The actions of existing or future low-cost carriers, including those described above, could have a material adverse effect on our operations and financial performance.

We provide air travel internationally, directly as well as through joint businesses, alliances, codeshare and similar arrangements to which we are a party. While our network is comprehensive, compared to some of our key global competitors, we generally have somewhat greater relative exposure to certain regions (for example, Latin America) and somewhat lower relative exposure to others (for example, China). Our financial performance relative to our key competitors will therefore be influenced significantly by macro-economic conditions in particular regions around the world and the relative exposure of our network to the markets in those regions, including the duration of declines in demand for travel to specific regions as a result of the COVID-19 pandemic and the speed with which demand for travel to these regions returns.

Table of Contents

Our international service exposes us to foreign economies and the potential for reduced demand when any foreign country we serve suffers adverse local economic conditions or if governments restrict commercial air service to or from any of these markets. For example, the COVID-19 pandemic resulted in a precipitous and prolonged decline in demand for air travel, in particular international travel, in part as a result of the imposition by the U.S. and foreign governments of restrictions on travel from certain regions. In addition, open skies agreements, which are now in place with a substantial number of countries around the world, provide international airlines with open access to U.S. markets, potentially subjecting us to increased competition on our international routes. See also *"Our business is subject to extensive government regulation, which may result in increases in our costs, disruptions to our operations, limits on our operating flexibility, reductions in the demand for air travel, and competitive disadvantages."*

Certain airline alliances, joint ventures and joint businesses have been, or may in the future be, granted immunity from antitrust regulations by governmental authorities for specific areas of cooperation, such as joint pricing decisions. To the extent alliances formed by our competitors can undertake activities that are not available to us, our ability to effectively compete may be hindered. Our ability to attract and retain customers is dependent upon, among other things, our ability to offer our customers convenient access to desired markets. Our business could be adversely affected if we are unable to maintain or obtain alliance and marketing relationships with other air carriers in desired markets.

American has established a transatlantic joint business with British Airways, Aer Lingus, Iberia and Finnair, a transpacific joint business with Japan Airlines and a joint business relating to Australia and New Zealand with Qantas, each of which has been granted antitrust immunity. The transatlantic joint business benefits from a grant of antitrust immunity from the DOT and was reviewed by the EC in July 2010. In connection with this review, we provided certain commitments to the EC regarding, among other things, the availability of take-off and landing slots at LHR or LGW airports. The commitments accepted by the EC were binding for 10 years. In October 2018, in anticipation of the exit of the United Kingdom from the EU, commonly referred to as Brexit, and the expiry of the EC commitments in July 2020, the CMA opened an investigation into the transatlantic joint business. We continue to fully cooperate with the CMA and, in September 2020 and April 2022, the CMA adopted interim measures that effectively extend the EC commitments until March 2026 in light of the uncertainty and other impacts resulting from the COVID-19 pandemic. The CMA plans to complete its investigation before the scheduled expiration of the interim measures in March 2026. The foregoing arrangements are important aspects of our international network and we are dependent on the performance and continued cooperation of the other airlines party to those arrangements.

We have a marketing relationship with JetBlue that includes an alliance agreement with reciprocal codesharing on certain domestic and international routes from New York (JFK, LGA and EWR) and BOS, and provides for reciprocal loyalty program benefits. The arrangement does not include JetBlue's transatlantic flying. Pursuant to federal law, American and JetBlue submitted this proposed alliance arrangement to the DOT for review. After American, JetBlue and the DOT agreed to a series of commitments, the DOT terminated its review of the proposed alliance in January 2021. The commitments include growth commitments to ensure capacity expansion, slot divestitures at JFK and at DCA near Washington, D.C. and antitrust compliance measures. Beyond the DOT Agreement, American and JetBlue will also refrain from certain kinds of coordination on certain city pair markets. Upon the DOT's termination of its review of the proposed alliance, American and JetBlue implemented the proposed alliance subject to these commitments. On September 21, 2021, the DOJ, joined by Attorneys General from six states and the District of Columbia, filed an antitrust complaint against American and JetBlue in the District of Massachusetts alleging that American and JetBlue violated U.S. antitrust law in connection with the NEA. The parties presented their respective cases in a bench trial that commenced on September 27, 2022. Closing arguments from both parties were presented on November 18, 2022. A decision is expected in the first quarter of 2023. Separately, in December 2022, two putative class action lawsuits were filed in the Eastern District of New York also alleging that the NEA violated the antitrust law. Those lawsuits, which have been consolidated, seek monetary and injunctive relief. In February 2023, private party plaintiffs filed two additional putative class action antitrust complaints against American and JetBlue in the District of Massachusetts and the Eastern District of New York, respectively. We believe these complaints are without merit and are defending against them vigorously.

Notwithstanding the DOT's termination of its reviews of the NEA and certain other alliances, the DOT maintains authority to conduct investigations under the scope of its existing statutes and regulations, including conduct related to this alliance. On September 21, 2021, the DOT published a Clarification Notice relating to the DOT Agreement. The DOT Clarification Notice stated, among other things, that the DOT Agreement remains in force during the pendency of the DOJ action against the NEA and, while the DOT retains independent statutory authority to prohibit unfair methods of competition in air transportation, the DOT intends to defer to the DOJ to resolve the antitrust concerns that the DOJ has identified with respect to the NEA. The DOT simultaneously published a Notice Staying Proceeding in relation to a complaint by Spirit Airlines, Inc. regarding the NEA, pending resolution of the DOJ action described above. On September

Table of Contents

30, 2022, the DOT issued a further statement referencing the prior Clarification Notice and, among other things, indicating its intention to continue working with the DOJ in its efforts to resolve the ongoing proceedings regarding the NEA.

No assurances can be given as to any benefits that we may derive from any of the foregoing arrangements or any other arrangements that may ultimately be implemented, or whether regulators will, or if granted continue to, approve or impose material conditions on our business activities.

Other mergers and other forms of airline partnerships, including antitrust immunity grants, may take place and may not involve us as a participant. Depending on which carriers combine or integrate and which assets, if any, are sold or otherwise transferred to other carriers in connection with any such transactions, our competitive position relative to the post-transaction carriers or other carriers that acquire such assets could be harmed. In addition, as carriers combine through traditional mergers or integrate their operations through antitrust immunity grants, their route networks will grow, and that growth will result in greater overlap with our network, which in turn could decrease our overall market share and revenues. Such combination or collaboration is not limited to the U.S., but could include further transactions among international carriers in Europe and elsewhere that result in broader networks offered by rival airlines.

Additionally, our AAdvantage loyalty program, which is an important element of our sales and marketing programs, faces significant and increasing competition from the loyalty programs offered by other travel companies, as well as from similar loyalty benefits offered by banks and other financial services companies. Competition among loyalty programs is intense regarding the rewards, fees, required usage, and other terms and conditions of these programs. In addition, we have used certain assets from our AAdvantage loyalty program as collateral for the AAdvantage Financing, which contains covenants that impose restrictions on certain amendments or changes to certain of our AAdvantage Agreements and other aspects of the AAdvantage loyalty program. These competitive factors and covenants (to the extent applicable) may affect our ability to attract and retain customers, increase usage of our loyalty program and maximize the revenue generated by our loyalty program.

We may also be impacted by competition regulations affecting certain of our major commercial partners, including our co-branded credit card partners. For example, there has previously been bipartisan legislation proposed in Congress called the Credit Card Competition Act designed to increase credit card transaction routing options for merchants which, if enacted, could result in a reduction of the fees levied on credit card transactions. If this legislation were successful, it could fundamentally alter the profitability of our agreements with co-branded credit card partners and the benefits we provide to our consumers through the co-branded credit cards issued by these partners.

The commercial relationships that we have with other companies, including any related equity investments, may not produce the returns or results we expect.

An important part of our strategy to expand our network has been to initiate or expand our commercial relationships with other airlines, such as by entering into global alliance, joint business and codeshare relationships, and, in certain instances, including China Southern Airlines, GOL and JetSMART, by making an equity investment in another airline in connection with initiating or expanding such a commercial relationship. We may explore additional investments in, and joint ventures and strategic alliances with, other carriers as part of our global business strategy. We face competition in forming and maintaining these commercial relationships since there are a limited number of potential arrangements and other airlines are looking to enter into similar relationships, and our inability to form or maintain these relationships or inability to form as many of these relationships as our competitors may have an adverse effect on our business. Any such existing or future investment could involve significant challenges and risks, including that we may not realize a satisfactory return on our investment or that they may not generate the expected revenue synergies, and they may distract management focus from our operations or other strategic options. We may also be subject to consequences from any illegal conduct of joint business partners as well as to any political or regulatory change that negatively impacts or prohibits our arrangements with any such business partners. In addition, as a result of the COVID-19 pandemic and subsequent economic recovery, the industry experienced significant volatility in demand for air travel both internationally and domestically, which is expected to continue into the foreseeable future and could materially disrupt our partners' abilities to provide air service, the timely execution of our strategic operating plans, including the finalization, approval and implementation of new strategic relationships or the maintenance or expansion of existing relationships. If any carriers with which we partner or in which we hold an equity stake were to cease trading or be declared insolvent, we could lose the value of any such investment or experience significant operational disruption. These events could have a material adverse effect on our business, results of operations and financial condition.

[Table of Contents](#)

We may also from time to time pursue commercial relationships with companies outside the airline industry, which relationships may include equity investments or other financial commitments. Any such relationship or related investment could involve unique risks, particularly where these relationships involve new industry participants, emerging technologies or industries with which we are unfamiliar.

Our business is very dependent on the price and availability of aircraft fuel. Continued periods of high volatility in fuel costs, increased fuel prices or significant disruptions in the supply of aircraft fuel could have a significant negative impact on consumer demand, our operating results and liquidity.

Our operating results are materially impacted by changes in the availability, price volatility and cost of aircraft fuel, which represents one of the largest single cost items in our business and thus is a significant factor in the price of airline tickets. Market prices for aircraft fuel have fluctuated substantially over the past several years and prices continue to be highly volatile, with market spot prices ranging from a low of approximately \$0.37 per gallon to a high of approximately \$4.40 per gallon during the period from January 1, 2020 to December 31, 2022.

Because of the amount of fuel needed to operate our business, even a relatively small increase or decrease in the price of fuel can have a material effect on our operating results and liquidity. Due to the competitive nature of the airline industry and unpredictability of the market for air travel, we can offer no assurance that we may be able to increase our fares, impose fuel surcharges or otherwise increase revenues or decrease other operating costs sufficiently to offset fuel price increases. Similarly, we cannot predict actions that may be taken by our competitors in response to changes in fuel prices.

We cannot predict the future availability, price volatility or cost of aircraft fuel. Natural disasters (including hurricanes or similar events in the U.S. Southeast and on the Gulf Coast where a significant portion of domestic refining capacity is located), political disruptions or wars involving oil-producing countries, economic sanctions imposed against oil-producing countries or specific industry participants, changes in fuel-related governmental policy, the strength of the U.S. dollar against foreign currencies, changes in the cost to transport or store petroleum products and any related staffing or transportation equipment shortages, changes in access to petroleum product pipelines and terminals, speculation in the energy futures markets, changes in aircraft fuel production capacity, environmental concerns and other unpredictable events, may result in fuel supply shortages, distribution challenges, additional fuel price volatility and cost increases in the future. Any of these factors or events could cause a disruption in or increased demands on oil production, refinery operations, pipeline capacity or terminal access and possibly result in significant increases in the price of aircraft fuel and diminished availability of aircraft fuel supply.

Our aviation fuel purchase contracts generally do not provide meaningful price protection against increases in fuel costs. Our current policy is not to enter into transactions to hedge our fuel consumption, although we review this policy from time to time based on market conditions and other factors. Accordingly, as of December 31, 2022, we did not have any fuel hedging contracts outstanding to hedge our fuel consumption. As such, and assuming we do not enter into any future transactions to hedge our fuel consumption, we will continue to be fully exposed to fluctuations in fuel prices. See also the discussion in Part II, Item 7A. Quantitative and Qualitative Disclosures About Market Risk – “*Aircraft Fuel.*”

In addition, as part of our emissions reduction targets, we and other airlines have committed to increasing the use of SAF in our fleet. Currently, industrial production of SAF is small in scale and inadequate to meet growing industry demand, and while additional production capacity is expected to come online in coming years, we anticipate that competition for SAF among industry participants will remain intense. As a result, we may need to pay a significant premium for SAF above the price we would pay for conventional jet fuel. To secure future SAF supply, we have entered into multiple agreements for the purchase of future SAF production, and continue to engage with producers regarding potential future SAF purchases, which may include investments to support these producers. Certain existing or potential future agreements pertain to SAF production from facilities that are planned but not yet operational, and which may utilize technology that has not been proven at commercial scale. There is no assurance that these facilities will be built or that they will meet contracted production timelines and volumes. In the event that the SAF is not delivered on schedule or in sufficient volumes, there can be no assurance that we will be able to source a supply of SAF sufficient to meet our stated goals, or that we will be able to do so on favorable economic terms.

[Table of Contents](#)

Our business is subject to extensive government regulation, which may result in increases in our costs, disruptions to our operations, limits on our operating flexibility, reductions in the demand for air travel, and competitive disadvantages.

Airlines are subject to extensive domestic and international regulatory requirements. In the last several years, Congress and state and local governments have passed laws and regulatory initiatives, and the DOT, the FAA, the TSA and several of their respective international counterparts have issued regulations and a number of other directives, that affect the airline industry. These requirements impose substantial costs on us and restrict the ways we may conduct our business.

For example, the FAA from time to time issues directives and other regulations relating to the maintenance and operation of aircraft that require significant expenditures or operational restrictions. These requirements can be issued with little or no notice, or can otherwise impact our ability to efficiently or fully utilize our aircraft, and in some instances have resulted in the temporary and prolonged grounding of aircraft types altogether (including, for example, the March 2019 grounding of all Boeing 737 MAX Family aircraft, which was not lifted in the United States until November 2020), or otherwise caused substantial disruption and resulted in material costs to us and lost revenues. The recent telecom industry roll-out of 5G technology, and concerns regarding its possible interference with aircraft navigation systems, also resulted in regulatory uncertainty and the potential for operational impacts, including possible suspension of service to certain airports or the operation of certain aircraft. See "*We rely heavily on technology and automated systems to operate our business, and any failure of these technologies or systems could harm our business, results of operations and financial condition.*" The FAA also exercises comprehensive regulatory authority over nearly all technical aspects of our operations. Our failure to comply with such requirements has in the past and may in the future result in fines and other enforcement actions by the FAA or other regulators. The FAA recently issued a final rule implementing flight attendant duty and rest periods, which will impact our scheduling flexibility. In the future, any new regulatory requirements, particularly requirements that limit our ability to operate or price our products, could have a material adverse effect on us and the industry.

DOT consumer rules, and rules promulgated by certain analogous agencies in other countries we serve, dictate procedures for many aspects of our customer's journey, including at the time of ticket purchase, at the airport, and onboard the aircraft. DOT requires multiple disclosures of airline fares, taxes and baggage fees and is further changing these requirements to increase the number of disclosures and the time at which they must be disclosed. DOT also recently issued a proposed rule mandating refunds in certain circumstances, such as a global pandemic. DOT has also proposed rules requiring disclosure of certain ancillary fees by air carriers and travel agents. Finally, DOT will be proposing and implementing a number of new disability regulations that will impact us, including rules for accessible lavatories on single-aisle aircraft, wheelchair damage and prompt wheelchair assistance.

The Aviation and Transportation Security Act mandates the federalization of certain airport security procedures and imposes additional security requirements on airports and airlines, most of which are funded by a per-ticket tax on passengers and a tax on airlines. Present and potential future security requirements can have the effect of imposing costs and inconvenience on travelers, potentially reducing the demand for air travel.

Similarly, there are a number of legislative and regulatory initiatives and reforms at the state and local levels. These initiatives include increasingly stringent laws to protect the environment, wage/hour requirements, mandatory paid sick or family leave, and healthcare mandates. These laws could affect our relationship with our workforce and the vendors that serve our airline and cause our expenses to increase without an ability to pass through these costs. In recent years, the airline industry has experienced an increase in litigation over the application of state and local employment laws, particularly in California. Application of these laws may result in operational disruption, increased litigation risk and impact our negotiated labor agreements. For example, we are currently involved in legal proceedings brought by flight attendants and certain other work groups in California concerning alleged violations of the state's labor code including, among other things, violations of certain meal and rest break laws, and an adverse determination in any of these cases could adversely impact our operational flexibility and result in the imposition of damages and fines, which could potentially be significant. Additionally, in September 2021, the Biden Administration issued an executive order mandating a COVID-19 vaccination requirement for federal contractors. Due to a number of our agreements, American is classified as a government contractor. Consistent with this executive order and guidance from the Safer Federal Workforce Task Force responsible for implementing the order, we announced that the federal vaccine mandate would require all of American's U.S.-based team members and certain international crew members to be vaccinated or be exempt due to an accommodation for a medical disability or sincerely held religious belief. Enforcement of the federal contractor vaccine mandate has been on hold amid multiple ongoing legal challenges. Given the uncertainty of its viability in the courts, the timing of implementation and availability of accommodations, we cannot predict the ultimate impact of this federal vaccination.

Table of Contents

requirement on our business should the federal government move to reinstate and enforce it. Moreover, we may be subject to state and local vaccine mandates and other COVID-19-related requirements governing airports where we operate. While OSHA has withdrawn its overarching COVID-19 Emergency Temporary Standard, the U.S. Supreme Court has acknowledged that OSHA may issue a revised COVID-19 standard targeted to high-risk occupations or workplaces, which could impact our regional carriers and other service providers.

The results of our operations, demand for air travel, and the manner in which we conduct business each may be affected by changes in law and future actions taken by governmental agencies, including:

- changes in law that affect the services that can be offered by airlines in particular markets and at particular airports, or the types of fares offered or fees that can be charged to passengers;
- the granting and timing of certain governmental approvals (including antitrust or foreign government approvals) needed for codesharing alliances, joint businesses and other arrangements with other airlines, and the imposition of regulatory investigations or commencement of litigation related to any of the foregoing (including our arrangements with JetBlue);
- restrictions on competitive practices (for example, court orders, or agency regulations or orders, that would curtail an airline's ability to respond to a competitor);
- the adoption of new passenger security standards or regulations that impact customer service standards;
- restrictions on airport operations, such as restrictions on the use of slots at airports or the auction or reallocation of slot rights currently held by us;
- the adoption of more restrictive locally-imposed noise restrictions; and
- restrictions on travel or special guidelines regarding aircraft occupancy or hygiene in response to outbreaks of illness, such as occurred during the COVID-19 pandemic, including the imposition of preflight testing regimes or vaccination confirmation requirements which have to date and may in the future have the effect of reducing demand for air travel in the markets where such requirements are imposed.

Each additional regulation or other form of regulatory oversight increases costs and adds greater complexity to airline operations and, in some cases, may reduce the demand for air travel. There can be no assurance that the increased costs or greater complexity associated with our compliance with new rules, anticipated rules or other forms of regulatory oversight will not have a material adverse effect on us.

Any significant reduction in air traffic capacity at and in the airspace serving key airports in the U.S. or overseas could have a material adverse effect on our business, results of operations and financial condition. In addition, the ATC system is not successfully modernizing to meet the growing demand for U.S. air travel. Air traffic controllers rely on outdated procedures and technologies that routinely compel airlines, including ourselves, to fly inefficient routes or take significant delays on the ground. The ATC system's inability to manage existing travel demand has led government agencies to implement short-term capacity constraints during peak travel periods or adverse weather conditions in certain markets, resulting in delays and disruptions of air traffic. The outdated technologies also cause the ATC system to be less resilient in the event of a failure, and past system disruptions have resulted in large-scale flight cancellations and delays.

In the early 2000s, the FAA embarked on a path to modernize the national airspace system, including migration from the current radar-based ATC system to a GPS-based system. This modernization of the ATC system, generally referred to as "NextGen," has been plagued by delays and cost overruns, and it remains uncertain when the full array of benefits expected from this modernization will be available to the public and the airlines, including ourselves. Failure to update the ATC system and the substantial costs that may be imposed on airlines, including ourselves, to fund a modernized ATC system may have a material adverse effect on our business.

Further, our business has been adversely impacted when government agencies have ceased to operate as expected, including due to partial shut-downs, sequestrations or similar events and the COVID-19 pandemic. These events have resulted in, among other things, reduced demand for air travel, an actual or perceived reduction in air traffic control and security screening resources and related travel delays, as well as disruption in the ability of the FAA to grant required regulatory approvals, such as those that are involved when a new aircraft is first placed into service.

[Table of Contents](#)

Our operating authority in international markets is subject to aviation agreements between the U.S. and the respective countries or governmental authorities, such as the EU, and in some cases, fares and schedules require the approval of the DOT and/or the relevant foreign governments. Moreover, alliances with international carriers may be subject to the jurisdiction and regulations of various foreign agencies. The U.S. government has negotiated “open skies” agreements with 130 trading partners, which agreements allow unrestricted route authority access between the U.S. and the foreign markets. While the U.S. has worked to increase the number of countries with which open skies agreements are in effect, a number of markets important to us, including China, do not have open skies agreements. For example, the open skies air services agreement between the U.S. and the EU, which took effect in March 2008, provides airlines from the U.S. and EU member states open access to each other’s markets, with freedom of pricing and unlimited rights to fly from the U.S. to any airport in the EU. As a result of the agreement and a subsequent open skies agreement involving the U.S. and the United Kingdom, which was agreed in anticipation of Brexit, we face increased competition in these markets, including LHR. Bilateral and multilateral agreements among the U.S. and various foreign governments of countries we serve but which are not covered by an open skies treaty are subject to periodic renegotiation. We currently operate a number of international routes under government arrangements that limit the number of airlines permitted to operate on the route, the capacity of the airlines providing services on the route, or the number of airlines allowed access to particular airports. If an open skies policy were to be adopted for any of these markets, it could adversely impact us and could result in impairments of our related tangible and intangible assets. In addition, competition from foreign airlines, revenue-sharing joint ventures, joint business agreements, and other alliance arrangements by and among other airlines could impair the value of our business and assets on the open skies routes.

On May 1, 2021 the EU and United Kingdom entered into a new trade and cooperation agreement (the EU-UK Trade and Cooperation Agreement) to govern certain aspects of their relationship following Brexit. We face risks associated with Brexit, notably given the extent of our passenger and cargo traffic and that of our joint business partners that flows through LHR in the United Kingdom. The EU-UK Trade and Cooperation Agreement includes provisions in relation to commercial air service that we expect to be sufficient to sustain our current services under the transatlantic joint business. However, the scope of traffic rights under the EU-UK Trade and Cooperation Agreement is less extensive than before Brexit and therefore the full impact of the EU-UK Trade and Cooperation Agreement is uncertain. As a result, the continuation of our current services, and those of our partners could be disrupted. This could materially adversely affect our business, results of operations and financial condition. More generally, changes in U.S. or foreign government aviation policies could result in the alteration or termination of such agreements, diminish the value of route authorities, slots or other assets located abroad, or otherwise adversely affect our international operations.

We operate a global business with international operations that are subject to economic and political instability and have been, and in the future may continue to be, adversely affected by numerous events, circumstances or government actions beyond our control.

We operate a global business with significant operations outside of the U.S. Our current international activities and prospects have been, and in the future could be, adversely affected by government policies, reversals or delays in the opening of foreign markets, increased competition in international markets, the performance of our alliance, joint business and codeshare partners in a given market, exchange controls or other restrictions on repatriation of funds, currency and political risks (including changes in exchange rates and currency devaluations), environmental regulation, increases in taxes and fees and changes in international government regulation of our operations, including the inability to obtain or retain needed route authorities and/or slots. In particular, the COVID-19 pandemic severely impacted the demand for international travel for a prolonged period, and resulted in the imposition of significant governmental restrictions on commercial air service to or from certain regions. We responded by temporarily suspending a significant portion of our long-haul international flights and delaying the introduction of certain new long-haul international routes. While many countries have largely eliminated their pandemic restrictions, or are in the process of doing so, we can provide no assurance as to when demand for international travel will return to pre-COVID-19 pandemic levels, if at all, or whether certain international destinations we previously served will be economical in the future.

We are subject to varying registration requirements and ongoing reporting obligations in the countries where we operate. Our permission to continue doing business in these countries may depend on our ability to timely fulfil or remedy any noncompliance with these and other governmental requirements. We may also be subject to the risk that relevant government agencies will be delayed in granting or renewing required approvals, including as a result of shutdowns (such as occurred in certain jurisdictions during the COVID-19 pandemic), cybersecurity incidents or other events. Any lapse, revocation, suspension or delay in approval of our authority to do business in a given jurisdiction may prevent us from serving certain destinations and could adversely impact our business, financial condition and results of operations.

[Table of Contents](#)

More generally, our industry may be affected by any deterioration in global trade relations, including shifts in the trade policies of individual nations. For example, much of the demand for international air travel is the result of business travel in support of global trade. Should protectionist governmental policies, such as increased tariff or other trade barriers, travel limitations and other regulatory actions, have the effect of reducing global commercial activity, the result could be a material decrease in the demand for international air travel. Additionally, certain of the products and services that we purchase, including certain of our aircraft and related parts, are sourced from suppliers located outside the U.S., and the imposition of new tariffs, or any increase in existing tariffs, by the U.S. government in respect of the importation of such products could materially increase the amounts we pay for them.

We face risks associated with Brexit, notably given the extent of our passenger and cargo traffic and that of our joint business partners that flows through LHR in the United Kingdom. The EU-UK Trade and Cooperation Agreement includes provisions in relation to commercial air service that we expect to be sufficient to sustain our current services under the transatlantic joint business. However, the scope of traffic rights under the EU-UK Trade and Cooperation Agreement is less extensive than before Brexit and therefore the full impact of the EU-UK Trade and Cooperation Agreement is uncertain. As a result, the continuation of our current services, and those of our partners could be disrupted. Moreover, Brexit has created uncertainty as to the future trade relationship between the EU and the United Kingdom, including air traffic services. LHR is presently a very important element of our international network, however it may become less desirable as a destination or as a hub location after Brexit when compared to other airports in Europe. This could materially adversely affect our business, results of operations and financial condition.

Brexit has also led to legal and regulatory uncertainty such as the identity of the relevant regulators, new regulatory action and/or potentially divergent treaties, laws and regulations as the United Kingdom determines which EU treaties, laws and regulations to replace or replicate, including those governing aviation, labor, environmental, data protection/privacy, competition and other matters applicable to the provision of air transportation services by us or our alliance, joint business or codeshare partners. For example, the Retained EU Law (Revocation and Reform) Bill which is currently before the UK Parliament would, if enacted in its current form, “sunset” at the end of 2023 a large part of retained EU legislation that has continued in force in the UK post-Brexit, unless specific action is taken to preserve or delay the “sunset” of individual retained EU legislation. The extent of any such specific action, and therefore the specific retained EU legislation that would “sunset” at the end of 2023, is currently unknown. The impact on our business of any treaties, laws and regulations that replace the existing EU counterparts, or other governmental or regulatory actions taken by the United Kingdom or the EU in connection with or subsequent to Brexit, cannot be predicted, including whether or not regulators will continue to approve or impose material conditions on our business activities such as the transatlantic joint business. See also *“The airline industry is intensely competitive and dynamic.”* Any of these effects, and others we cannot anticipate, could materially adversely affect our business, results of operations and financial condition.

Additionally, fluctuations in foreign currencies, including devaluations, exchange controls and other restrictions on the repatriation of funds, have significantly affected and may continue to significantly affect our operating performance, liquidity and the value of any cash held outside the U.S. in local currency. Such fluctuations in foreign currencies, including devaluations, cannot be predicted by us and can significantly affect the value of our assets located outside the United States. These conditions, as well as any further delays, devaluations or imposition of more stringent repatriation restrictions, may materially adversely affect our business, results of operations and financial condition.

We may be adversely affected by conflicts overseas or terrorist attacks; the travel industry continues to face ongoing security concerns.

Acts of terrorism or fear of such attacks, including elevated national threat warnings, wars or other military conflicts, may depress air travel, particularly on international routes, and cause declines in revenues and increases in costs. The attacks of September 11, 2001 and continuing terrorist threats, attacks and attempted attacks materially impacted and continue to impact air travel. Increased security procedures introduced at airports since the attacks of September 11, 2001 and any other such measures that may be introduced in the future generate higher operating costs for airlines. The Aviation and Transportation Security Act mandated improved flight deck security, deployment of federal air marshals on-board flights, improved airport perimeter access security, airline crew security training, enhanced security screening of passengers, baggage, cargo, mail, employees and vendors, enhanced training and qualifications of security screening personnel, additional provision of passenger data to the U.S. Customs and Border Protection Agency and enhanced background checks. A concurrent increase in airport security charges and procedures, such as restrictions on carry-on baggage, has also had and may continue to have a disproportionate impact on short-haul travel, which constitutes a significant portion of our flying and revenue. Implementation of and compliance with increasingly complex security and customs requirements will continue to result in increased costs for us and our passengers, and have caused and likely will continue to cause periodic service disruptions and delays. We have at times found it necessary or desirable to make

Table of Contents

significant expenditures to comply with security-related requirements while seeking to reduce their impact on our customers, such as expenditures for automated security screening lines at airports. As a result of competitive pressure, and the need to improve security screening throughput to support the pace of our operations, it is unlikely that we will be able to capture all security-related costs through increased fares. In addition, we cannot forecast what new security requirements may be imposed in the future, or their impact on our business.

We are subject to risks associated with climate change, including increased regulation of our CO₂ emissions, changing consumer preferences and the potential increased impacts of severe weather events on our operations and infrastructure.

Efforts to transition to a low-carbon future have increased the focus by global, regional and national regulators on climate change and GHG emissions, including CO₂ emissions. In particular, ICAO has adopted rules, including those pertaining to the CORSIA, which will require us to mitigate the growth in CO₂ emissions associated with a significant majority of our international flights. For more information on CORSIA, see "Aircraft Emissions and Climate Change Requirements" under Item 1. Business – Domestic and Global Regulatory Landscape – Environmental Matters.

At this time, the costs of complying with our future obligations under CORSIA are uncertain, primarily due to continued volatility in demand for international air travel during and in the recovery from the COVID-19 pandemic and because there is significant uncertainty with respect to the future supply and price of carbon offset credits and lower-carbon aircraft fuels. In addition, we will not directly control our CORSIA compliance costs through 2032 because those obligations are based on the growth in emissions of the global aviation sector and begin to incorporate a factor for individual airline operator emissions growth beginning in 2033. Due to the competitive nature of the airline industry and unpredictability of the market for air travel, we can offer no assurance that we may be able to increase our fares, impose surcharges or otherwise increase revenues or decrease other operating costs sufficiently to offset our costs of meeting obligations under CORSIA.

In the event that CORSIA does not come into force as expected, we and other airlines could become subject to an unpredictable and inconsistent array of national or regional emissions restrictions, creating a patchwork of complex regulatory requirements that could affect global competitors differently without offering meaningful aviation environmental improvements. For example, EC has committed to undertake a review in 2026 to determine whether CORSIA is sufficiently delivering on the goals of the Paris Agreement and, to the extent it is determined not to be, has noted it may extend the scope of the EU Emissions Trading System to include all departing flights from the EEA (and not just flights within the EEA, which are currently included). These and similar proposals may lead to increased expense related to the emissions of our flights departing from EEA airports.

Concerns over climate change are likely to result in continued attempts by governments to adopt requirements or change business environments related to aviation that, if successful, may result in increased costs to the airline industry and us. In addition, several countries and U.S. states have adopted or are considering adopting programs, including new taxes, to regulate domestic GHG emissions. Finally, certain airports have adopted, and others could in the future adopt, GHG emission or climate-related goals that could impact our operations or require us to make changes or investments in our infrastructure.

In January 2021, the EPA adopted GHG emission standards for new aircraft engines, which are aligned with the 2017 ICAO aircraft engine GHG emission standards. Like the ICAO standards, the final EPA standards for new aircraft engines would not apply retroactively to engines already on in-service aircraft. These final standards have been challenged by several states and environmental groups, and the Biden Administration has issued an executive order requiring a review of these final standards. On November 15, 2021, the EPA announced that it would not rewrite the existing aircraft engine GHG emissions standards but would seek more for ambitious new aircraft GHG emission standards within the ICAO process. The outcome of the legal challenge and whether there will be any development of new aircraft GHG emissions standards cannot be predicted at this time.

The EC's ReFuelEU Aviation initiative (part of its "Fit for 55" program) included a proposal for the creation of a SAF blending mandate for aviation fuel suppliers set at 2% beginning in 2025 and rising to 63% by 2050, among other requirements. The European Parliament (which has proposed stricter targets in relation to SAF blending percentages for 2050) and the European Council have adopted initial negotiating positions with respect to the ReFuelEU Aviation initiative and are currently in negotiations in relation to the final text of the proposed regulation. Individual EU member states have been developing their own requirements including, for example, a 1% SAF mandate in France that came into force on January 1, 2022. Whether and in what form these regulations will be finalized and the potential effects on our business are uncertain at this time.

[Table of Contents](#)

All such climate change-related regulatory activity and developments may adversely affect our business and financial results by requiring us to reduce our emissions before cost-effective emissions reduction technologies are available, for example through requirements to make capital investments to purchase specific types of equipment or technologies, purchase carbon offset credits, or otherwise incur additional costs related to our emissions. Such activity may also impact us indirectly by increasing our operating costs, including fuel costs.

In addition, as part of our emissions reduction targets, we and other airlines have committed to increasing the use of SAF in our fleet. Currently, industrial production of SAF is small in scale and inadequate to meet growing industry demand, and while additional production capacity is expected to come online in coming years, we anticipate that competition for SAF among industry participants will remain intense. As a result, we may need to pay a significant premium for SAF above the price we would pay for conventional jet fuel. To secure future SAF supply, we have entered into multiple agreements for the purchase of future SAF production, and continue to engage with producers regarding potential future SAF purchases, which may include investments to support these producers. Certain existing or potential future agreements pertain to SAF production from facilities that are planned but not yet operational, and which may utilize technology that has not been proven at commercial scale. There is no assurance that these facilities will be built or that they will meet contracted production timelines and volumes. In the event that the SAF is not delivered on schedule or in sufficient volumes, there can be no assurance that we will be able to source a supply of SAF sufficient to meet our stated goals, or that we will be able to do so on favorable economic terms.

Growing recognition among consumers of the dangers of climate change may mean some customers choose to fly less frequently or fly on an airline they perceive as operating in a manner that is more sustainable to the climate. Business customers may choose to use alternatives to travel, such as virtual meetings and workspaces. Greater development of high-speed rail in markets now served by short-haul flights could provide passengers with lower-carbon alternatives to flying with us. Our collateral to secure loans, in the form of aircraft, spare parts and airport slots, could lose value as customer demand shifts and economies move to low-carbon alternatives, which may increase our financing cost.

Finally, the potential acute and chronic physical effects of climate change, such as increased frequency and severity of storms, floods, fires, sea-level rise, excessive heat, longer-term changes in weather patterns and other climate-related events, could affect our operations, infrastructure and financial results. Operational impacts, such as more frequent or widespread flight cancellations, could result in loss of revenue. We could incur significant costs to improve the climate resiliency of our infrastructure and otherwise prepare for, respond to, and mitigate such physical effects of climate change. We are not able to predict accurately the materiality of any potential losses or costs associated with the physical effects of climate change.

We are subject to many forms of environmental and noise regulation and may incur substantial costs as a result.

We are subject to a number of increasingly stringent federal, state, local and foreign laws, regulations and ordinances relating to the protection of human health and the environment and noise reduction, including those relating to emissions to the air, discharges to land and surface and subsurface waters, safe drinking water, and the management of hazardous substances, oils and waste materials. This universe of substances is evolving to encompass many substances not previously regulated. Compliance with environmental laws and regulations can require significant expenditures, and violations can lead to significant fines and penalties, as well as civil liability.

We are also subject to other environmental laws and regulations, including those that require us to investigate and remediate soil or groundwater to meet certain remediation standards. Under federal law, generators of waste materials, and current and former owners or operators of facilities, can be subject to liability for investigation and remediation costs at locations that have been identified as requiring response actions. Liability under these laws may be retroactive, strict, joint and several, meaning that we could be liable for the costs of cleaning up environmental contamination regardless of when it occurred, fault or the amount of waste directly attributable to us. We have liability for investigation and remediation costs at various sites, although such costs currently are not expected to have a material adverse effect on our business.

Governmental authorities in the U.S. and abroad are increasingly focused on potential contamination resulting from the use of certain chemicals, most notably per- and polyfluoroalkyl substances (PFAS). Products containing PFAS have been used in manufacturing, industrial, and consumer applications over many decades, including those related to aviation. Among other things, recent changes to federal requirements for firefighting foams containing PFAS, as well as related state regulations affecting their use, will require operational changes. On August 26, 2022, the EPA published for public comment a new rulemaking that would designate two PFAS substances (perfluorooctanoic acid and perfluorooctanesulfonic acid) as hazardous substances under the Comprehensive Environmental Response,

[Table of Contents](#)

Compensation, and Liability Act. This rulemaking would require entities to immediately report current and past releases that meet or exceed the reportable quantity for such substances to EPA's National Response Center. Depending on the final outcome of this rulemaking and the introduction of any additional state or federal regulations, we may incur costs in connection with reporting obligations and costs related to historic usage of PFAS-containing materials, transitioning away from the usage of PFAS-containing products, disposing of PFAS-containing waste or remediating any residual environmental impacts.

We have various leases and agreements with respect to real property, tanks and pipelines with airports and other operators. Under these leases and agreements, we have agreed to indemnify the lessor or operator against environmental liabilities associated with the real property or operations described under the agreement, even in certain cases where we are not the party responsible for the initial event that caused the environmental damage. We also participate in leases with other airlines in fuel consortiums and fuel committees at airports, and such indemnities are generally joint and several among the participating airlines.

Governmental authorities in several U.S. and foreign cities are also considering, or have already implemented, aircraft noise reduction programs, including the imposition of nighttime curfews and limitations on daytime take offs and landings. We have been able to accommodate local noise restrictions imposed to date, but our operations could be adversely affected if locally-imposed regulations become more restrictive or widespread. The FAA is also currently evaluating possible changes to how aircraft noise is measured, and the resulting standards that are based on them. Ultimately, these changes could have an impact on, or limit, our operations, or make it more difficult for the FAA to modernize and increase the efficiency of the airspace and airports we utilize.

A higher than normal number of pilot retirements, more stringent duty time regulations, increased flight hour requirements for commercial airline pilots, reductions in the number of military pilots entering the commercial workforce, increased training requirements and other factors have caused a shortage of pilots that could materially adversely affect our business.

Large numbers of pilots in the industry accepted early retirement during the COVID-19 pandemic or are approaching the FAA's mandatory retirement age of 65. Our pilots and other employees are subject to rigorous certification standards, and our pilots and other crew members must adhere to flight time and rest requirements. Commencing in 2013, the minimum flight hour requirement to achieve a commercial pilot's license in the United States increased from 250 to 1,500 hours, thereby significantly increasing the time and cost commitment required to become licensed to fly commercial aircraft. Additionally, the number of military pilots being trained by the U.S. armed forces and available as commercial pilots upon their retirement from military service has been decreasing. Further, in the course of the domestic airline industry rapidly restoring capacity during the recovery from the COVID-19 pandemic, the significant training requirements to return large numbers of pilots to active flying have been time consuming and disruptive.

These and other factors have contributed to a shortage of qualified, entry-level pilots, shortages of experienced pilots trained and ready for duty, and increased compensation costs materially for pilots throughout the industry. The foregoing factors have also led to increased competition from large, mainline carriers attempting to meet their hiring needs and significant further proposed increases in mainline pilot compensation. We believe that this industry-wide pilot shortage will remain a significant problem for airlines in the United States for the foreseeable future. Our regional airline subsidiaries and other regional partners have recently been unable to hire adequate numbers of pilots to meet their needs, resulting in a reduction in the number of flights offered, disruptions, increased compensation expense and costs of operations, financial difficulties and other adverse effects, and these circumstances may become more severe in the future and thereby cause a material adverse effect on our business.

We depend on a limited number of suppliers for aircraft, aircraft engines and parts.

We depend on a limited number of suppliers for aircraft, aircraft engines and many aircraft and engine parts. For example, as of the end of 2022, all of our mainline aircraft were manufactured by either Airbus or Boeing and all of our regional aircraft were manufactured by either Bombardier or Embraer. Further, our supplier base continues to consolidate as evidenced by recent transactions involving Airbus and Bombardier and Mitsubishi and Bombardier, and the cessation of production of certain Bombardier regional aircraft that we and our regional partners currently operate in large numbers. Due to the limited number of these suppliers, we are vulnerable to any problems associated with the performance of their obligation to supply key aircraft, parts and engines, including design defects, mechanical problems, contractual performance by suppliers, adverse perception by the public that would result in customer avoidance of any of our aircraft or any action by the FAA or any other regulatory authority resulting in an inability to certify or operate our aircraft, even temporarily. For instance, in March 2019, the FAA ordered the grounding of all Boeing 737 MAX Family aircraft, which

Table of Contents

remained in place for over a year and was not lifted in the United States until November 2020. More recently, regulatory concerns raised by the FAA forced Boeing to temporarily suspend deliveries of certain 787 aircraft, resulting in significant reductions to our planned long-haul flying. The limited number of these suppliers may also result in reduced competition and potentially higher prices than if the supplier base was less concentrated.

Delays in scheduled aircraft deliveries or other loss of anticipated fleet capacity, and failure of new aircraft to perform as expected, may adversely impact our business, results of operations and financial condition.

The success of our business depends on, among other things, effectively managing the number and types of aircraft we operate. If, for any reason, we are unable to accept or secure deliveries of new aircraft on contractually scheduled delivery dates, this could have negative impacts on our business, results of operations and financial condition. Our failure to integrate newly purchased aircraft into our fleet as planned might require us to seek extensions of the terms for some leased aircraft or otherwise delay the exit of certain aircraft from our fleet. Such unanticipated extensions or delays, which recently have been relatively commonplace among manufacturers of commercial aircraft, may require us to operate existing aircraft beyond the point at which it is economically optimal to retire them, resulting in increased maintenance costs, or reductions to our schedule, thereby reducing revenues. If new aircraft orders are not filled on a timely basis, we could face higher financing and operating costs than planned. In addition, if the aircraft we receive do not meet expected performance or quality standards, including with respect to fuel efficiency, safety and reliability, we could face higher financing and operating costs than planned and our business, results of operations and financial condition could be adversely impacted. For instance, in March 2019, the FAA grounded all Boeing 737 MAX Family aircraft, including the 24 aircraft in our fleet at the time of the grounding, as a result of which we were unable to take delivery of the Boeing 737 MAX Family aircraft we had on order from Boeing. More recently, regulatory concerns raised by the FAA forced Boeing to temporarily suspend deliveries of 787 aircraft, resulting in significant reductions to our planned long-haul flying. Repeated or prolonged delays in the production, delivery or induction of our new aircraft could require us to scale back our growth plans, reduce frequencies or forgo service entirely to certain markets, which could adversely affect our business, financial condition and results of operations.

We rely heavily on technology and automated systems to operate our business, and any failure of these technologies or systems could harm our business, results of operations and financial condition.

We are highly dependent on existing and emerging technology and automated systems to operate our business. These technologies and systems include our computerized airline reservation system, flight operations and crew scheduling systems, financial planning, management and accounting systems, telecommunications systems, website, maintenance systems and check-in kiosks. In order for our operations to work efficiently, our website and reservation system must be able to accommodate a high volume of traffic, maintain secure information and deliver flight information, as well as issue electronic tickets and process critical financial information in a timely manner. Substantially all of our tickets are issued to passengers as electronic tickets. We depend on our reservation system, which is hosted and maintained under a long-term contract by a third-party service provider, to be able to issue, track and accept these electronic tickets. If our technologies or automated systems are not functioning or if our third-party service providers were to fail to adequately provide technical support, system maintenance or timely software upgrades for any one of our key existing systems, we could experience service disruptions or delays, which could harm our business and result in the loss of important data, increase our expenses and decrease our revenues. Furthermore, certain critical aspects of our operation rely on legacy technological systems which may grow more difficult or expensive to support and maintain over time, and such systems may fail to perform as required or become more vulnerable to malfunction or failure over time. In the event that one or more of our primary technology or systems vendors goes into bankruptcy, ceases operations or fails to perform as promised, replacement services may not be readily available on a timely basis, at competitive rates or at all, and any transition time to a new system may be significant.

Our aircraft employ a number of sophisticated radio and satellite-based navigation and safety technologies, and we are subject to risks associated with the introduction or expansion of technologies that could interfere with the safe operation of these flight systems. For example, telecommunications companies are expanding and increasing the commercial and consumer applications of 5G cellular communication networks, and regulators, manufacturers and operators have expressed concerns that certain 5G applications could interfere with certain flight systems. On December 23, 2021, the FAA issued a special airworthiness information bulletin (SAIB), in which it indicated that further testing and assessment is needed regarding the effects of 5G on certain aircraft equipped with radar altimeters, which measure the aircraft's altitude and guide pilots during landings. If it were determined that 5G signals posed an interference risk to these altimeters or other systems, the FAA indicated in its SAIB that it could restrict flight operations in areas where such interference could occur. On January 18, 2022, major U.S. telecommunications companies agreed to delay the implementation of 5G near airports until July 5, 2022 while working with the FAA to develop long-term mitigations to support safe aviation operations.

[Table of Contents](#)

While the telecommunications industry agreed to delay the activation of 5G transmitters in close proximity to airports, it did move forward with the activation of a vast majority of 5G transmitters away from airports, and we expect that companies will continue expanding their 5G networks over the next several years. As a result, the FAA has taken precautionary steps to mitigate any remaining interference risks, which have resulted in minimal impacts to our operations, particularly in low-visibility conditions at certain airports and with our regional carriers. While we are working closely with the FAA and other aviation industry participants to develop a long-term strategy that permits the full implementation of the 5G spectrum without disruption to safe aviation operations, any new restrictions imposed to mitigate interference risks would require us to adjust our operating procedures and could impact our ability to operate certain aircraft or to serve certain markets. On June 17, 2022, the FAA announced that major U.S. telecommunications companies have agreed to continue to keep 5G mitigations beyond July 5, 2022, but simultaneously announced their expectation that the U.S. mainline commercial fleet to have radio altimeter retrofits or other enhancements in place by July 2023. We have made clear our commitment to updating our aircraft as soon as possible and we have already completed retrofitting our mainline Airbus A320 fleet with updated radio altimeters. We will continue retrofitting aircraft across both our mainline and regional fleets and currently expect completion by July 2023. Our most pressing concern moving forward is ensuring that the FAA, FCC, and telecommunications industry can come to a long-term mitigation agreement without adverse impacts on aviation. For each fleet type, we need the FAA to certify a solution, the aircraft manufacturer to issue a service bulletin, the radio altimeter manufacturer to produce the solution, and for the solution to be delivered to us with enough time to install it on our aircraft in advance of July 2023.

Our technologies and automated systems are not completely protected against events that are beyond our control, including natural disasters, power failures, terrorist attacks, cyber-attacks, data theft, defects, errors, equipment and software failures, computer viruses or telecommunications failures. When service interruptions occur as a result of any of the aforementioned events, we address them in accordance with applicable laws, rules and regulations. However, substantial or sustained system failures could cause service delays or failures and result in our customers purchasing tickets from other airlines. We cannot assure that our security measures, change control procedures or disaster recovery plans are adequate to prevent disruptions or delays. Disruption in or changes to these technologies or systems could result in a disruption to our business and the loss of important data. Any of the foregoing could result in a material adverse effect on our business, results of operations and financial condition.

Evolving data security and privacy requirements (in particular, compliance with applicable federal, state and foreign laws relating to handling of personal information about individuals) could increase our costs, and any significant data security or privacy incident could disrupt our operations, harm our reputation, expose us to legal risks and otherwise materially adversely affect our business, results of operations and financial condition.

In the normal course of our business, we collect, process, use and disclose personal information about individuals and rely on third party service providers to host or otherwise process personal information. Many federal, state and foreign governmental bodies and agencies have adopted, or are considering adopting, laws and regulations that impose limits on the collection, processing, use, disclosure and security of personal information about individuals. In some cases, such laws and regulations can be enforced by private parties in addition to government entities. In addition, privacy advocacy and industry groups may propose new and different self-regulatory standards or guidance that may legally or contractually apply to us and our vendors. These non-uniform laws, regulations, standards and guidance are complex and currently evolving and can be subject to significant change and interpretation, and may be inconsistently applied and enforced from one jurisdiction to another.

Our business requires the secure processing and storage of personal information relating to our customers, employees, business partners and others. However, like any global enterprise operating in today's digital business environment, we have experienced cybersecurity incidents and data breaches. The threat of cybersecurity incidents continues to increase as the frequency, intensity and sophistication of attacks and intrusions increase around the world. Despite ongoing efforts to maintain and improve the security of digital information, individuals, including employees or contractors, may be able to circumvent the security measures we put in place, and we may be unable to anticipate new techniques used for these attacks and intrusions and implement adequate preventative measures. We and our business partners have been the target of cybersecurity attacks and data breaches in the past and expect that we will continue to be in the future. For example, in March 2021, a sub-set of AAdvantage members as well as members of several other major airline loyalty programs received a notification about a security incident involving a limited amount of loyalty data held by a service provider. As another example, in July 2022, a minor phishing incident resulted in certain employee email accounts being accessed and acquired without authorization that contained personal information about a very limited number of individuals, including travelers (following which we notified the individuals). We react and respond to these

Table of Contents

cybersecurity attacks in accordance with the applicable legal requirements, our own approved cybersecurity protocols, as well as our commercial partners' standards, but we cannot ensure that our responses will be sufficient to prevent or mitigate the potential adverse impacts of these incidents, which may be material.

Moreover, the conflict involving Russia and Ukraine has resulted in a heightened risk of cyberattacks against companies like ours that have operations, vendors and/or supply chain providers located in or around the region of conflict or are otherwise related to the conflict.

There has been heightened legislative and regulatory focus on data privacy and cybersecurity in the U.S., the EU, China and elsewhere, particularly with respect to critical infrastructure providers, including those in the transportation sector. As a result, we must comply with a proliferating and fast-evolving set of legal requirements in this area, including substantive data privacy and cybersecurity standards as well as requirements for notifying regulators and affected individuals in the event of a data security incident. This regulatory environment is increasingly challenging and may present material obligations and risks to our business, including significantly expanded compliance burdens, costs and enforcement risks. For example, in May 2018, the EU's General Data Protection Regulation, commonly referred to as GDPR, came into effect, which imposes a host of data privacy and security requirements, imposing significant costs on us and carrying substantial penalties for non-compliance.

In addition, many of our commercial partners, including credit card companies, have imposed data security standards that we must meet. In particular, we are required by the Payment Card Industry Security Standards Council, founded by the credit card companies, to comply with their highest level of data security standards. While we continue our efforts to meet these standards, new and revised standards may be imposed that may be difficult for us to meet and could increase our costs.

Significant cybersecurity incidents involving us or one of our AAdvantage partners or other business partners have in the past and may in the future result in a range of potentially material negative consequences for us, including unauthorized access to, disclosure, modification, misuse, loss or destruction of company systems or data; theft of sensitive, regulated or confidential data, such as personal information or our intellectual property; the loss of functionality of critical systems through ransomware, denial of service or other attacks; a diminished ability to retain or attract new customers; a deterioration in our relationships with business partners and other third parties; interruptions or failures in our payment related systems; and business delays, service or system disruptions, damage to equipment and injury to persons or property. The methods used to obtain unauthorized access, disable or degrade service or sabotage systems are constantly evolving and may be difficult to anticipate or to detect for long periods of time. The constantly changing nature of the threats means that we cannot and have not been able to prevent all data security breaches or misuse of data. Similarly, we depend on the ability of our key commercial partners, including AAdvantage partners, other business partners, our regional carriers, distribution partners and technology vendors, to conduct their businesses in a manner that complies with applicable security standards and assures their ability to perform on a timely basis. A security failure, including a failure to meet relevant payment security standards, breach or other significant cybersecurity incident affecting one of our partners, interruptions or failures in our payment related systems, could result in potentially material negative consequences for us, including loss of critical data, service interruptions and the potential for fines, restrictions and expulsion from card acceptance programs. In addition, we use third-party service providers to help us deliver services to customers. These service providers may store personal information, credit card information and/or other confidential information. Such information may be the target of unauthorized access or subject to security breaches because of third-party action, employee error, malfeasance or otherwise. Any of these could (a) result in the loss of information, litigation, indemnity obligations, expensive and inconsistent cybersecurity incident and data breach notification requirements, damage to our reputation, regulatory scrutiny, and other liability, or (b) have a material adverse effect on our business, financial condition and results of operations.

The costs and operational consequences of defending against, preparing for, responding to and remediating an incident of cybersecurity breach may be substantial. As cybersecurity threats become more frequent, intense and sophisticated, costs of proactive defense measures are increasing. Further, we could be exposed to litigation, regulatory enforcement or other legal action as a result of an incident, carrying the potential for damages, fines, sanctions or other penalties, as well as injunctive relief and enforcement actions requiring costly compliance measures. A significant number of recent privacy and data security incidents, including those involving other large airlines, have resulted in very substantial adverse financial consequences to those companies. A cybersecurity incident could also impact our brand, including that of the AAdvantage program, harm our reputation and adversely impact our relationship with our customers, employees and stockholders. The increased regulatory focus on data privacy practices apart from how personal data is secured, such as how personal data is collected, used for marketing purposes, and shared with third parties, also may require changes to our processes and increase compliance costs. There is also an increased risk to our business in the

Table of Contents

event of a significant data privacy violation, including additional compliance costs, reputational harm, disruption to the manner in which we provide our services, including the geographies we service, and being subject to complaints and/or regulatory investigations, significant monetary liability, fines, penalties, regulatory enforcement, individual or class action lawsuits, public criticism, loss of customers, loss of goodwill or other additional liabilities, such as claims by industry groups or other third parties. Accordingly, failure to appropriately address data privacy and cybersecurity issues could result in material financial and other liabilities and cause significant reputational harm to our company.

In addition, litigation, claims and enforcement related to privacy, biometrics and other provisions of state privacy laws may involve new interpretations of privacy laws. Compliance with these laws and regulations may be inconsistent from jurisdiction to jurisdiction, increasing the cost of compliance and our risk of liability from litigation. Any litigation, claims or enforcement actions to which we are or become a party could potentially result in substantial monetary damages or fines.

We rely on third-party distribution channels and must manage effectively the costs, rights and functionality of these channels.

We rely on third-party distribution channels, including those provided by or through global distribution systems (GDSs) (e.g., Amadeus, Sabre and Travelport), conventional travel agents, travel management companies and online travel agents (OTAs) (e.g., Expedia, including its booking sites Orbitz and Travelocity, and Booking Holdings, including its booking sites Kayak and Priceline), to distribute a significant portion of our airline tickets, and we expect in the future to continue to rely on these channels. We are also dependent upon the ability and willingness of these distribution channels to expand their ability to distribute and collect revenues for ancillary products (e.g., fees for selective seating). These distribution channels are more expensive and at present have less functionality in respect of ancillary product offerings than those we operate ourselves, such as our website at www.aa.com. Certain of these distribution channels also effectively restrict the manner in which we distribute our products generally.

To remain competitive, we will need to manage successfully our distribution costs and rights, increase our distribution flexibility and improve the functionality of our distribution channels, while maintaining an industry-competitive cost structure. Further, as distribution technology changes we will need to continue to update our technology by acquiring new technology from third parties, building the functionality ourselves, or a combination, which in any event will likely entail significant technological and commercial risk and involve potentially material investments. These imperatives may affect our relationships with conventional travel agents, travel management companies, GDSs and OTAs, including if consolidation of conventional travel agents, travel management companies, GDSs or OTAs continues, or should any of these parties seek to acquire other technology providers thereby potentially limiting our technology alternatives. Any inability to manage our third-party distribution costs, rights and functionality at a competitive level or any material diminishment or disruption in the distribution of our tickets could have a material adverse effect on our business, results of operations and financial condition.

If we are unable to obtain and maintain adequate facilities and infrastructure throughout our system and, at some airports, adequate slots, we may be unable to operate our existing flight schedule and to expand or change our route network in the future, which may have a material adverse impact on our operations.

In order to operate our existing and proposed flight schedule and, where desirable, add service along new or existing routes, we must be able to maintain and/or obtain adequate gates, check-in counters, operations areas, operations control facilities and administrative support space. As airports around the world become more congested, it may not be possible for us to ensure that our plans for new service can be implemented in a commercially viable manner, given operating constraints at airports throughout our network, including those imposed by inadequate facilities at desirable airports.

In light of constraints on existing facilities, there is presently a significant amount of capital spending underway at major airports in the United States, including large projects underway at a number of airports where we have significant operations, such as ORD, Dallas/Fort Worth International Airport, JFK and LAX. This spending is expected to result in increased costs to airlines and the traveling public that use those facilities as the airports seek to recover their investments through increased rental, landing and other facility costs. In some circumstances, such costs could be imposed by the relevant airport authority without our approval. Accordingly, our operating costs are expected to increase significantly at many airports at which we operate, including a number of our hubs and gateways, as a result of capital spending projects currently underway and additional projects that we expect to commence over the next several years.

In addition, operations at three major domestic airports, certain smaller domestic airports and many foreign airports we serve are regulated by governmental entities through allocations of slots or similar regulatory mechanisms that limit the rights of carriers to conduct operations at those airports. Each slot represents the authorization to land at or take off from the particular airport during a specified time period and may impose other operational restrictions as well. In the U.S., the

Table of Contents

DOT and the FAA currently regulate the allocation of slots or slot exemptions at DCA and two New York City airports: JFK and LGA. Our operations at these airports generally require the allocation of slots or similar regulatory authority. In addition to slot restrictions, operations at DCA and LGA are also limited based on a so-called “perimeter rule” which generally limits the stage length of the flights that can be operated from those airports to 1,250 and 1,500 miles, respectively. Similarly, our operations at LHR, international airports in Beijing, Frankfurt, Paris, Tokyo and other airports outside the U.S. are regulated by local slot authorities pursuant to the International Airline Trade Association Worldwide Scheduling Guidelines and/or applicable local law. Termination of slot controls at some or all of the foregoing airports could affect our operational performance and competitive position. We currently have sufficient slots or analogous authorizations to operate our existing flights and we have generally, but not always, been able to obtain the rights to expand our operations and to change our schedules. However, there is no assurance that we will be able to obtain sufficient slots or analogous authorizations in the future or as to the cost of acquiring such rights because, among other reasons, such allocations are often sought after by other airlines and are subject to changes in governmental policies. Due to the dramatic reduction in air travel during the COVID-19 pandemic, we relied in many instances on exemptions granted by applicable authorities from the requirement that we continuously use certain slots, gates and routes or risk having such operating rights revoked, and depending on the applicable authority these exemptions can vary in the way they are structured and applied. We cannot predict whether such exemptions will continue to be made available, whether they will be granted on the same or similar terms, or whether we ultimately could be at risk of losing valuable operating rights. If we are forced to surrender slots, we may be unable to provide our desired level of service to or from certain destinations in the future. We cannot provide any assurance that regulatory changes resulting in changes in the application of slot controls or the allocation of or any reallocation of existing slots, the continued enforcement or termination of a perimeter rule or similar regulatory regime will not have a material adverse impact on our operations.

Our ability to provide service can also be impaired at airports, such as LAX and ORD where the airport gates and other facilities are currently inadequate to accommodate all of the service that we would like to provide, or airports such as Dallas Love Field Airport where we have no access to gates at all.

Any limitation on our ability to acquire or maintain adequate gates, ticketing facilities, operations areas, operations control facilities, slots (where applicable), or office space could have a material adverse effect on our business, results of operations and financial condition.

Interruptions or disruptions in service at one of our key facilities could have a material adverse impact on our operations.

We operate principally through our hubs in Charlotte, Chicago, Dallas/Fort Worth, Los Angeles, Miami, New York, Philadelphia, Phoenix and Washington, D.C. and partner gateways including London Heathrow (among others). Substantially all of our flights either originate at or fly into one of these locations. A significant interruption or disruption in service at one of our hubs, gateways or other airports where we have a significant presence, resulting from air traffic control delays, weather conditions, natural disasters, growth constraints, performance by third-party service providers (such as electric utility or telecommunications providers), failure of computer systems, disruptions at airport facilities or other key facilities used by us to manage our operations (including as a result of social or environmental activism), labor relations, power supplies, fuel supplies, terrorist activities, or otherwise could result in the cancellation or delay of a significant portion of our flights and, as a result, could have a severe impact on our business, results of operations and financial condition. We have limited control, particularly in the short term, over the operation, quality or maintenance of many of the services on which our operations depend and over whether vendors of such services will improve or continue to provide services that are essential to our business.

Increases in insurance costs or reductions in insurance coverage may adversely impact our operations and financial results.

The terrorist attacks of September 11, 2001 led to a significant increase in insurance premiums and a decrease in the insurance coverage available to commercial air carriers. Accordingly, our insurance costs increased significantly, and our ability to continue to obtain insurance even at current prices remains uncertain. The occurrence or persistence of certain events, including armed conflicts, could also impact our ability to obtain commercial insurance coverage against certain risks, or to obtain such insurance on commercially acceptable terms. If we are unable to maintain adequate insurance coverage or to secure suitable alternatives outside the commercial insurance markets, our business could be materially and adversely affected. Additionally, severe disruptions in the domestic and global financial markets could adversely impact the claims paying ability of some insurers. Future downgrades in the ratings of enough insurers could adversely impact both the availability of appropriate insurance coverage and its cost. Because of competitive pressures in our

Table of Contents

industry, our ability to pass along additional insurance costs to passengers is limited. As a result, further increases in insurance costs or reductions in available insurance coverage could have an adverse impact on our financial results.

The airline industry is heavily taxed.

The airline industry is subject to extensive government fees and taxation that negatively impact our revenue and profitability. The U.S. airline industry is one of the most heavily taxed of all industries. These fees and taxes have grown significantly in the past decade for domestic flights, and various U.S. fees and taxes also are assessed on international flights. For example, as permitted by federal legislation, most major U.S. airports impose a per-passenger facility charge on us. In addition, the governments of foreign countries in which we operate impose on U.S. airlines, including us, various fees and taxes, and these assessments have been increasing in number and amount in recent years. Moreover, we are obligated to collect a federal excise tax, commonly referred to as the "ticket tax," on domestic and international air transportation. We collect the excise tax, along with certain other U.S. and foreign taxes and user fees on air transportation (such as passenger security fees), and pass along the collected amounts to the appropriate governmental agencies. Although these taxes and fees are not our operating expenses, they represent an additional cost to our customers. There are continuing efforts in Congress and in other countries to raise different portions of the various taxes, fees, and charges imposed on airlines and their passengers, including the passenger facility charge, and we may not be able to recover all of these charges from our customers. Increases in such taxes, fees and charges could negatively impact our business, results of operations and financial condition.

Under DOT regulations, all governmental taxes and fees must be included in the prices we quote or advertise to our customers. Due to the competitive revenue environment, many increases in these fees and taxes have been absorbed by the airline industry rather than being passed on to the customer. Further increases in fees and taxes may reduce demand for air travel, and thus our revenues.

Risks Related to Ownership of AAG Common Stock and Convertible Notes

The price of AAG common stock has been and may in the future be volatile.

The market price of AAG common stock has fluctuated substantially in the past, and may fluctuate substantially in the future, due to a variety of factors, many of which are beyond our control, including:

- the effects of the COVID-19 pandemic on our business or the U.S. and global economies;
- macro-economic conditions, including the price of fuel;
- changes in market values of airline companies as well as general market conditions;
- our operating and financial results failing to meet the expectations of securities analysts or investors;
- changes in financial estimates or recommendations by securities analysts;
- changes in our level of outstanding indebtedness and other obligations;
- changes in our credit ratings;
- material announcements by us or our competitors;
- expectations regarding any future capital deployment program, including share repurchase programs and any future dividend payments that may be declared by our Board of Directors, or any subsequent determination to cease repurchasing stock or paying dividends;
- new regulatory pronouncements and changes in regulatory guidelines;
- general and industry-specific economic conditions;
- changes in our key personnel;
- public or private sales of a substantial number of shares of AAG common stock or issuances of AAG common stock upon the exercise or conversion of restricted stock unit awards, stock appreciation rights, or other securities that may be issued from time to time, including warrants we have issued in connection with our receipt of funds under the CARES Act, the PSP Extension Law and the ARP;

Table of Contents

- increases or decreases in reported holdings by insiders or other significant stockholders;
- fluctuations in trading volume; and
- technical factors in the public trading market for our stock that may produce price movements that may or may not comport with macro, industry or company-specific fundamentals, including, without limitation, the sentiment of retail investors (including as may be expressed on financial trading and other social media sites), the amount and status of short interest in our securities, access to margin debt, trading in options and other derivatives on our common stock and any related hedging and other technical trading factors.

The closing price of our common stock on the Nasdaq Global Select Market varied from \$11.86 to \$20.22 during 2022 and \$12.74 to \$17.08 during 2023 year-to-date through February 17, 2023. At times, fluctuations in our stock price have been rapid, imposing risks on investors due to the possibility of significant, short-term price volatility. While we believe that in recent years this wide range of trading prices has largely reflected the changing prospects for a large airline facing the challenges imposed by the COVID-19 pandemic, we also believe, based in part on the commentary of market analysts, that the trading price of our common stock has at times been influenced by the technical trading factors discussed in the last bullet above. On some occasions, market analysts have explained fluctuations in our stock price by reference to purported “short squeeze” activity. A “short squeeze” is a technical market condition that occurs when the price of a stock increases substantially, forcing market participants who had taken a position that its price would fall (i.e., who had sold the stock “short”), to buy it, which in turn may create significant, short-term demand for the stock not for fundamental reasons, but rather due to the need for such market participants to acquire the stock in order to forestall the risk of even greater losses. A “short squeeze” condition in the market for a stock can lead to short-term conditions involving very high volatility and trading that may or may not track fundamental valuation models.

If we do decide to make repurchases of or pay dividends on our common stock, we cannot guarantee that we will continue to do so or that such a capital deployment program will enhance long-term stockholder value.

In connection with the financial assistance provided under PSP1, PSP2 and PSP3, we agreed not to repurchase shares of AAG common stock through September 30, 2022. Following the expiration of these restrictions, if we determine to make any share repurchases in the future, such repurchases may be made through a variety of methods, which may include open market purchases, privately negotiated transactions, block trades or accelerated share repurchase transactions. Our future repurchases of AAG common stock, if any, may be limited, suspended or discontinued at any time at our discretion and without prior notice.

In connection with the financial assistance provided under PSP1, PSP2 and PSP3, we also agreed not to pay dividends on AAG common stock through September 30, 2022. Following the expiration of these restrictions, if we determine to make any dividends in the future, such dividends that may be declared and paid from time to time will be subject to market and economic conditions, applicable legal requirements and other relevant factors. The amount and timing of any future dividends, if any, may vary, and the payment of any dividend does not assure that we will pay dividends in the future.

In addition, any future repurchases of AAG common stock or payment of dividends, or any determination to cease repurchasing stock or paying dividends, could affect our stock price and increase its volatility. The existence of a future share repurchase program and any future dividends could cause our stock price to be higher than it would otherwise be and could potentially reduce the market liquidity for our stock. Additionally, any future repurchases of AAG common stock or payment of dividends will diminish our cash reserves, which may impact our ability to finance future growth and to pursue possible future strategic opportunities and acquisitions. Further, our repurchase of AAG common stock may fluctuate such that our cash flow may be insufficient to fully cover our share repurchases. Under the recently enacted IRA, we may become subject to an excise tax on the fair market value of AAG common stock repurchased after December 31, 2022, which may adversely affect our financial condition. Although our share repurchase programs are intended to enhance long-term stockholder value, there is no assurance that they will do so.

[Table of Contents](#)

AAG's Certificate of Incorporation, Bylaws and Tax Benefit Preservation Plan include provisions that limit voting and acquisition and disposition of our equity interests and specify an exclusive forum for certain stockholder disputes.

Our Certificate of Incorporation and Bylaws include significant provisions that limit voting and ownership and disposition of our equity interests as described in Part II, Item 5. Market for American Airlines Group's Common Stock, Related Stockholder Matters and Issuer Purchases of Equity Securities - "Ownership Restrictions" and AAG's Description of the Registrants' Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934, which is filed as Exhibit 4.1 hereto. Further restrictions are set forth in our Tax Benefit Preservation Plan. These restrictions may adversely affect the ability of certain holders of AAG common stock and our other equity interests to vote such interests and adversely affect the ability of persons to acquire shares of AAG common stock and our other equity interests.

Our Certificate of Incorporation also specifies that the Court of Chancery of the State of Delaware shall be the exclusive forum for substantially all disputes between us and our stockholders. Because the applicability of the exclusive forum provision is limited to the extent permitted by applicable law, we do not intend for the exclusive forum provision to apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction, and acknowledge that federal courts have concurrent jurisdiction over all suits brought to enforce any duty or liability created by the Securities Act of 1933 (Securities Act). We note that there is uncertainty as to whether a court would enforce the provision as it applies to the Securities Act and that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. This provision may have the effect of discouraging lawsuits against our directors and officers.

Certain provisions of AAG's Certificate of Incorporation and Bylaws make it difficult for stockholders to change the composition of our Board of Directors and may discourage takeover attempts that some of our stockholders might consider beneficial.

Certain provisions of our Certificate of Incorporation and Bylaws, as currently in effect, may have the effect of delaying or preventing changes in control if our Board of Directors determines that such changes in control are not in our best interest and the best interest of our stockholders. These provisions include, among other things, the following:

- advance notice procedures for stockholder proposals to be considered at stockholders' meetings;
- the ability of our Board of Directors to fill vacancies on the board;
- a prohibition against stockholders taking action by written consent;
- stockholders are restricted from calling a special meeting unless they hold at least 20% of our outstanding shares and follow the procedures provided for in the amended Bylaws;
- a requirement that holders of at least 80% of the voting power of the shares entitled to vote in the election of directors approve any amendment of our Bylaws submitted to stockholders for approval; and
- super-majority voting requirements to modify or amend specified provisions of our Certificate of Incorporation.

These provisions are not intended to prevent a takeover, but are intended to protect and maximize the value of the interests of our stockholders. While these provisions have the effect of encouraging persons seeking to acquire control of our company to negotiate with our Board of Directors, they could enable our Board of Directors to prevent a transaction that some, or a majority, of our stockholders might believe to be in their best interest and, in that case, may prevent or discourage attempts to remove and replace incumbent directors. In addition, we are subject to the provisions of Section 203 of the Delaware General Corporation Law, which prohibits business combinations with interested stockholders. Interested stockholders do not include stockholders whose acquisition of our securities is approved by the Board of Directors prior to the investment under Section 203.

[**Table of Contents**](#)

The issuance or sale of shares of our common stock, rights to acquire shares of our common stock, or warrants issued to Treasury under the CARES Act, the PSP Extension Law, the ARP, PSP1, PSP2 and PSP3, could depress the trading price of our common stock and the Convertible Notes.

We may conduct future offerings of material amounts of our common stock, preferred stock or other securities that are convertible into or exercisable for our common stock to finance our operations, to fund acquisitions, or for any other purposes at any time and from time to time (including as compensation to the U.S. Government for the proceeds received pursuant to PSP1, PSP2 or PSP3). If these additional shares or securities are issued or sold, or if it is perceived that they will be sold, into the public market or otherwise, the price of our common stock and Convertible Notes could decline substantially. If we issue additional shares of our common stock or rights to acquire shares of our common stock, if any of our existing stockholders sells a substantial amount of our common stock, or if the market perceives that such issuances or sales may occur, then the trading price of our common stock and Convertible Notes could decline substantially.

ITEM 1B. UNRESOLVED STAFF COMMENTS

We had no unresolved SEC staff comments that were issued 180 days or more preceding December 31, 2022.

Table of Contents

ITEM 2. PROPERTIES

Flight Equipment

As of December 31, 2022, American operated a mainline fleet of 925 aircraft. During 2022, American accepted delivery of 33 mainline aircraft including 24 Airbus A321neo and nine Boeing 787-8 aircraft and returned 27 mainline aircraft to service from temporary storage. We are supported by our wholly-owned and third-party regional carriers that fly under capacity purchase agreements operating as American Eagle. As of December 31, 2022, American Eagle operated 536 regional aircraft. During 2022, we decreased our regional fleet by a net of 31 aircraft, including the addition of 38 regional aircraft, temporary parking of 59 regional aircraft and return of 10 regional aircraft.

Mainline

As of December 31, 2022, American's mainline fleet consisted of the following aircraft:

	Average Seating Capacity	Average Age (Years)	Owned	Leased	Total
Airbus A319	128	18.7	21	112	133
Airbus A320	150	21.7	10	38	48
Airbus A321	184	10.4	164	54	218
Airbus A321neo	196	1.7	33	35	68
Boeing 737-800 ⁽¹⁾	172	12.8	123	171	294
Boeing 737-8 MAX	172	3.4	9	33	42
Boeing 777-200ER	273	22.0	44	3	47
Boeing 777-300ER	304	8.8	18	2	20
Boeing 787-8	234	4.6	20	13	33
Boeing 787-9	285	5.2	17	5	22
Total	12.2	459	466	925	

⁽¹⁾ Excluded from the total operating aircraft count above are nine owned Boeing 737-800 held in temporary storage as of December 31, 2022.

Table of Contents

Regional

As of December 31, 2022, the fleet of our wholly-owned and third-party regional carriers operating as American Eagle consisted of the following aircraft:

	Average Seating Capacity	Owned	Leased	Owned or Leased by Third Party Regional Carrier	Total	Operating Regional Carrier	Number of Aircraft Operated
Bombardier CRJ 700 ⁽¹⁾	65	40	2	80	122	SkyWest PSA Total	80 42 122
Bombardier CRJ 900 ⁽¹⁾	76	69	—	40	109	PSA Mesa Total	69 40 109
Embraer 170 ⁽¹⁾	65	2	6	13	21	Republic Envoy Total	13 8 21
Embraer 175	76	101	—	108	209	Envoy Republic SkyWest Total	101 88 20 209
Embraer 145 ⁽¹⁾	50	75	—	—	75	Piedmont Envoy Total	47 28 75
Total		287	8	241	536		536

⁽¹⁾ Excluded from the total operating aircraft count above are 69 regional aircraft that are being held in temporary storage as follows: 40 owned Embraer 145, 14 owned and five leased Bombardier CRJ 700, four owned and two leased Embraer 170 and four owned Bombardier CRJ 900.

See Note 11 to AAG's Consolidated Financial Statements in Part II, Item 8A and Note 10 to American's Consolidated Financial Statements in Part II, Item 8B for additional information on our capacity purchase agreements with third-party regional carriers.

Aircraft and Engine Purchase Commitments

As of December 31, 2022, we had definitive purchase agreements for the acquisition of the following aircraft ⁽¹⁾:

	2023	2024	2025	2026	2027	Total
Airbus						
A320neo Family	2	5	19	29	5	60
Boeing						
737 MAX Family	17	22	28	21	—	88
787 Family	4	12	9	4	5	34
Total	23	39	56	54	10	182

⁽¹⁾ Delivery schedule represents our best estimate as of the date of this report as described in footnote (e) to the "Contractual Obligations" table in Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations. Actual delivery dates are subject to change, which could be material, based on various potential factors including production delays by the manufacturer and regulatory concerns.

We also have agreements for 52 spare engines to be delivered in 2023 and beyond.

Table of Contents

We currently have financing commitments in place for all aircraft on order and scheduled to be delivered in 2023 except for 10 Boeing 737 MAX Family aircraft. Our ability to draw on the financing commitments we have in place is subject to (1) the satisfaction of various terms and conditions including, in some cases, on our acquisition of the aircraft by a certain date and (2) the performance by the counterparty providing such financing commitments of its obligations thereunder. We do not have financing commitments in place for any of the aircraft scheduled to be delivered in 2024 and beyond, except for five Boeing 787 Family aircraft scheduled to be delivered in 2024. See Part I, Item 1A. Risk Factors – “*We will need to obtain sufficient financing or other capital to operate successfully*” for additional discussion.

See Note 11 to AAG’s Consolidated Financial Statements in Part II, Item 8A and Note 10 to American’s Consolidated Financial Statements in Part II, Item 8B for additional information on aircraft and engine acquisition commitments.

Ground Properties

At each airport where we conduct flight operations, we have agreements, generally with a governmental unit or authority, for the use of passenger, operations and baggage handling space as well as runways and taxiways. These agreements, particularly in the U.S., often contain provisions for periodic adjustments to rates and charges applicable under such agreements. These rates and charges also vary with our level of operations and the operations of the airport. Additionally, at our hub locations and in certain other cities we serve, we lease administrative offices, catering, cargo, training, maintenance and other facilities.

We lease or have built on leased property our headquarters and training facilities in Fort Worth, Texas, our principal overhaul and maintenance base in Tulsa, Oklahoma, our regional reservation offices, and administrative offices throughout the U.S. and abroad.

ITEM 3. LEGAL PROCEEDINGS

See Note 11 to AAG’s Consolidated Financial Statements in Part II, Item 8A and Note 10 to American’s Consolidated Financial Statements in Part II, Item 8B for information on legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

[Table of Contents](#)

PART II

ITEM 5. MARKET FOR AMERICAN AIRLINES GROUP'S COMMON STOCK, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Stock Exchange Listing

Our common stock is listed on The Nasdaq Global Select Market under the trading symbol "AAL." There is no trading market for the common stock of American, which is a wholly-owned subsidiary of AAG.

As of February 17, 2023, there were approximately 14,000 holders of record of our common stock. However, because many of the shares of our common stock are held by brokers and other institutions on behalf of stockholders, we believe there are substantially more beneficial holders of our common stock than record holders.

Information on securities authorized for issuance under our equity compensation plans will be set forth in our Proxy Statement for the 2023 Annual Meeting of Stockholders of American Airlines Group Inc. (the Proxy Statement) under the caption "Equity Compensation Plan Information" and is incorporated by reference into this Annual Report on Form 10-K.

Dividends on Common Stock

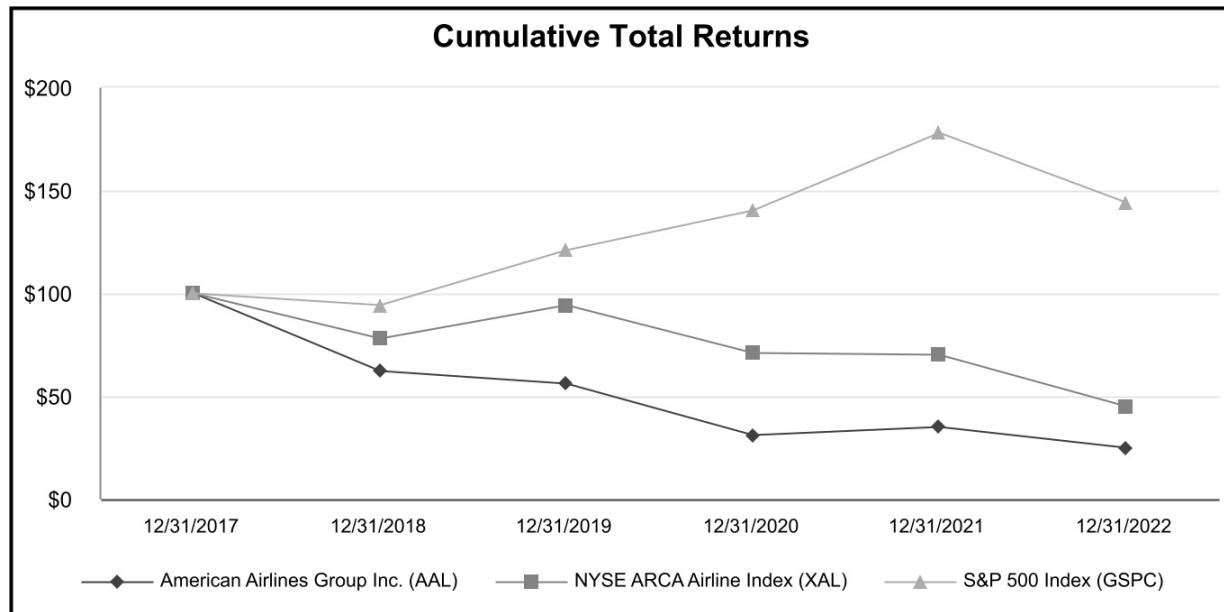
There were no cash dividend payments during the years ended December 31, 2022 and 2021. In connection with our receipt of financial assistance under PSP1, PSP2 and PSP3, we agreed not to pay dividends on AAG common stock through September 30, 2022 when this restriction expired. If we determine to make any dividends in the future, such dividends that may be declared and paid from time to time will be subject to market and economic conditions, applicable legal requirements and other relevant factors. We are not obligated to continue a dividend for any fixed period, and the payment of dividends may be suspended or discontinued again at any time at our discretion and without prior notice.

Table of Contents

Stock Performance Graph

The following stock performance graph and related information shall not be deemed “soliciting material” or “filed” with the SEC, nor shall such information be incorporated by reference into any future filings under the Securities Act of 1933 or the Exchange Act, each as amended, except to the extent that we specifically incorporate it by reference into such filing.

The following stock performance graph compares the cumulative total stockholder returns during the period from December 31, 2017 to December 31, 2022 of our common stock to the New York Stock Exchange (NYSE) ARCA Airline Index and the Standard and Poor's Financial Services, LLC (S&P) 500 Stock Index. The comparison assumes \$100 was invested on December 31, 2017 in our common stock and in each of the foregoing indices and assumes that all dividends were reinvested. The stock performance shown on the following graph represents historical stock performance and is not necessarily indicative of future stock price performance.



	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
American Airlines Group Inc. (AAL)	\$ 100	\$ 62	\$ 56	\$ 31	\$ 35	\$ 25
NYSE ARCA Airline Index (XAL)	100	78	94	71	70	45
S&P 500 Index (GSPC)	100	94	121	140	178	144

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The remaining authority under our most recent \$2.0 billion share repurchase program expired in December 2020, and in connection with our receipt of financial assistance under PSP1, PSP2 and PSP3, we agreed not to repurchase shares of AAG common stock through September 30, 2022 when this restriction expired. No repurchases of AAG common stock were made in 2022 following the lapse of these restrictions. As of December 31, 2022, the Board of Directors of AAG had not authorized another share repurchase program. Any future determination to enter into a share repurchase program will be at the discretion of the Board of Directors, subject to applicable legal limitations, and will depend upon our results of operations, financial condition, contractual restrictions and other factors deemed relevant by the Board of Directors.

See Part I, Item 1A. Risk Factors – “If we do decide to make repurchases of or pay dividends on our common stock, we cannot guarantee that we will continue to do so or that our capital deployment program will enhance long-term stockholder value.”

[Table of Contents](#)

Ownership Restrictions

AAG's Certificate of Incorporation and Bylaws provide that, consistent with the requirements of Subtitle VII of Title 49 of the United States Code, as amended (the Aviation Act), any persons or entities who are not a "citizen of the United States" (as defined under the Aviation Act and administrative interpretations issued by the DOT, its predecessors and successors, from time to time), including any agent, trustee or representative of such persons or entities (a non-citizen), shall not, in the aggregate, own (beneficially or of record) and/or control more than (a) 24.9% of the aggregate votes of all of our outstanding equity securities or (b) 49.0% of our outstanding equity securities. Our Certificate of Incorporation and Bylaws further specify that it is the duty of each stockholder who is a non-citizen to register his, her or its equity securities on our foreign stock record and provide for remedies applicable to stockholders that exceed the voting and ownership caps described above.

In addition, to reduce the risk of a potential adverse effect on our ability to use our NOL carryforwards and certain other tax attributes for federal income tax purposes, and in connection with the expiration in December 2021 of certain transfer restrictions applicable to substantial shareholders contained in our Certificate of Incorporation, the Board of Directors of AAG adopted the Tax Benefits Preservation Plan in order to preserve our ability to use our NOLs and certain other tax attributes to reduce potential future income tax obligations. The Tax Benefits Preservation Plan was subsequently ratified by our stockholders at the 2022 Annual Meeting of Stockholders of AAG. The Tax Benefits Preservation Plan is designed to reduce the likelihood that we experience an "ownership change" for purposes of Section 382 by deterring certain acquisitions of AAG common stock. There is no assurance, however, that the deterrent mechanism will be effective, and such acquisitions may still occur. In addition, the Tax Benefits Preservation Plan may adversely affect the marketability of AAG common stock by discouraging existing or potential investors from acquiring AAG common stock or additional shares of AAG common stock, because any non-exempt third party that acquires 4.9% or more of the then-outstanding shares of AAG common stock would suffer substantial dilution of its ownership interest in AAG.

See Part I, Item 1A. Risk Factors – “*AAG’s Certificate of Incorporation, Bylaws and Tax Benefit Preservation Plan include provisions that limit voting and acquisition and disposition of our equity interests and specify an exclusive forum for certain stockholder disputes*” and “*Our ability to utilize our NOLs and other carryforwards may be limited.*” Also see AAG’s Certification of Incorporation and Bylaws, which are filed as Exhibits 3.1, 3.2 and 3.3 hereto, for the full text of the foregoing restrictions and AAG’s Description of the Registrants’ Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934, which is filed as Exhibit 4.1 hereto, for a more detailed description.

Table of Contents

ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

Selected Consolidated Financial Data of AAG

The selected consolidated financial data presented below under the captions “Consolidated Statements of Operations data” and “Consolidated Balance Sheet data” for the years ended and as of December 31, 2022, 2021 and 2020, are derived from AAG’s audited consolidated financial statements.

	Year Ended December 31,		
	2022	2021	2020
(In millions, except share and per share amounts)			
Consolidated Statements of Operations data:			
Total operating revenues	\$ 48,971	\$ 29,882	\$ 17,337
Total operating expenses	47,364	30,941	27,758
Operating income (loss)	1,607	(1,059)	(10,421)
Net income (loss)	127	(1,993)	(8,885)
Earnings (loss) per common share:			
Basic	\$ 0.20	\$ (3.09)	\$ (18.36)
Diluted	0.19	(3.09)	(18.36)
Shares used for computation (in thousands):			
Basic	650,345	644,015	483,888
Diluted	655,122	644,015	483,888
Consolidated Balance Sheet data (at end of period):			
Total assets	\$ 64,716	\$ 66,467	\$ 62,008
Debt and finance leases	35,663	38,060	32,593
Pension and postretirement obligations ⁽¹⁾	2,926	5,150	7,131
Operating lease liabilities	8,024	8,117	8,428
Stockholders’ deficit	(5,799)	(7,340)	(6,867)

⁽¹⁾ Substantially all defined benefit pension plans were frozen effective November 1, 2012. See Note 9 to AAG’s Consolidated Financial Statements in Part II, Item 8A for further information on pension and postretirement benefits.

Reconciliation of GAAP to Non-GAAP Financial Measures

We sometimes use financial measures that are derived from the consolidated financial statements but that are not presented in accordance with accounting principles generally accepted in the U.S. (GAAP) to understand and evaluate our current operating performance and to allow for period-to-period comparisons. We believe these non-GAAP financial measures may also provide useful information to investors and others. These non-GAAP measures may not be comparable to similarly titled non-GAAP measures of other companies, and should be considered in addition to, and not as a substitute for or superior to, any measure of performance, cash flow or liquidity prepared in accordance with GAAP. We are providing a reconciliation of reported non-GAAP financial measures to their comparable financial measures on a GAAP basis.

[Table of Contents](#)

The following table presents the components of our total net special items and the reconciliation of pre-tax income (loss) and net income (loss) (GAAP measures) to pre-tax income (loss) excluding net special items and net income (loss) excluding net special items (non-GAAP measures). Management uses these non-GAAP financial measures to evaluate our current operating performance and to allow for period-to-period comparisons. As net special items may vary from period-to-period in nature and amount, the adjustment to exclude net special items allows management an additional tool to understand our core operating performance.

	Year Ended December 31,	
	2022	2021
	(In millions)	
Components of Total Special Items, Net: ⁽¹⁾		
Fleet impairment ⁽²⁾	\$ 149	\$ —
Litigation reserve adjustments	37	(19)
PSP Financial Assistance ⁽³⁾	—	(4,162)
Severance expenses ⁽⁴⁾	—	168
Mark-to-market adjustments on bankruptcy obligations, net	—	(3)
Other operating special items, net	7	10
Mainline operating special items, net	193	(4,006)
PSP Financial Assistance ⁽³⁾	—	(539)
Regional pilot retention program ⁽⁵⁾	—	61
Fleet impairment ⁽²⁾	—	27
Severance expenses ⁽⁴⁾	—	2
Other operating special items, net	5	—
Regional operating special items, net	5	(449)
Operating special items, net	198	(4,455)
Mark-to-market adjustments on equity and other investments, net ⁽⁶⁾	71	31
Debt refinancing, extinguishment and other, net	3	29
Nonoperating special items, net	74	60
Pre-tax special items, net	272	(4,395)
Income tax special items, net	(9)	—
Total special items, net	\$ 263	\$ (4,395)
Reconciliation of Pre-Tax Income (Loss) Excluding Net Special Items:		
Pre-tax income (loss) – GAAP	\$ 186	\$ (2,548)
Adjusted for: Pre-tax special items, net	272	(4,395)
Pre-tax income (loss) excluding net special items	\$ 458	\$ (6,943)
Reconciliation of Net Income (Loss) Excluding Net Special Items:		
Net income (loss) – GAAP	\$ 127	\$ (1,993)
Adjusted for: Total special items, net	263	(4,395)
Adjusted for: Net tax effect of net special items	(62)	993
Net income (loss) excluding net special items	\$ 328	\$ (5,395)

⁽¹⁾ See Note 2 to AAG's Consolidated Financial Statements in Part II, Item 8A for further information on net special items.

⁽²⁾ Fleet impairment for 2022 included a non-cash impairment charge to write down the carrying value of our retired Airbus A330 fleet to the estimated fair value due to the market conditions for certain used aircraft. We retired our Airbus A330 fleet in 2020 as a result of the decline in demand for air travel due to the COVID-19 pandemic.

Table of Contents

Fleet impairment for 2021 included a non-cash impairment charge to write down regional aircraft resulting from the retirement of the remaining Embraer 140 fleet earlier than planned.

- (3) The PSP Financial Assistance represents recognition of a portion of the financial assistance received from the U.S. Department of Treasury (Treasury) pursuant to the payroll support programs established by the U.S. Government. See Note 1(b) to AAG's Consolidated Financial Statements in Part II, Item 8A for further information.
- (4) Severance expenses include salary and medical costs primarily associated with certain team members who opted into voluntary early retirement programs offered as a result of reductions to our operation due to the COVID-19 pandemic.
- (5) Our regional pilot retention program provides for, among other things, a cash retention bonus paid in the fourth quarter of 2021 to eligible captains at our wholly-owned regional carriers included on the pilot seniority list as of September 1, 2021.
- (6) Mark-to-market adjustments on equity and other investments, net principally included net unrealized gains and losses associated with certain equity investments. See Note 8 to AAG's Consolidated Financial Statements in Part II, Item 8A for further information related to our equity investments.

Additionally, the table below presents the reconciliation of total operating costs (GAAP measure) to total operating costs excluding net special items and fuel (non-GAAP measure) and total operating cost per available seat mile (CASM) to CASM excluding net special items and fuel. Management uses total operating costs excluding net special items and fuel and CASM excluding net special items and fuel to evaluate our current operating performance and for period-to-period comparisons. The price of fuel, over which we have no control, impacts the comparability of period-to-period financial performance. The adjustment to exclude fuel and net special items allows management an additional tool to understand and analyze our non-fuel costs and core operating performance. Amounts may not recalculate due to rounding.

	Year Ended December 31,	
	2022	2021
Reconciliation of CASM Excluding Net Special Items and Fuel:		
(In millions)		
Total operating expenses – GAAP	\$ 47,364	\$ 30,941
Operating net special items ⁽¹⁾ :		
Mainline operating special items, net	(193)	4,006
Regional operating special items, net	(5)	449
Aircraft fuel and related taxes	(13,791)	(6,792)
Total operating expenses, excluding net special items and fuel	<u>\$ 33,375</u>	<u>\$ 28,604</u>
(In millions)		
Total Available Seat Miles (ASM)	260,226	214,535
(In cents)		
CASM	18.20	14.42
Operating net special items per ASM ⁽¹⁾ :		
Mainline operating special items, net	(0.07)	1.87
Regional operating special items, net	—	0.21
Aircraft fuel and related taxes per ASM	(5.30)	(3.17)
CASM, excluding net special items and fuel	<u>12.83</u>	<u>13.33</u>

⁽¹⁾ See Note 2 to AAG's Consolidated Financial Statements in Part II, Item 8A for further information on net special items.

Table of Contents

Selected Consolidated Financial Data of American

The selected consolidated financial data presented below under the captions "Consolidated Statements of Operations data" and "Consolidated Balance Sheet data" for the years ended and as of December 31, 2022, 2021 and 2020, are derived from American's audited consolidated financial statements.

	Year Ended December 31,		
	2022	2021	2020
(In millions)			
Consolidated Statements of Operations data:			
Total operating revenues	\$ 48,965	\$ 29,880	\$ 17,335
Total operating expenses	47,312	30,841	27,559
Operating income (loss)	1,653	(961)	(10,224)
Net income (loss)	338	(1,777)	(8,450)
Consolidated Balance Sheet data (at end of period):			
Total assets	\$ 70,324	\$ 71,145	\$ 69,215
Debt and finance leases	30,422	32,094	28,982
Pension and postretirement obligations ⁽¹⁾	2,900	5,117	7,089
Operating lease liabilities	7,961	8,074	8,380
Stockholder's equity	5,593	3,826	4,348

⁽¹⁾ Substantially all defined benefit pension plans were frozen effective November 1, 2012. See Note 8 to American's Consolidated Financial Statements in Part II, Item 8B for further information on pension and postretirement benefits.

[Table of Contents](#)

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

2022 Financial Overview

The selected financial data presented below is derived from AAG's audited consolidated financial statements included in Part II, Item 8A of this report and should be read in conjunction with those financial statements and the related notes thereto.

	Year Ended December 31,		Increase (Decrease)	Percent Increase (Decrease)
	2022	2021		
(In millions, except percentage changes)				
Passenger revenue	\$ 44,568	\$ 26,063	\$ 18,505	71.0
Cargo revenue	1,233	1,314	(81)	(6.2)
Other operating revenue	3,170	2,505	665	26.5
Total operating revenues	48,971	29,882	19,089	63.9
Aircraft fuel and related taxes	13,791	6,792	6,999	nm ⁽²⁾
Salaries, wages and benefits	12,972	11,817	1,155	9.8
Total operating expenses	47,364	30,941	16,423	53.1
Operating income (loss)	1,607	(1,059)	2,666	nm
Pre-tax income (loss)	186	(2,548)	2,734	nm
Income tax provision (benefit)	59	(555)	614	nm
Net income (loss)	127	(1,993)	2,120	nm
Pre-tax income (loss) – GAAP	\$ 186	\$ (2,548)	\$ 2,734	nm
Adjusted for: pre-tax net special items ⁽¹⁾	272	(4,395)	4,667	nm
Pre-tax income (loss) excluding net special items	<u>\$ 458</u>	<u>\$ (6,943)</u>	<u>\$ 7,401</u>	<u>nm</u>

⁽¹⁾ See Part II, Item 6. Selected Consolidated Financial Data – “Reconciliation of GAAP to Non-GAAP Financial Measures” and Note 2 to AAG’s Consolidated Financial Statements in Part II, Item 8A for details on the components of pre-tax net special items.

⁽²⁾ Not meaningful or greater than 100% change.

Pre-Tax Income (Loss) and Net Income (Loss)

Pre-tax income and net income were \$186 million and \$127 million, respectively, in 2022. This compares to 2021 pre-tax loss and net loss of \$2.5 billion and \$2.0 billion, respectively.

The year-over-year improvement in our pre-tax income, on a GAAP basis, was driven by the continued strength in demand for air travel and a 21.3% increase in capacity as compared to 2021. This resulted in record passenger revenue for 2022 which was offset in part by higher aircraft fuel and related taxes, due to a 73.0% increase in the average price per gallon of aircraft fuel as well as increases in other operating expenses from increased capacity. The 2021 period also included the recognition of \$4.4 billion of net pre-tax special credits, principally related to PSP Financial Assistance. See Note 2 to AAG’s Consolidated Financial Statements in Part II, Item 8A for details on the components of pre-tax net special items.

Excluding the effects of pre-tax net special items, pre-tax income was \$458 million in 2022 and pre-tax loss was \$6.9 billion in 2021. The year-over-year improvement in our pre-tax income excluding pre-tax net special items was primarily due to record passenger revenue in 2022, offset in part by higher aircraft fuel and related taxes and increases in other operating expenses, as described above.

Table of Contents

Revenue

In 2022, we reported total operating revenues of \$49.0 billion, an increase of \$19.1 billion, or 63.9%, as compared to 2021. Passenger revenue was \$44.6 billion, an increase of \$18.5 billion, or 71.0%, as compared to 2021. The increase in passenger revenue in 2022 was primarily due to a 33.5% increase in revenue passenger miles (RPMs), driven by the continued strength in demand for air travel domestically and in the Atlantic and Latin America regions, resulting in a 7.6 point increase in passenger load factor to 82.9% in 2022, and a 28.1% increase in passenger yield.

In 2022, cargo revenue was \$1.2 billion, a decrease of \$81 million, or 6.2%, as compared to 2021, primarily due to a 5.3% decrease in cargo ton miles driven by the discontinuation of our cargo-only flying and lower demand.

Other operating revenue increased \$665 million, or 26.5%, in 2022 as compared to 2021, driven primarily by higher revenue associated with our loyalty program. During 2022 and 2021, cash payments from co-branded credit card and other partners were \$4.5 billion and \$3.4 billion, respectively.

Our total revenue per available seat mile (TRASM) was 18.82 cents in 2022, a 35.1% increase as compared to 13.93 cents in 2021, driven principally by the increase in passenger revenue as described above.

Fuel

In 2022, aircraft fuel expense totaled \$13.8 billion, an increase of \$7.0 billion as compared to 2021. This increase was primarily driven by a 73.0% increase in the average price per gallon of aircraft fuel including related taxes to \$3.54 in 2022 from \$2.04 in 2021 and a 17.4% increase in gallons of fuel consumed due to increased capacity.

As of December 31, 2022, we did not have any fuel hedging contracts outstanding to hedge our fuel consumption. Our current policy is not to enter into transactions to hedge our fuel consumption, although we review that policy from time to time based on market conditions and other factors. As such, and assuming we do not enter into any future transactions to hedge our fuel consumption, we will continue to be fully exposed to fluctuations in fuel prices.

Other Costs

We remain committed to actively managing our cost structure, which we believe is necessary in an industry whose economic prospects are heavily dependent upon two variables we cannot control: general economic conditions and the price of fuel.

Our 2022 CASM was 18.20 cents, an increase of 26.2%, from 14.42 cents in 2021. This increase in CASM was primarily driven by higher aircraft fuel and related taxes in 2022, as described above, and the recognition of \$4.5 billion of operating net special credits in 2021 principally related to PSP Financial Assistance.

Our 2022 CASM excluding net special items and fuel was 12.83 cents, a decrease of 3.8%, from 13.33 cents in 2021.

For a reconciliation of total operating CASM to total operating CASM excluding net special items and fuel, see Part II, Item 6. Selected Consolidated Financial Data – “Reconciliation of GAAP to Non-GAAP Financial Measures.”

Liquidity

As of December 31, 2022, we had \$12.0 billion in total available liquidity, consisting of \$9.0 billion in unrestricted cash and short-term investments, \$2.8 billion in undrawn capacity under revolving credit facilities and a total of \$220 million in undrawn short-term revolving and other facilities.

During 2022, we completed the following financing transactions (see Note 4 to AAG’s Consolidated Financial Statements in Part II, Item 8A for further information):

- repaid in full approximately \$1.2 billion outstanding balance under, and terminated, the December 2016 Term Loan Facility;
- received \$866 million in proceeds from enhanced equipment trust certificates (EETCs);
- repurchased \$349 million of unsecured notes in the open market; and
- issued \$205 million of equipment loans and other notes payable in connection with the financing of certain aircraft.

Table of Contents

A significant portion of our debt financing agreements contain covenants requiring us to maintain an aggregate of at least \$2.0 billion of unrestricted cash and cash equivalents and amounts available to be drawn under revolving credit facilities and/or contain covenants requiring us to meet certain loan to value, collateral coverage and/or peak debt service coverage ratios.

See Note 4 to AAG's Consolidated Financial Statements in Part II, Item 8A for additional information on our debt obligations.

AAG's Results of Operations

For a comparison of the 2021 to 2020 reporting periods, see Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – "AAG's Results of Operations" of our 2021 Form 10-K.

Operating Statistics

The table below sets forth selected operating data for the years ended December 31, 2022 and 2021.

	Year Ended December 31,		Increase
	2022	2021	
Revenue passenger miles (millions) ^(a)	215,624	161,538	33.5%
Available seat miles (millions) ^(b)	260,226	214,535	21.3%
Passenger load factor (percent) ^(c)	82.9	75.3	7.6pts
Yield (cents) ^(d)	20.67	16.13	28.1%
Passenger revenue per available seat mile (cents) ^(e)	17.13	12.15	41.0%
Total revenue per available seat mile (cents) ^(f)	18.82	13.93	35.1%
Fuel consumption (gallons in millions)	3,901	3,324	17.4%
Average aircraft fuel price including related taxes (dollars per gallon)	3.54	2.04	73.0%
Total operating cost per available seat mile (cents) ^(g)	18.20	14.42	26.2%
Aircraft at end of period ^(h)	1,461	1,432	2.0%
Full-time equivalent employees at end of period	129,700	123,400	5.1%

(a) Revenue passenger mile (RPM) – A basic measure of sales volume. One RPM represents one passenger flown one mile.

(b) Available seat mile (ASM) – A basic measure of production. One ASM represents one seat flown one mile.

(c) Passenger load factor – The percentage of available seats that are filled with revenue passengers.

(d) Yield – A measure of airline revenue derived by dividing passenger revenue by RPMs.

(e) Passenger revenue per available seat mile (PRASM) – Passenger revenue divided by ASMs.

(f) Total revenue per available seat mile (TRASM) – Total revenues divided by ASMs.

(g) Total operating cost per available seat mile (CASM) – Total operating expenses divided by ASMs.

(h) Includes aircraft owned and leased by American as well as aircraft operated by third-party regional carriers under capacity purchase agreements. Excludes nine mainline and 69 regional aircraft in temporary storage as of December 31, 2022 as follows: nine Boeing 737-800, 40 Embraer 145, 19 Bombardier CRJ 700, six Embraer 170 and four Bombardier CRJ 900.

Table of Contents

Operating Revenues

	Year Ended December 31,		Increase (Decrease)	Percent Increase (Decrease)
	2022	2021		
	(In millions, except percentage changes)			
Passenger	\$ 44,568	\$ 26,063	\$ 18,505	71.0
Cargo	1,233	1,314	(81)	(6.2)
Other	3,170	2,505	665	26.5
Total operating revenues	<u>\$ 48,971</u>	<u>\$ 29,882</u>	<u>\$ 19,089</u>	63.9

This table presents our passenger revenue and the year-over-year change in certain operating statistics:

	Year Ended December 31, 2022 (In millions)	Increase vs. Year Ended December 31, 2021					
		Passenger Revenue	RPMs	ASMs	Load Factor	Passenger Yield	PRASM
Passenger revenue	\$ 44,568	71.0%	33.5%	21.3%	7.6pts	28.1%	41.0%

Passenger revenue increased \$18.5 billion, or 71.0%, in 2022 from 2021 primarily due to a 33.5% increase in RPMs, driven by the continued strength in demand for air travel domestically and in the Atlantic and Latin America regions, resulting in a 7.6 point increase in passenger load factor to 82.9% in 2022, and a 28.1% increase in passenger yield.

Cargo revenue decreased \$81 million, or 6.2%, in 2022 from 2021 primarily due to a 5.3% decrease in cargo ton miles driven by the discontinuation of our cargo-only flying and lower demand.

Other operating revenue increased \$665 million, or 26.5%, in 2022 from 2021 driven primarily by higher revenue associated with our loyalty program. During 2022 and 2021, cash payments from co-branded credit card and other partners were \$4.5 billion and \$3.4 billion, respectively.

Total operating revenues in 2022 increased \$19.1 billion, or 63.9%, from 2021 and our TRASM increased 35.1% to 18.82 cents in 2022 from 13.93 cents in 2021, driven principally by the increase in passenger revenue as described above.

Operating Expenses

	Year Ended December 31,		Increase (Decrease)	Percent Increase (Decrease)
	2022	2021		
	(In millions, except percentage changes)			
Aircraft fuel and related taxes	\$ 13,791	\$ 6,792	\$ 6,999	nm
Salaries, wages and benefits	12,972	11,817	1,155	9.8
Regional expenses	4,385	3,204	1,181	36.9
Maintenance, materials and repairs	2,684	1,979	705	35.6
Other rent and landing fees	2,730	2,619	111	4.2
Aircraft rent	1,395	1,425	(30)	(2.1)
Selling expenses	1,815	1,098	717	65.3
Depreciation and amortization	1,977	2,019	(42)	(2.1)
Mainline operating special items, net	193	(4,006)	4,199	nm
Other	5,422	3,994	1,428	35.8
Total operating expenses	<u>\$ 47,364</u>	<u>\$ 30,941</u>	<u>\$ 16,423</u>	53.1

Total operating expenses increased \$16.4 billion, or 53.1%, in 2022 from 2021 driven by higher aircraft fuel and related taxes and other expenses as a result of an increase in the average price per gallon of aircraft fuel and increased capacity. In 2021, total operating expenses also included \$4.5 billion of net operating special credits principally related to PSP Financial Assistance. See further discussion of operating special items, net below.

Table of Contents

Aircraft fuel and related taxes increased \$7.0 billion in 2022 from 2021 primarily driven by a 73.0% increase in the average price per gallon of aircraft fuel including related taxes to \$3.54 in 2022 from \$2.04 in 2021 and a 17.4% increase in gallons of fuel consumed due to increased capacity.

Salaries, wages and benefits increased \$1.2 billion, or 9.8%, in 2022 from 2021 primarily due to an increase in average mainline full-time equivalent employees in 2022 as compared to 2021.

Regional expenses increased \$1.2 billion, or 36.9%, in 2022 from 2021 primarily due to pay rate increases and retention bonuses offered at our wholly-owned regional carriers, as well as contractual rate increases with our third-party regional carriers. The 2021 period also included the recognition of \$539 million of PSP Financial Assistance as a regional operating special credit. See further discussion of operating special items, net below.

Maintenance, materials and repairs increased \$705 million, or 35.6%, in 2022 from 2021 primarily due to increased capacity and an increase in the volume of engine overhauls where expense is incurred as maintenance is performed.

Selling expenses increased \$717 million, or 65.3%, in 2022 from 2021 primarily due to higher credit card fees and commission expense driven by the overall increase in passenger revenues.

Other operating expenses increased \$1.4 billion, or 35.8%, in 2022 from 2021 primarily as a result of increased aircraft food and catering, crew travel, passenger accommodation and ground and cargo handling expenses driven by the increase in flight operations as well as certain general and administrative expenses.

Operating Special Items, Net

	Year Ended December 31,	
	2022	2021
	(In millions)	
Fleet impairment ⁽¹⁾	\$ 149	\$ —
Litigation reserve adjustments	37	(19)
PSP Financial Assistance ⁽²⁾	—	(4,162)
Severance expenses ⁽³⁾	—	168
Mark-to-market adjustments on bankruptcy obligations, net	—	(3)
Other operating special items, net	7	10
Mainline operating special items, net	193	(4,006)
 PSP Financial Assistance ⁽²⁾	—	(539)
Regional pilot retention program ⁽⁴⁾	—	61
Fleet impairment ⁽¹⁾	—	27
Severance expenses ⁽³⁾	—	2
Other operating special items, net	5	—
Regional operating special items, net	5	(449)
Operating special items, net	\$ 198	\$ (4,455)

⁽¹⁾ Fleet impairment for 2022 included a non-cash impairment charge to write down the carrying value of our retired Airbus A330 fleet to the estimated fair value due to the market conditions for certain used aircraft. We retired our Airbus A330 fleet in 2020 as a result of the decline in demand for air travel due to the COVID-19 pandemic.

Fleet impairment for 2021 included a non-cash impairment charge to write down regional aircraft resulting from the retirement of the remaining Embraer 140 fleet earlier than planned.

⁽²⁾ The PSP Financial Assistance represents recognition of a portion of the financial assistance received from Treasury pursuant to the payroll support programs established by the U.S. Government. See Note 1(b) to AAG's Consolidated Financial Statements in Part II, Item 8A for further information.

⁽³⁾ Severance expenses include salary and medical costs primarily associated with certain team members who opted into voluntary early retirement programs offered as a result of reductions to our operation due to the COVID-19 pandemic.

Table of Contents

- ⁽⁴⁾ Our regional pilot retention program provides for, among other things, a cash retention bonus paid in the fourth quarter of 2021 to eligible captains at our wholly-owned regional carriers included on the pilot seniority list as of September 1, 2021.

Nonoperating Results

	Year Ended December 31,		Increase (Decrease)	Percent Increase (Decrease)
	2022	2021		
	(In millions, except percentage changes)			
Interest income	\$ 216	\$ 18	\$ 198	nm
Interest expense, net	(1,962)	(1,800)	(162)	9.0
Other income, net	325	293	32	10.9
Total nonoperating expense, net	\$ (1,421)	\$ (1,489)	\$ 68	(4.6)

Interest income increased in 2022 compared to 2021 primarily as a result of higher returns on our short-term investments. Interest expense, net increased in 2022 compared to 2021 primarily due to the impact of the AAdvantage Financing issued at the end of the first quarter of 2021 and higher interest expense on our variable-rate debt instruments as a result of increased interest rates, offset in part by debt repayments.

In 2022, other nonoperating income, net primarily included \$424 million of non-service related pension and other postretirement benefit plan income, offset in part by \$74 million of net special charges principally for mark-to-market net unrealized losses associated with certain equity investments.

In 2021, other nonoperating income, net included \$337 million of non-service related pension and other postretirement benefit plan income, offset in part by \$60 million of net special charges principally for mark-to-market net unrealized losses associated with certain equity investments and non-cash charges associated with debt refinancings and extinguishments.

Income Taxes

In 2022, we recorded an income tax provision of \$59 million with an effective rate of approximately 32%, which was substantially non-cash. Substantially all of our income before income taxes is attributable to the United States. At December 31, 2022, we had approximately \$16.2 billion of gross federal NOLs and \$4.3 billion of other carryforwards available to reduce future federal taxable income, of which \$5.9 billion will expire beginning in 2024 if unused and \$14.6 billion can be carried forward indefinitely. We also had approximately \$6.0 billion of NOL carryforwards to reduce future state taxable income at December 31, 2022, which will expire in taxable years 2022 through 2042 if unused.

In 2021, we recorded an income tax benefit of \$555 million at an effective rate of approximately 22%, which was substantially non-cash.

See Note 6 to AAG's Consolidated Financial Statements in Part II, Item 8A for additional information on income taxes.

American's Results of Operations

For a comparison of the 2021 to 2020 reporting periods, see Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – "American's Results of Operations" of American's 2021 Form 10-K.

Operating Revenues

	Year Ended December 31,		Increase (Decrease)	Percent Increase (Decrease)
	2022	2021		
	(In millions, except percentage changes)			
Passenger	\$ 44,568	\$ 26,063	\$ 18,505	71.0
Cargo	1,233	1,314	(81)	(6.2)
Other	3,164	2,503	661	26.4
Total operating revenues	\$ 48,965	\$ 29,880	\$ 19,085	63.9

[Table of Contents](#)

Passenger revenue increased \$18.5 billion, or 71.0%, in 2022 from 2021 primarily due to an increase in RPMs, driven by the continued strength in demand for air travel domestically and in the Atlantic and Latin America regions, resulting in an increase in passenger load factor in 2022, and an increase in passenger yield.

Cargo revenue decreased \$81 million, or 6.2%, in 2022 from 2021 primarily due to a decrease in cargo ton miles driven by the discontinuation of American's cargo-only flying and lower demand.

Other operating revenue increased \$661 million, or 26.4%, in 2022 from 2021 driven primarily by higher revenue associated with American's loyalty program. During 2022 and 2021, cash payments from co-branded credit card and other partners were \$4.5 billion and \$3.4 billion, respectively.

Total operating revenues in 2022 increased \$19.1 billion, or 63.9%, from 2021 driven principally by the increase in passenger revenue as described above.

Operating Expenses

	Year Ended December 31,		Increase (Decrease)	Percent Increase (Decrease)
	2022	2021		
(In millions, except percentage changes)				
Aircraft fuel and related taxes	\$ 13,791	\$ 6,792	\$ 6,999	nm
Salaries, wages and benefits	12,965	11,811	1,154	9.8
Regional expenses	4,345	3,111	1,234	39.7
Maintenance, materials and repairs	2,684	1,979	705	35.6
Other rent and landing fees	2,730	2,619	111	4.2
Aircraft rent	1,395	1,425	(30)	(2.1)
Selling expenses	1,815	1,098	717	65.3
Depreciation and amortization	1,969	2,019	(50)	(2.4)
Mainline operating special items, net	193	(4,006)	4,199	nm
Other	5,425	3,993	1,432	35.8
Total operating expenses	\$ 47,312	\$ 30,841	\$ 16,471	53.4

Total operating expenses increased \$16.5 billion, or 53.4%, in 2022 from 2021 driven by higher aircraft fuel and related taxes and other expenses as a result of an increase in the average price per gallon of aircraft fuel and increased capacity. In 2021, total operating expenses also included \$4.5 billion of net operating special credits principally related to PSP Financial Assistance. See further discussion of operating special items, net below.

Aircraft fuel and related taxes increased \$7.0 billion in 2022 from 2021 primarily driven by a 73.0% increase in the average price per gallon of aircraft fuel including related taxes to \$3.54 in 2022 from \$2.04 in 2021 and a 17.4% increase in gallons of fuel consumed due to increased capacity.

Salaries, wages and benefits increased \$1.2 billion, or 9.8%, in 2022 from 2021 primarily due to an increase in average mainline full-time equivalent employees in 2022 as compared to 2021.

Regional expenses increased \$1.2 billion, or 39.7%, in 2022 from 2021 primarily due to contractual rate increases with American's third-party regional carriers. The 2021 period also included the recognition of \$539 million of PSP Financial Assistance as a regional operating special credit. See further discussion of operating special items, net below.

Maintenance, materials and repairs increased \$705 million, or 35.6%, in 2022 from 2021 primarily due to increased capacity and an increase in the volume of engine overhauls where expense is incurred as maintenance is performed.

Selling expenses increased \$717 million, or 65.3%, in 2022 from 2021 primarily due to higher credit card fees and commission expense driven by the overall increase in passenger revenues.

Other operating expenses increased \$1.4 billion, or 35.8%, in 2022 from 2021 primarily as a result of increased aircraft food and catering, crew travel, passenger accommodation and ground and cargo handling expenses driven by the increase in flight operations as well as certain general and administrative expenses.

Table of Contents

Operating Special Items, Net

	Year Ended December 31,	
	2022	2021
	(In millions)	
Fleet impairment ⁽¹⁾	\$ 149	\$ —
Litigation reserve adjustments	37	(19)
PSP Financial Assistance ⁽²⁾	—	(4,162)
Severance expenses ⁽³⁾	—	168
Mark-to-market adjustments on bankruptcy obligations, net	—	(3)
Other operating special items, net	7	10
Mainline operating special items, net	<u>193</u>	<u>(4,006)</u>
PSP Financial Assistance ⁽²⁾	—	(539)
Fleet impairment ⁽¹⁾	—	27
Regional operating special items, net	<u>—</u>	<u>(512)</u>
Operating special items, net	<u>\$ 193</u>	<u>\$ (4,518)</u>

⁽¹⁾ Fleet impairment for 2022 included a non-cash impairment charge to write down the carrying value of American's retired Airbus A330 fleet to the estimated fair value due to the market conditions for certain used aircraft. American retired its Airbus A330 fleet in 2020 as a result of the decline in demand for air travel due to the COVID-19 pandemic.

Fleet impairment for 2021 included a non-cash impairment charge to write down regional aircraft resulting from the retirement of the remaining Embraer 140 fleet earlier than planned.

⁽²⁾ The PSP Financial Assistance represents recognition of a portion of the financial assistance received from Treasury pursuant to the payroll support programs established by the U.S. Government. See Note 1(b) to American's Consolidated Financial Statements in Part II, Item 8B for further information.

⁽³⁾ Severance expenses include salary and medical costs primarily associated with certain team members who opted into voluntary early retirement programs offered as a result of reductions to American's operation due to the COVID-19 pandemic.

Nonoperating Results

	Year Ended December 31,		Increase (Decrease)	Percent Increase (Decrease)
	2022	2021		
	(In millions, except percentage changes)			
Interest income	\$ 349	\$ 34	\$ 315	nm
Interest expense, net	(1,872)	(1,642)	(230)	14.0
Other income, net	324	292	32	11.3
Total nonoperating expense, net	<u>\$ (1,199)</u>	<u>\$ (1,316)</u>	<u>\$ 117</u>	<u>(8.9)</u>

Interest income increased in 2022 compared to 2021 primarily as a result of higher returns on American's short-term investments and related party receivables from AAG. Interest expense, net increased in 2022 compared to 2021 primarily due to the impact of the AAdvantage Financing issued at the end of the first quarter of 2021 and higher interest expense on American's variable-rate debt instruments as a result of increased interest rates, offset in part by debt repayments.

In 2022, other nonoperating income, net primarily included \$423 million of non-service related pension and other postretirement benefit plan income, offset in part by \$72 million of net special charges principally for mark-to-market net unrealized losses associated with certain equity investments.

In 2021, other nonoperating income, net included \$335 million of non-service related pension and other postretirement benefit plan income, offset in part by \$60 million of net special charges principally for mark-to-market net unrealized losses associated with certain equity investments and non-cash charges associated with debt refinancings and extinguishments.

[Table of Contents](#)

Income Taxes

American is a member of AAG's consolidated federal and certain state income tax returns.

In 2022, American recorded an income tax provision of \$116 million with an effective rate of approximately 26%, which was substantially non-cash. Substantially all of American's income before income taxes is attributable to the United States. At December 31, 2022, American had approximately \$16.1 billion of gross federal NOLs and \$3.5 billion of other carryforwards available to reduce future federal taxable income, of which \$6.2 billion will expire beginning in 2024 if unused and \$13.4 billion can be carried forward indefinitely. American also had approximately \$5.9 billion of NOL carryforwards to reduce future state taxable income at December 31, 2022, which will expire in taxable years 2022 through 2042 if unused.

In 2021, American recorded an income tax benefit of \$500 million at an effective rate of approximately 22%, which was substantially non-cash.

See Note 5 to American's Consolidated Financial Statements in Part II, Item 8B for additional information on income taxes.

Liquidity and Capital Resources

Liquidity

At December 31, 2022, AAG had \$12.0 billion in total available liquidity and \$995 million in restricted cash and short-term investments. Additional detail regarding our available liquidity is provided in the table below (in millions):

	AAG		American	
	December 31,		December 31,	
	2022	2021	2022	2021
Cash	\$ 440	\$ 273	\$ 429	\$ 265
Short-term investments	8,525	12,158	8,523	12,155
Undrawn facilities	3,033	3,411	3,033	3,411
Total available liquidity	\$ 11,998	\$ 15,842	\$ 11,985	\$ 15,831

In the ordinary course of our business, we or our affiliates may, at any time and from time to time, seek to prepay, retire or repurchase our outstanding debt through cash purchases and/or exchanges for equity or debt, in open-market purchases, privately negotiated transactions or otherwise. Such repurchases, prepayments, retirements or exchanges, if any, will be conducted on such terms and at such prices as we may determine, and will depend on prevailing market conditions, our liquidity requirements, legal and contractual restrictions and other factors. The amounts involved may be material. For further information regarding our debt repurchases for the year ended 2022, see Note 4 to AAG's Condensed Consolidated Financial Statements in Part II, Item 8A.

Certain Covenants

Our debt agreements contain customary terms and conditions as well as various affirmative, negative and financial covenants that, among other things, may restrict the ability of us and our subsidiaries to incur additional indebtedness, pay dividends or repurchase stock. Our debt agreements also contain customary change of control provisions, which may require us to repay or redeem such indebtedness upon certain events constituting a change of control under the relevant agreement, in certain cases at a premium. Certain of our debt financing agreements (including our secured notes, term loans, revolving credit facilities and spare engine EETCs) contain loan to value (LTV), collateral coverage or peak debt service coverage ratio covenants and certain agreements require us to appraise the related collateral annually or semiannually. Pursuant to such agreements, if the applicable LTV, collateral coverage or peak debt service coverage ratio exceeds or falls below a specified threshold, as the case may be, we will be required, as applicable, to pledge additional qualifying collateral (which in some cases may include cash or investment securities), withhold additional cash in certain accounts, or pay down such financing, in whole or in part, or the interest rate for the relevant financing will be increased. As of the most recent applicable measurement dates, we were in compliance with each of the foregoing LTV, collateral coverage and peak debt service coverage tests. Additionally, a significant portion of our debt financing agreements contain covenants requiring us to maintain an aggregate of at least \$2.0 billion of unrestricted cash and cash equivalents and amounts available to be drawn under revolving credit facilities, and our AAdvantage Financing contains a peak debt service coverage ratio, pursuant to which failure to comply with a certain threshold may result in early repayment, in whole or in part, of the AAdvantage Financing. For further information regarding our debt covenants, see Note 4 to AAG's

Table of Contents

Consolidated Financial Statements in Part II, Item 8A and Note 3 to American's Consolidated Financial Statements in Part II, Item 8B.

Sources and Uses of Cash

For a comparison of the 2021 and 2020 reporting periods, see Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – "Sources and Uses of Cash" of our 2021 Form 10-K.

AAG

Operating Activities

Our net cash provided by operating activities was \$2.2 billion and \$704 million in 2022 and 2021, respectively, a \$1.5 billion year-over-year increase. In 2021, we received cash proceeds of approximately \$4.7 billion associated with the PSP Financial Assistance. Excluding the PSP Financial Assistance, our operating cash flows increased \$6.2 billion compared to 2021 primarily due to a return to profitability.

Investing Activities

Our net cash provided by investing activities was \$636 million in 2022 as compared to net cash used in investing activities of \$6.0 billion in 2021.

Our principal investing activities in 2022 included \$3.7 billion in net sales of short-term investments. These cash inflows were offset in part by \$2.5 billion of capital expenditures, which primarily related to the purchase of 24 Airbus A321neo aircraft and 12 spare engines, and \$321 million of equity investments, principally related to GOL. Additionally, we incurred \$360 million related to airport construction projects, net of reimbursements, principally in connection with the renovation and expansion of Terminal 8 at JFK and the modernization of Terminals 4 and 5 at LAX.

Our principal investing activities in 2021 included \$5.5 billion in net purchases of short-term investments as well as a \$401 million increase in restricted short-term investments primarily related to collateral associated with the AAdvantage Financing and collateral held to support workers' compensation obligations. We had capital expenditures of \$208 million, net of aircraft purchase deposit returns of \$996 million, which expenditures principally related to the harmonization of interior configurations across the mainline fleet and the purchase of two Airbus A321neo aircraft. Additionally, we incurred \$204 million related to airport construction projects, net of reimbursements, principally in connection with the renovation and expansion of Terminal 8 at JFK and the modernization of Terminals 4 and 5 at LAX. These cash outflows were offset in part by \$193 million of proceeds from the sale of property and equipment principally related to the disposition of retired aircraft and \$181 million of proceeds primarily from aircraft sale-leaseback transactions.

Financing Activities

Our net cash used in financing activities was \$2.6 billion in 2022 as compared to net cash provided by financing activities of \$5.3 billion in 2021.

Our principal financing activities in 2022 included \$3.8 billion in repayments of debt and finance lease obligations, consisting of \$2.2 billion of scheduled debt repayments including the repayment of \$401 million in connection with the maturity of our 5.000% unsecured notes, the \$1.2 billion prepayment of the December 2016 Term Loan Facility and the repurchase of \$349 million of unsecured notes in the open market. These cash outflows were offset in part by \$1.1 billion of long-term debt proceeds, consisting of \$866 million from the issuance of equipment notes related to the 2021-1 Aircraft EETCs and \$205 million in connection with the financing of certain aircraft.

Our principal financing activities in 2021 included \$12.2 billion in proceeds from the issuance of debt, including approximately \$10.0 billion associated with the AAdvantage Financing, \$1.0 billion in aggregate principal amount under the PSP2 Promissory Note, \$946 million in aggregate principal amount under the PSP3 Promissory Note and the \$150 million issuance of special facility revenue bonds related to JFK. We also received \$460 million in net proceeds from the issuance of equity pursuant to an at-the-market offering. These cash inflows were offset in part by \$7.3 billion in debt repayments, including prepayments totaling \$2.8 billion for our revolving credit facilities, \$950 million for the April 2016 Spare Parts Term Loan Facility and \$550 million of outstanding loans under the Treasury Loan Agreement as well as \$2.9 billion in scheduled debt repayments. In addition, we had \$209 million of deferred financing cost cash outflows.

Table of Contents

American

Operating Activities

American's net cash provided by operating activities was \$1.3 billion and \$3.2 billion in 2022 and 2021, respectively, a \$1.9 billion year-over-year decrease. American had a \$2.9 billion net decrease year-over-year in intercompany cash receipts principally from AAG's financing transactions. Additionally, in 2021, American received cash proceeds of approximately \$4.2 billion associated with the PSP Financial Assistance. Excluding the PSP Financial Assistance and the net decrease in AAG's financing transactions, American's operating cash flows increased \$5.2 billion compared to 2021 primarily due to a return to profitability.

Investing Activities

American's net cash provided by investing activities was \$693 million in 2022 as compared to net cash used in investing activities of \$5.9 billion in 2021.

American's principal investing activities in 2022 included \$3.7 billion in net sales of short-term investments. These cash inflows were offset in part by \$2.5 billion of capital expenditures, which primarily related to the purchase of 24 Airbus A321neo aircraft and 12 spare engines, and \$321 million of equity investments, principally related to GOL. Additionally, American incurred \$360 million related to airport construction projects, net of reimbursements, principally in connection with the renovation and expansion of Terminal 8 at JFK and the modernization of Terminals 4 and 5 at LAX.

American's principal investing activities in 2021 included \$5.5 billion in net purchases of short-term investments as well as a \$401 million increase in restricted short-term investments primarily related to collateral associated with the AAdvantage Financing and collateral held to support workers' compensation obligations. American had capital expenditures of \$169 million, net of aircraft purchase deposit returns of \$996 million, which expenditures principally related to the harmonization of interior configurations across the mainline fleet and the purchase of two Airbus A321neo aircraft. Additionally, American incurred \$204 million related to airport construction projects, net of reimbursements, principally in connection with the renovation and expansion of Terminal 8 at JFK and the modernization of Terminals 4 and 5 at LAX. These cash outflows were offset in part by \$192 million of proceeds from the sale of property and equipment principally related to American's disposition of retired aircraft and \$181 million of proceeds primarily from aircraft sale-leaseback transactions.

Financing Activities

American's net cash used in financing activities was \$1.8 billion in 2022 as compared to net cash provided by financing activities of \$2.8 billion in 2021.

American's principal financing activities in 2022 included \$3.0 billion in repayments of debt and finance lease obligations, consisting of \$1.8 billion of scheduled debt repayments and the \$1.2 billion prepayment of the December 2016 Term Loan Facility. These cash outflows were offset in part by \$1.1 billion of long-term debt proceeds, consisting of \$866 million from the issuance of equipment notes related to the 2021-1 Aircraft EETCs and \$205 million in connection with the financing of certain aircraft.

American's principal financing activities in 2021 included \$10.2 billion in proceeds from the issuance of debt, including approximately \$10.0 billion associated with the AAdvantage Financing and the \$150 million issuance of special facility revenue bonds related to JFK. These cash inflows were offset in part by \$7.3 billion in debt repayments, including prepayments totaling \$2.8 billion for American's revolving credit facilities, \$950 million for the April 2016 Spare Parts Term Loan Facility and \$550 million of outstanding loans under the Treasury Loan Agreement and \$2.9 billion in scheduled debt repayments. In addition, American had \$207 million of deferred financing cost cash outflows.

Table of Contents

Commitments

For further information regarding our commitments, see the Notes to AAG's Consolidated Financial Statements in Part II, Item 8A and the Notes to American's Consolidated Financial Statements in Part II, Item 8B at the referenced footnotes below.

	AAG	American
Debt	Note 4	Note 3
Leases	Note 5	Note 4
Employee Benefit Plans	Note 9	Note 8
Commitments, Contingencies and Guarantees	Note 11	Note 10

Off-Balance Sheet Arrangements

An off-balance sheet arrangement is any transaction, agreement or other contractual arrangement involving an unconsolidated entity under which a company has (1) made guarantees, (2) a retained or a contingent interest in transferred assets, (3) an obligation under derivative instruments classified as equity or (4) any obligation arising out of a material variable interest in an unconsolidated entity that provides financing, liquidity, market risk or credit risk support to us, or that engages in leasing, hedging or research and development arrangements with us.

We have no off-balance sheet arrangements of the types described in the first three categories above that we believe may have a material current or future effect on financial condition, liquidity or results of operations.

Pass-Through Trusts

American currently has 352 owned aircraft and 60 owned spare aircraft engines, which in each case were financed with EETCs issued by pass-through trusts. These trusts are off-balance sheet entities, the primary purpose of which is to finance the acquisition of flight equipment or to permit issuance of debt backed by existing flight equipment. In the case of aircraft EETCs, rather than finance each aircraft separately when such aircraft is purchased, delivered or refinanced, these trusts allow American to raise the financing for a number of aircraft at one time and, if applicable, place such funds in escrow pending a future purchase, delivery or refinancing of the relevant aircraft. Similarly, in the case of the spare engine EETCs, the trusts allow American to use its existing pool of spare engines to raise financing under a single facility. The trusts have also been structured to provide for certain credit enhancements, such as liquidity facilities to cover certain interest payments, that reduce the risks to the purchasers of the trust certificates and, as a result, reduce the cost of aircraft financing to American.

Each trust covers a set number of aircraft or spare engines scheduled to be delivered, financed or refinanced upon the issuance of the EETC or within a specific period of time thereafter. At the time of each covered aircraft or spare engine financing, the relevant trust used the proceeds of the issuance of the EETC (which may have been available at the time of issuance thereof or held in escrow until financing of the applicable aircraft following its delivery) to purchase equipment notes relating to the financed aircraft or engines. The equipment notes are issued, at American's election, in connection with a mortgage financing of the aircraft or spare engines. The equipment notes are secured by a security interest in the aircraft or engines, as applicable. The pass-through trust certificates are not direct obligations of, nor are they guaranteed by, AAG or American. However, the equipment notes issued to the trusts are direct obligations of American and, in certain instances, have been guaranteed by AAG. As of December 31, 2022, \$9.2 billion associated with these mortgage financings is reflected as debt in the accompanying consolidated balance sheet.

Letters of Credit and Other

We provide financial assurance, such as letters of credit and surety bonds, primarily to support airport commitments. As of December 31, 2022, we had \$218 million of letters of credit and surety bonds securing various obligations, of which \$100 million is collateralized with our restricted cash. The letters of credit and surety bonds that are subject to expiration will expire on various dates through 2026.

Table of Contents

Contractual Obligations

The following table provides details of our estimated material cash requirements from contractual obligations as of December 31, 2022 (in millions). The table does not include commitments that are contingent on events or other factors that are uncertain or unknown at this time and is subject to other conventions as set forth in the applicable accompanying footnotes.

	Payments Due by Period							2028 and Thereafter	Total		
	2023	2024	2025	2026	2027	2028 and Thereafter					
American ^(a)											
Long-term debt:											
Principal amount ^{(b), (d)} (See Note 3)	\$ 3,059	\$ 3,535	\$ 7,817	\$ 4,480	\$ 4,515	\$ 6,637	\$ 30,043				
Interest obligations ^{(c), (d)}	1,900	1,649	1,317	710	427	524	6,527				
Finance lease obligations (See Note 4)	257	204	141	115	69	87	873				
Aircraft and engine purchase commitments ^(e) (See Note 10(a))	1,485	2,678	3,896	3,214	988	65	12,326				
Operating lease commitments (See Note 4)	1,964	1,718	1,418	1,151	964	4,529	11,744				
Regional capacity purchase agreements ^(f) (See Note 10(b))	1,791	1,950	1,866	1,298	944	1,399	9,248				
Minimum pension obligations ^(g) (See Note 8)	67	301	328	385	305	603	1,989				
Retiree medical and other postretirement benefits (See Note 8)	87	85	81	82	81	350	766				
Other purchase obligations ^(h) (See Note 10(a))	5,678	3,041	1,668	231	126	941	11,685				
Total American Contractual Obligations	\$ 16,288	\$ 15,161	\$ 18,532	\$ 11,666	\$ 8,419	\$ 15,135	\$ 85,201				
AAG Parent and Other AAG Subsidiaries ^(a)											
Long-term debt:											
Principal amount ^(b) (See Note 4)	\$ —	\$ —	\$ 1,500	\$ —	\$ —	\$ 3,746	\$ 5,246				
Interest obligations ^(c)	121	121	144	155	189	575	1,305				
Finance lease obligations (See Note 5)	8	10	—	—	—	—	18				
Operating lease commitments (See Note 5)	22	14	11	9	4	29	89				
Minimum pension obligations ^(g) (See Note 9)	2	2	2	2	2	8	18				
Total AAG Contractual Obligations	<u>\$ 16,441</u>	<u>\$ 15,308</u>	<u>\$ 20,189</u>	<u>\$ 11,832</u>	<u>\$ 8,614</u>	<u>\$ 19,493</u>	<u>\$ 91,877</u>				

^(a) For additional information, see the Notes to AAG's and American's Consolidated Financial Statements in Part II, Items 8A and 8B, respectively, referenced in the table above.

^(b) Amounts represent contractual amounts due. Excludes \$364 million and \$22 million of unamortized debt discount, premium and issuance costs as of December 31, 2022 for American and AAG Parent, respectively.

^(c) For variable-rate debt, future interest obligations are estimated using the current forward rates at December 31, 2022.

^(d) Includes \$9.2 billion of future principal payments and \$1.4 billion of future interest payments as of December 31, 2022, related to EETCs associated with mortgage financings of certain aircraft and spare engines.

Table of Contents

- (e) See Part I, Item 2. Properties – “*Aircraft and Engine Purchase Commitments*” for additional information about the firm commitment aircraft delivery schedule, in particular the footnote to the table thereunder as to potential changes to such delivery schedule. Due to uncertainty surrounding the timing of delivery of certain aircraft, the amounts in the table represent our most current estimate based on contractual delivery schedules adjusted for updates and revisions to such schedules communicated to management by the applicable equipment manufacturer. However, the actual delivery schedule may differ, potentially materially, based on various potential factors including production delays by the manufacturer and regulatory concerns. Additionally, the amounts in the table exclude four Boeing 787-8 aircraft scheduled to be delivered in 2023 and five Boeing 787-9 aircraft scheduled to be delivered in 2024, for which we have obtained committed lease financing. This financing is reflected in the operating lease commitments line above.
- (f) Represents minimum payments under capacity purchase agreements with third-party regional carriers. These commitments are estimates of costs based on assumed minimum levels of flying under the capacity purchase agreements and American’s actual payments could differ materially. Rental payments under operating leases for certain aircraft flown under these capacity purchase agreements are reflected in the operating lease commitments line above.
- (g) Represents minimum pension contributions based on actuarially determined estimates as of December 31, 2022 and is based on estimated payments through 2032. In January 2023, we made \$67 million of required pension contributions.
- (h) Includes purchase commitments for aircraft fuel, flight equipment maintenance, information technology support and construction projects and excludes obligations under certain fuel offtake agreements or other agreements for which the timing of the related expenditure is uncertain, or which are subject to material contingencies, such as the construction of a production facility.

Capital Raising Activity and Other Possible Actions

In light of our significant financial commitments related to, among other things, the servicing and amortization of existing debt and equipment leasing arrangements and new flight equipment, we and our subsidiaries will regularly consider, and enter into negotiations related to, capital raising and liability management activity, which may include the entry into leasing transactions and future issuances of, and transactions designed to manage the timing and amount of, secured or unsecured debt obligations or additional equity or equity-linked securities in public or private offerings or otherwise. The cash available from operations (if any) and these sources, however, may not be sufficient to cover our cash obligations because economic factors may reduce the amount of cash generated by operations or increase costs. For instance, an economic downturn or general global instability caused by military actions, terrorism, disease outbreaks (such as occurred during the COVID-19 pandemic), natural disasters or other causes could reduce the demand for air travel, which would reduce the amount of cash generated by operations. See Part I, Item 1A. Risk Factors – “*Downturns in economic conditions could adversely affect our business.*” for additional discussion. An increase in costs, either due to an increase in borrowing costs caused by a reduction in credit ratings or a general increase in interest rates, or due to an increase in the cost of fuel, maintenance, aircraft, aircraft engines or parts, could decrease the amount of cash available to cover cash contractual obligations. Moreover, certain of our financing arrangements contain significant minimum cash balance or similar liquidity requirements. As a result, we cannot use all of our available cash to fund operations, capital expenditures and cash obligations without violating these requirements. See Note 4 to AAG’s Consolidated Financial Statements in Part II, Item 8A and Note 3 to American’s Consolidated Financial Statements in Part II, Item 8B for information regarding our financing arrangements.

In the past, we have from time to time refinanced, redeemed or repurchased our debt and taken other steps to reduce or otherwise manage the aggregate amount and cost of our debt, lease and other obligations or otherwise improve our balance sheet. Going forward, depending on market conditions, our cash position and other considerations, we may continue to take such actions.

Table of Contents

OTHER INFORMATION

Basis of Presentation

See Note 1 to each of AAG's and American's Consolidated Financial Statements in Part II, Items 8A and 8B, respectively, for information regarding the basis of presentation.

Critical Accounting Policies and Estimates

The preparation of financial statements in accordance with GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses, and the disclosure of contingent assets and liabilities at the date of the financial statements. We believe our estimates and assumptions are reasonable; however, actual results could differ from those estimates. Critical accounting policies are defined as those that are reflective of significant judgments and uncertainties and could potentially result in materially different results under different assumptions and conditions. We have identified the following critical accounting policies that impact the preparation of our consolidated financial statements. See the "*Basis of Presentation and Summary of Significant Accounting Policies*" included in Note 1 to each of AAG's and American's Consolidated Financial Statements in Part II, Item 8A and 8B, respectively, for additional discussion of the application of these estimates and other accounting policies.

Passenger Revenue

We recognize all revenues generated from transportation on American and our regional flights operated under the brand name American Eagle, including associated baggage fees and other inflight services, as passenger revenue when transportation is provided. Ticket and other related sales for transportation that has not yet been provided are initially deferred and recorded as air traffic liability on our consolidated balance sheets. The air traffic liability principally represents tickets sold for future travel on American and partner airlines.

The majority of tickets sold are nonrefundable. A small percentage of tickets, some of which are partially used tickets, expire unused. The estimate for tickets expected to expire unused is generally based on an analysis of our historical data. We have consistently applied this accounting method to estimate and recognize revenue from unused tickets at the date of travel. This estimate is periodically evaluated based on subsequent activity to validate its accuracy. Any adjustments resulting from periodic evaluations of the estimated air traffic liability are included in passenger revenue during the period in which the evaluations are completed. While the contract duration of passenger tickets is generally one year, in response to the COVID-19 pandemic, we extended the contract duration for certain tickets to September 30, 2022, principally those tickets which were issued in 2020 and 2021. Additionally, we extended the contract duration to December 31, 2022 for tickets to certain international destinations. Tickets issued in 2022 and thereafter are no longer subject to change fees which provides more flexibility for customers to change travel plans. Given this new flexibility offered to our customers, our estimate of revenue that will be recognized from the air traffic liability for future flown or unused tickets may be subject to variability and differ from historical experience.

Loyalty Revenue

We currently operate the loyalty program, AAdvantage. This program awards mileage credits to passengers who fly on American, any oneworld airline or other partner airlines, or by using the services of other program participants, such as our co-branded credit cards, and certain hotels and car rental companies. Mileage credits can be redeemed for travel on American and other participating partner airlines, as well as other non-air travel awards such as hotels and rental cars. For mileage credits earned by AAdvantage loyalty program members, we apply the deferred revenue method.

Mileage credits earned through travel

For mileage credits earned through travel, we apply a relative selling price approach whereby the total amount collected from each passenger ticket sale is allocated between the air transportation and the mileage credits earned. The portion of each passenger ticket sale attributable to mileage credits earned is initially deferred and then recognized in passenger revenue when mileage credits are redeemed and transportation is provided. The estimated selling price of mileage credits is determined using an equivalent ticket value approach, which uses historical data, including award redemption patterns by geographic region and class of service, as well as similar fares as those used to settle award redemptions. The estimated selling price of mileage credits is adjusted for an estimate of mileage credits that will not be redeemed using a statistical model based on historical redemption patterns to develop an estimate of the likelihood of future redemption. For the year ended December 31, 2022, a hypothetical 10% increase in the estimated selling price of mileage credits would have decreased revenues by approximately \$105 million as a result of additional amounts deferred from passenger ticket sales to be recognized in future periods.

Table of Contents

Mileage credits sold to co-branded credit cards and other partners

We sell mileage credits to participating airline partners and non-airline business partners, including our co-branded credit card partners, under contracts with remaining terms generally from one to seven years as of December 31, 2022. Consideration received from the sale of mileage credits is variable and payment terms typically are within 30 days subsequent to the month of mileage sale. Sales of mileage credits to non-airline business partners are comprised of two components, transportation and marketing. We allocate the consideration received from these sales of mileage credits based on the relative selling price of each product or service delivered.

Our most significant mileage credit partner agreements are our co-branded credit card agreements with Citi and Barclaycard US. We identified two revenue elements in these co-branded credit card agreements: the transportation component and the marketing component.

The transportation component represents the estimated selling price of future travel awards and is determined using the same equivalent ticket value approach described above. The portion of each mileage credit sold attributable to transportation is initially deferred and then recognized in passenger revenue when mileage credits are redeemed and transportation is provided.

The marketing component includes the use of intellectual property, including the American brand and access to loyalty program member lists, which is the predominant element in these agreements, as well as advertising. We recognize the marketing component in other revenue in the period of the mileage credit sale following the sales-based royalty method.

For the portion of our outstanding mileage credits that we estimate will not be redeemed, we recognize the associated value proportionally as the remaining mileage credits are redeemed. Our estimates use a statistical model based on historical redemption patterns to develop an estimate of the likelihood of future redemption. For the year ended December 31, 2022, a hypothetical 10% increase in our estimate of mileage credits not expected to be redeemed would have increased revenues by approximately \$100 million.

Pensions and Retiree Medical and Other Postretirement Benefits

We recognize the funded status (i.e., the difference between the fair value of plan assets and the projected benefit obligations) of our pension and retiree medical and other postretirement benefits plans on the consolidated balance sheets with a corresponding adjustment to accumulated other comprehensive income (loss).

Our pension and retiree medical and other postretirement benefits costs and liabilities are calculated using various actuarial assumptions and methodologies. We use certain assumptions including, but not limited to, the selection of the: (1) discount rate and (2) expected return on plan assets (as discussed below). These assumptions as of December 31 were:

	2022	2021
Pension weighted average discount rate ⁽¹⁾	5.6 %	3.0 %
Retiree medical and other postretirement benefits weighted average discount rate ⁽¹⁾	5.7 %	2.8 %
Expected rate of return on plan assets ⁽²⁾	8.0 %	8.0 %

⁽¹⁾ When establishing our discount rate to measure our obligations, we match high quality corporate bonds available in the marketplace whose cash flows approximate our projected benefit disbursements. Lowering the discount rate by 50 basis points as of December 31, 2022 would increase our pension and retiree medical and other postretirement benefits obligations by approximately \$725 million and \$30 million, respectively, and decrease estimated 2023 pension and retiree medical and other postretirement benefits expense by approximately \$5 million and \$1 million, respectively.

⁽²⁾ The expected rate of return on plan assets is based upon an evaluation of our historical trends and experience, taking into account current and expected market conditions and our target asset allocation of 30% fixed income securities, 24% U.S. stocks, 22% private investments, 16% developed international stocks and 8% emerging market stocks. The expected rate of return on plan assets component of our net periodic benefit cost is calculated based on the fair value of plan assets and our target asset allocation. Lowering the expected long-term rate of return on plan assets by 50 basis points as of December 31, 2022 would increase estimated 2023 pension expense and retiree medical and other postretirement benefits expense by approximately \$60 million and \$1 million, respectively.

Table of Contents

Annually, we review and revise certain economic and demographic assumptions including the pension and retiree medical and other postretirement benefits discount rates. The net effect of changing this assumption for the pension plans resulted in a decrease of \$4.6 billion in the projected benefit obligation at December 31, 2022. The net effect of changing this assumption for retiree medical and other postretirement benefits plans resulted in a decrease of \$183 million in the accumulated postretirement benefit obligation at December 31, 2022.

See Note 9 to AAG's Consolidated Financial Statements in Part II, Item 8A and Note 8 to American's Consolidated Financial Statements in Part II, Item 8B for additional information regarding our employee benefit plans.

Income Taxes

Our ability to use our NOLs and other carryforwards depends on the amount of taxable income generated in future periods. We provide a valuation allowance for our deferred tax assets when it is more likely than not that some portion, or all of our deferred tax assets, will not be realized. We consider all available positive and negative evidence and make certain assumptions in evaluating the realizability of our deferred tax assets. Many factors are considered that impact our assessment of future profitability, including conditions which are beyond our control, such as the health of the economy, the availability and price volatility of aircraft fuel and travel demand. We have determined that positive factors outweigh negative factors in the determination of the realizability of our deferred tax assets. There can be no assurance that an additional valuation allowance on our net deferred tax assets will not be required. Such valuation allowance could be material.

Recent Accounting Pronouncements

Accounting Standards Update (ASU) 2020-04: Reference Rate Reform (Topic 848) Facilitation of the Effects of Reference Rate Reform on Financial Reporting and ASU 2022-06: Deferral of the Sunset Date of Topic 848

ASU 2020-04 provides optional temporary guidance for applying GAAP to contracts, hedging relationships, and other transactions that reference the London Interbank Offered Rate (LIBOR) or another reference rate expected to be discontinued because of reference rate reform. Topic 848 is effective as of March 12, 2020 through December 31, 2022; however, because the intended cessation date of LIBOR was deferred to June 30, 2023, ASU 2022-06 was issued in December 2022 to extend the current relief in Topic 848 through December 31, 2024. We will adopt Topic 848 when our relevant contracts are modified upon transition to alternative reference rates and we do not expect the application of Topic 848 to have a material impact on our consolidated financial statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The risk inherent in our market risk sensitive instruments and positions is the potential loss arising from adverse changes in the price of fuel, foreign currency exchange rates and interest rates as discussed below. The sensitivity analyses presented do not consider the effects that such adverse changes may have on overall economic activity, nor do they consider additional actions we may take to mitigate our exposure to such changes. Therefore, actual results may differ.

Aircraft Fuel

Our operating results are materially impacted by changes in the availability, price volatility and cost of aircraft fuel, which represents one of the largest single cost items in our business. Because of the amount of fuel needed to operate our business, even a relatively small increase or decrease in the price of aircraft fuel can have a material effect on our operating results and liquidity. Market prices for aircraft fuel have fluctuated substantially over the past several years and prices continue to be highly volatile, with market spot prices ranging from a low of approximately \$0.37 per gallon to a high of approximately \$4.40 per gallon during the period from January 1, 2020 to December 31, 2022.

As of December 31, 2022, we did not have any fuel hedging contracts outstanding to hedge our fuel consumption. Our current policy is not to enter into transactions to hedge our fuel consumption, although we review that policy from time to time based on market conditions and other factors. As such, and assuming we do not enter into any future transactions to hedge our fuel consumption, we will continue to be fully exposed to fluctuations in fuel prices. Based on our 2023 forecasted fuel consumption, we estimate that a one cent per gallon increase in the price of aircraft fuel would increase our 2023 annual fuel expense by approximately \$40 million.

[Table of Contents](#)

Foreign Currency

We are exposed to the effect of foreign exchange rate fluctuations on the U.S. dollar value of foreign currency-denominated transactions. Our largest exposure comes from the Euro, British pound sterling, Canadian dollar and various Latin American currencies (primarily the Brazilian real). We do not currently have a foreign currency hedge program. We estimate a uniform 10% strengthening in the value of the U.S. dollar from 2022 levels relative to each of the currencies in which we have foreign currency exposure would have resulted in a decrease in pre-tax income of approximately \$175 million for the year ended December 31, 2022.

Generally, fluctuations in foreign currencies, including devaluations, cannot be predicted by us and can significantly affect the value of our assets located outside the United States. These conditions, as well as any further delays, devaluations or imposition of more stringent repatriation restrictions, may materially adversely affect our business, results of operations and financial condition. See Part I, Item 1A. Risk Factors – *“We operate a global business with international operations that are subject to economic and political instability and have been, and in the future may continue to be, adversely affected by numerous events, circumstances or government actions beyond our control”* for additional discussion of this and other currency risks.

Interest

Our earnings and cash flow are affected by changes in interest rates due to the impact those changes have on our interest expense from variable-rate debt instruments and our interest income from short-term, interest-bearing investments.

Our largest exposure with respect to variable-rate debt comes from changes in the relevant benchmark rate underlying such debt financings, principally LIBOR and SOFR. We had variable-rate debt instruments representing 27% of our total long-term debt at December 31, 2022. We currently do not have an interest rate hedge program to hedge our exposure to floating interest rates on our variable-rate debt obligations. If annual interest rates increase 100 basis points, based on our December 31, 2022 variable-rate debt and short-term investments balances, annual interest expense on variable-rate debt would increase by approximately \$95 million and annual interest income on short-term investments would increase by approximately \$90 million. Additionally, the fair value of fixed-rate debt would have decreased by approximately \$670 million for AAG and \$480 million for American.

On July 27, 2017, the U.K. Financial Conduct Authority (the authority that regulates LIBOR) announced that it intends to stop compelling banks to submit rates for the calculation of LIBOR after 2021. The discontinuation date for submission and publication of rates for certain tenors of USD LIBOR (1-month, 3-month, 6-month, and 12-month) was subsequently extended by the ICE Benchmark Administration (the administrator of LIBOR) until June 30, 2023. It is not possible to predict what rate or rates may become the predominant alternative to LIBOR, or what effect these changes in views or alternatives may have on financial markets for LIBOR-linked financial instruments. While the U.S. Federal Reserve, in conjunction with the Alternative Reference Rates Committee, has chosen SOFR, and specifically Term SOFR, as the recommended risk-free reference rate for the U.S. (calculated based on repurchase agreements backed by treasury securities), we cannot currently predict the extent to which this index will gain widespread acceptance as a replacement for LIBOR. It is not possible to predict the effect of these changes, other reforms or the establishment of alternative reference rates in the United Kingdom, the United States or elsewhere.

As of December 31, 2022, we had \$9.2 billion of borrowings with interest rates linked to LIBOR. We have commenced the process of amending our LIBOR-based financing agreements to transition them to successor reference rates in anticipation of LIBOR's discontinuation, but we may not be able to reach agreements with all affected lenders, or to do so on favorable terms. Additionally, the replacement of LIBOR with a comparable or successor rate could cause the amount of interest payable on our long-term debt to be different or higher than expected.

Table of Contents

ITEM 8A. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA OF AMERICAN AIRLINES GROUP INC.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
American Airlines Group Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of American Airlines Group Inc. and subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income (loss), cash flows, and stockholders' equity (deficit), for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 22, 2023 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Table of Contents

Sufficiency of audit evidence over realizability of tax operating loss and other carryforwards

As discussed in Notes 1(j) and 6 to the consolidated financial statements, the Company had \$4.7 billion of tax operating loss and other carryforwards, which are recorded as deferred tax assets at December 31, 2022. Deferred tax assets are recognized related to tax operating loss and other carryforwards that will reduce future taxable income. The Company provides a valuation allowance for deferred tax assets when it is more likely than not that some portion, or all of the deferred tax assets, will not be realized. In evaluating the need for a valuation allowance, management considers all available positive and negative evidence.

We identified the evaluation of the sufficiency of audit evidence over the realizability of tax operating loss and other carryforwards as a critical audit matter. Evaluating the sufficiency of audit evidence required subjective auditor judgment in order to assess the extent of procedures performed in assessing the realizability of the tax operating loss and other carryforwards.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's deferred tax asset valuation allowance process, including controls related to the realizability of tax operating loss and other carryforwards. We evaluated positive and negative evidence used in assessing whether the tax operating loss and other carryforwards were more likely than not to be realized in the future. We evaluated the reasonableness of management's projections of future profitability considering historical profitability of the Company, and consistency with industry data. We involved tax professionals with specialized skills and knowledge, who assisted in evaluating the application of tax law. We assessed the sufficiency of audit evidence obtained over the realizability of the tax operating loss and other carryforwards by evaluating the cumulative results of the audit procedures.

/s/ KPMG LLP

We have served as the Company's auditor since 2014.

Dallas, Texas
February 22, 2023

[Table of Contents](#)

AMERICAN AIRLINES GROUP INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In millions, except share and per share amounts)

	Year Ended December 31,		
	2022	2021	2020
Operating revenues:			
Passenger	\$ 44,568	\$ 26,063	\$ 14,518
Cargo	1,233	1,314	769
Other	3,170	2,505	2,050
Total operating revenues	48,971	29,882	17,337
Operating expenses:			
Aircraft fuel and related taxes	13,791	6,792	3,402
Salaries, wages and benefits	12,972	11,817	11,229
Regional expenses	4,385	3,204	2,962
Maintenance, materials and repairs	2,684	1,979	1,585
Other rent and landing fees	2,730	2,619	2,004
Aircraft rent	1,395	1,425	1,341
Selling expenses	1,815	1,098	666
Depreciation and amortization	1,977	2,019	2,040
Special items, net	193	(4,006)	(657)
Other	5,422	3,994	3,186
Total operating expenses	47,364	30,941	27,758
Operating income (loss)	1,607	(1,059)	(10,421)
Nonoperating income (expense):			
Interest income	216	18	41
Interest expense, net	(1,962)	(1,800)	(1,227)
Other income, net	325	293	154
Total nonoperating expense, net	(1,421)	(1,489)	(1,032)
Income (loss) before income taxes	186	(2,548)	(11,453)
Income tax provision (benefit)	59	(555)	(2,568)
Net income (loss)	\$ 127	\$ (1,993)	\$ (8,885)
Earnings (loss) per common share:			
Basic	\$ 0.20	\$ (3.09)	\$ (18.36)
Diluted	\$ 0.19	\$ (3.09)	\$ (18.36)
Weighted average shares outstanding (in thousands):			
Basic	650,345	644,015	483,888
Diluted	655,122	644,015	483,888

See accompanying notes to consolidated financial statements.

[Table of Contents](#)

AMERICAN AIRLINES GROUP INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In millions)

	Year Ended December 31,		
	2022	2021	2020
Net income (loss)	\$ 127	\$ (1,993)	\$ (8,885)
Other comprehensive income (loss), net of tax:			
Pension, retiree medical and other postretirement benefits	1,360	1,161	(772)
Investments	(3)	—	—
Total other comprehensive income (loss), net of tax	1,357	1,161	(772)
Total comprehensive income (loss)	\$ 1,484	\$ (832)	\$ (9,657)

See accompanying notes to consolidated financial statements.

[Table of Contents](#)

AMERICAN AIRLINES GROUP INC.
CONSOLIDATED BALANCE SHEETS
(In millions, except share and par value amounts)

	December 31,	
	2022	2021
ASSETS		
Current assets		
Cash	\$ 440	\$ 273
Short-term investments	8,525	12,158
Restricted cash and short-term investments	995	990
Accounts receivable, net	2,138	1,505
Aircraft fuel, spare parts and supplies, net	2,279	1,795
Prepaid expenses and other	892	615
Total current assets	15,269	17,336
Operating property and equipment		
Flight equipment	39,703	37,856
Ground property and equipment	9,913	9,335
Equipment purchase deposits	613	517
Total property and equipment, at cost	50,229	47,708
Less accumulated depreciation and amortization	(20,029)	(18,171)
Total property and equipment, net	30,200	29,537
Operating lease right-of-use assets		
	8,094	7,850
Other assets		
Goodwill	4,091	4,091
Intangibles, net of accumulated amortization of \$827 and \$786, respectively	2,059	1,988
Deferred tax asset	3,099	3,556
Other assets	1,904	2,109
Total other assets	11,153	11,744
Total assets	\$ 64,716	\$ 66,467
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities		
Current maturities of long-term debt and finance leases	\$ 3,274	\$ 2,489
Accounts payable	2,149	1,772
Accrued salaries and wages	1,713	1,489
Air traffic liability	6,745	6,087
Loyalty program liability	3,169	2,896
Operating lease liabilities	1,465	1,507
Other accrued liabilities	2,981	2,766
Total current liabilities	21,496	19,006
Noncurrent liabilities		
Long-term debt and finance leases, net of current maturities	32,389	35,571
Pension and postretirement benefits	2,837	5,053
Loyalty program liability	5,976	6,239
Operating lease liabilities	6,559	6,610
Other liabilities	1,258	1,328
Total noncurrent liabilities	49,019	54,801
Commitments and contingencies (Note 11)		
Stockholders' equity (deficit)		
Common stock, \$0.01 par value; 1,750,000,000 shares authorized, 650,642,461 shares issued and outstanding at December 31, 2022; 647,727,595 shares issued and outstanding at December 31, 2021	6	6
Additional paid-in capital	7,291	7,234
Accumulated other comprehensive loss	(4,585)	(5,942)
Retained deficit	(8,511)	(8,638)
Total stockholders' deficit	(5,799)	(7,340)
Total liabilities and stockholders' equity (deficit)	\$ 64,716	\$ 66,467

See accompanying notes to consolidated financial statements.

[Table of Contents](#)

AMERICAN AIRLINES GROUP INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net income (loss)	\$ 127	\$ (1,993)	\$ (8,885)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	2,298	2,335	2,370
Special items, net non-cash	229	83	1,599
Pension and postretirement	(405)	(321)	(319)
Deferred income tax provision (benefit)	65	(555)	(2,568)
Share-based compensation	78	98	91
Net gains from sale of property and equipment and sale-leaseback transactions	—	(22)	(95)
Other, net	(37)	38	47
Changes in operating assets and liabilities:			
Decrease (increase) in accounts receivable	(637)	(304)	538
Increase in other assets	(775)	(402)	(38)
Increase (decrease) in accounts payable and accrued liabilities	585	461	(626)
Increase (decrease) in air traffic liability	658	1,454	(51)
Increase (decrease) in loyalty program liability	10	(60)	580
Contributions to pension plans	(5)	(247)	(9)
Increase (decrease) in other liabilities	(18)	139	823
Net cash provided by (used in) operating activities	2,173	704	(6,543)
Cash flows from investing activities:			
Capital expenditures, net of aircraft purchase deposit returns	(2,546)	(208)	(1,958)
Airport construction projects, net of reimbursements	(360)	(204)	(173)
Proceeds from sale-leaseback transactions	86	181	665
Proceeds from sale of property and equipment	61	193	351
Sales of short-term investments	14,972	13,923	2,803
Purchases of short-term investments	(11,257)	(19,454)	(5,873)
Decrease (increase) in restricted short-term investments	1	(401)	(308)
Purchase of equity investments	(321)	(28)	—
Other investing activities	—	15	151
Net cash provided by (used in) investing activities	636	(5,983)	(4,342)
Cash flows from financing activities:			
Payments on long-term debt and finance leases	(3,752)	(7,343)	(3,535)
Proceeds from issuance of long-term debt	1,069	12,190	11,780
Deferred financing costs	(4)	(209)	(93)
Shares withheld for taxes pursuant to employee stock plans and treasury stock repurchases	(21)	(18)	(173)
Proceeds from issuance of equity	—	460	2,970
Dividend payments	—	—	(43)
Other financing activities	77	208	88
Net cash provided by (used in) financing activities	(2,631)	5,288	10,994
Net increase in cash and restricted cash	178	9	109
Cash and restricted cash at beginning of year	408	399	290
Cash and restricted cash at end of year ^(a)	\$ 586	\$ 408	\$ 399

^(a)The following table provides a reconciliation of cash and restricted cash to amounts reported within the consolidated balance sheets:

Cash	\$ 440	\$ 273	\$ 245
Restricted cash included in restricted cash and short-term investments	146	135	154
Total cash and restricted cash	\$ 586	\$ 408	\$ 399

See accompanying notes to consolidated financial statements.

[Table of Contents](#)

AMERICAN AIRLINES GROUP INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)
(In millions, except share amounts)

	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Retained Earnings (Deficit)	Total
Balance at December 31, 2019	\$ 4	\$ 3,945	\$ (6,331)	\$ 2,264	\$ (118)
Net loss	—	—	—	(8,885)	(8,885)
Other comprehensive loss, net	—	—	(772)	—	(772)
Issuance of PSP1 Warrants (see Note 1(b))	—	63	—	—	63
Issuance of Treasury Loan Warrants (see Note 1(b))	—	25	—	—	25
Issuance of 1,603,554 shares of AAG common stock pursuant to employee stock plans net of shares withheld for cash taxes	—	(15)	—	—	(15)
Issuance of 129,490,000 shares of AAG common stock pursuant to public stock offerings, net of offering costs	1	1,686	—	—	1,687
Issuance of 68,561,487 shares of AAG common stock pursuant to an at-the-market offering, net of offering costs	1	868	—	—	869
Equity component of convertible debt issued, net of tax and offering costs	—	320	—	—	320
Purchase and retirement of 6,378,025 shares of AAG common stock	—	(145)	—	—	(145)
Dividends declared on AAG common stock (\$0.10 per share)	—	—	—	(43)	(43)
Settlement of single-dip unsecured claims held in Disputed Claims Reserve (DCR)	—	56	—	—	56
Share-based compensation expense	—	91	—	—	91
Balance at December 31, 2020	6	6,894	(7,103)	(6,664)	(6,867)
Net loss	—	—	—	(1,993)	(1,993)
Other comprehensive income, net	—	—	1,161	—	1,161
Issuance of 24,150,764 shares of AAG common stock pursuant to an at-the-market offering, net of offering costs	—	460	—	—	460
Impact of adoption of Accounting Standards Update (ASU) 2020-06 related to convertible instruments	—	(320)	—	19	(301)
Issuance of PSP2 and PSP3 Warrants (see Note 1(b))	—	121	—	—	121
Issuance of 2,357,187 shares of AAG common stock pursuant to employee stock plans net of shares withheld for cash taxes	—	(18)	—	—	(18)
Settlement of single-dip unsecured claims held in DCR and retirement of 259,878 shares of AAG common stock	—	(1)	—	—	(1)
Share-based compensation expense	—	98	—	—	98
Balance at December 31, 2021	6	7,234	(5,942)	(8,638)	(7,340)
Net income	—	—	—	127	127
Other comprehensive income, net	—	—	1,357	—	1,357
Issuance of 2,914,866 shares of AAG common stock pursuant to employee stock plans net of shares withheld for cash taxes	—	(21)	—	—	(21)
Share-based compensation expense	—	78	—	—	78
Balance at December 31, 2022	\$ 6	\$ 7,291	\$ (4,585)	\$ (8,511)	\$ (5,799)

See accompanying notes to consolidated financial statements.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

1. Basis of Presentation and Summary of Significant Accounting Policies

(a) Basis of Presentation

American Airlines Group Inc. (we, us, our and similar terms, or AAG), a Delaware corporation, is a holding company whose primary business activity is the operation of a major network air carrier, providing scheduled air transportation for passengers and cargo through its mainline operating subsidiary, American Airlines, Inc. (American) and its wholly-owned regional airline subsidiaries, Envoy Aviation Group Inc., PSA Airlines, Inc. (PSA) and Piedmont Airlines, Inc. (Piedmont), that operate under the brand American Eagle. All significant intercompany transactions have been eliminated.

The preparation of financial statements in accordance with accounting principles generally accepted in the United States (GAAP) requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses, and the disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates. The most significant areas of judgment relate to passenger revenue recognition, the loyalty program, deferred tax assets, as well as pension and retiree medical and other postretirement benefits.

(b) Government Assistance

Payroll Support Programs

During 2020 and 2021, American, Envoy Air Inc. (Envoy), Piedmont and PSA (together with American, Envoy and Piedmont, the Subsidiaries) entered into payroll support program agreements (PSP Agreements) with the U.S. Department of Treasury (Treasury) pursuant to the payroll support program established under the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) (PSP1), the payroll support program established under the Subtitle A of Title IV of Division N of the Consolidated Appropriations Act, 2021 (PSP Extension Law) (PSP2) and the payroll support program established under the American Rescue Plan Act of 2021 (ARP) (PSP3). The aggregate amount of financial assistance received was approximately \$12.8 billion, and as partial compensation to the U.S. Government for the provision of financial assistance provided under each of these programs, AAG issued promissory notes and warrants to Treasury.

The table below provides a summary of the financial assistance received and the promissory notes and the warrants issued under each program (in millions, except exercise price amounts):

Program	Closing Date	PSP Financial Assistance	Promissory Notes ⁽¹⁾	PSP Warrants	Total	Warrants Issued (Shares) ⁽²⁾	Exercise Price of Warrants
PSP1	April 20, 2020	\$ 4,138	\$ 1,757	\$ 63	\$ 5,958	14.0	\$ 12.51
PSP2	January 15, 2021	2,427	1,030	76	3,533	6.6	15.66
PSP3	April 23, 2021	2,290	959	46	3,295	4.4	21.75
Total		\$ 8,855	\$ 3,746	\$ 185	\$ 12,786	25.0	

⁽¹⁾ See Note 4 for further information on the promissory notes issued.

⁽²⁾ The payroll support program warrants (PSP Warrants) are subject to certain anti-dilution provisions, do not have any voting rights and are freely transferable, with registration rights. Each warrant expires on the fifth anniversary of the date of issuance, with expiration dates ranging from April 2025 to June 2026, and will be exercisable either through net share settlement or cash, at our option. The warrants were issued solely as compensation to the U.S. Government related to entry into the PSP Agreements. No separate proceeds (apart from the financial assistance described below) were received upon issuance of the warrants or will be received upon exercise thereof.

In connection with the PSP Agreements entered into with Treasury, we were required to comply with the relevant provisions of the CARES Act, the PSP Extension Law, and the ARP, which included the requirement that funds provided pursuant to these programs be used exclusively for the continuation of payment of eligible employee wages, salaries and benefits, the prohibition against involuntary furloughs and reductions in employee pay rates and benefits, the requirement that certain levels of commercial air service be maintained, provisions that prohibited the repurchase of AAG common stock and the payment of common stock dividends as well as provisions that restrict the payment of certain executive

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

compensation. As of December 31, 2022, all of these provisions have expired except for those related to the payment of certain executive compensation, which expire on April 1, 2023.

For accounting purposes, the \$12.8 billion of aggregate financial assistance received pursuant to the PSP Agreements was allocated to the promissory notes, warrants and other financial assistance (PSP Financial Assistance). The aggregate principal amount of the promissory notes was recorded as unsecured long-term debt and the total fair value of the warrants, estimated using a Black-Scholes option pricing model, was recorded in stockholders' deficit in the consolidated balance sheets. The remaining amounts were recognized in 2020 and 2021 as a credit to special items, net in the consolidated statements of operations over the period which the continuation of payment of eligible employee wages, salaries and benefits was required.

Treasury Loan Agreement

On September 25, 2020 (the Treasury Loan Closing Date), AAG and American entered into a Loan and Guarantee Agreement (the Treasury Loan Agreement) with Treasury, which provided for a secured term loan facility (the Treasury Term Loan Facility) that permitted American to borrow up to \$5.5 billion. Subsequently, on October 21, 2020, AAG and American entered into an amendment to the Treasury Loan Agreement which increased the borrowing amount to up to \$7.5 billion. In connection with entry into the Treasury Loan Agreement, on the Treasury Loan Closing Date, AAG also entered into a warrant agreement (the Treasury Loan Warrant Agreement) with Treasury.

In September 2020, American borrowed \$550 million under the Treasury Term Loan Facility and on March 24, 2021, used a portion of the proceeds from the AAdvantage Financing to prepay in full the \$550 million of outstanding loans under the Treasury Term Loan Facility and terminated the Treasury Loan Agreement. Pursuant to the Treasury Loan Agreement, AAG issued to Treasury warrants (Treasury Loan Warrants) to purchase up to an aggregate of approximately 4.4 million shares of AAG common stock (the Treasury Loan Warrant Shares), which expire in September 2025. The exercise price of the Treasury Loan Warrant Shares is \$12.51 per share, subject to certain anti-dilution provisions provided for in the Treasury Loan Warrant Agreement. For accounting purposes, the fair value for the Treasury Loan Warrant Shares, estimated using a Black-Scholes option pricing model, was recorded in stockholders' deficit with an offsetting debt discount to the Treasury Term Loan Facility in the consolidated balance sheet. The provisions of the Treasury Loan Warrants are substantially similar to the PSP Warrants.

(c) Recent Accounting Pronouncements

ASU 2020-04: Reference Rate Reform (Topic 848) Facilitation of the Effects of Reference Rate Reform on Financial Reporting and ASU 2022-06: Deferral of the Sunset Date of Topic 848

ASU 2020-04 provides optional temporary guidance for applying GAAP to contracts, hedging relationships, and other transactions that reference the London Interbank Offered Rate (LIBOR) or another reference rate expected to be discontinued because of reference rate reform. Topic 848 is effective as of March 12, 2020 through December 31, 2022; however, because the intended cessation date of LIBOR was deferred to June 30, 2023, ASU 2022-06 was issued in December 2022 to extend the current relief in Topic 848 through December 31, 2024. We will adopt Topic 848 when our relevant contracts are modified upon transition to alternative reference rates and we do not expect the application of Topic 848 to have a material impact on our consolidated financial statements.

(d) Investments

Short-term investments primarily include debt securities and are classified as available-for-sale and stated at fair value. Realized gains and losses are recorded in nonoperating other income, net on our consolidated statements of operations. Unrealized gains and losses are recorded as a component of accumulated other comprehensive loss on our consolidated balance sheets. For investments in an unrealized loss position, we determine whether a credit loss exists by considering information about the collectability of the instrument, current market conditions and reasonable and supportable forecasts of economic conditions. There have been no credit losses.

Equity investments are accounted for under the equity method if we are able to exercise significant influence over an investee. Equity investments for which we do not have significant influence are recorded at fair value or at cost, if fair value is not readily determinable, with adjustments for observable changes in price or impairments (referred to as the measurement alternative). Our share of equity method investees' financial results and changes in fair value are recorded in nonoperating other income, net on the consolidated statements of operations. See Note 8 for additional information related to our equity investments.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.**(e) Restricted Cash and Short-term Investments**

We have restricted cash and short-term investments related primarily to collateral held to support workers' compensation obligations, collateral associated with the AAdvantage Financing and money market funds to be used to finance a substantial portion of the cost of the renovation and expansion of Terminal 8 at John F. Kennedy International Airport (JFK).

(f) Accounts Receivable, Net

Accounts receivable primarily consist of amounts due from credit card processing companies for tickets sold to individual passengers, amounts due from airline and non-airline business partners, including our co-branded credit card partners and cargo customers. Receivables from ticket sales are short-term, mostly settled within seven days after sale. Receivables from our business partners are typically settled within 30 days. All accounts receivable are reported net of an allowance for credit losses, which was not material as of December 31, 2022 and 2021. We consider past and future financial and qualitative factors, including aging, payment history and other credit monitoring indicators, when establishing the allowance for credit losses.

(g) Aircraft Fuel, Spare Parts and Supplies, Net

Aircraft fuel is recorded on a first-in, first-out basis. Spare parts and supplies are recorded at average costs less an allowance for obsolescence, which is recognized over the weighted average remaining useful life of the related fleet. We also provide an allowance for spare parts and supplies identified as excess or obsolete to reduce the carrying cost to the lower of cost or net realizable value. Aircraft fuel, spare parts and supplies are expensed when used.

(h) Operating Property and Equipment

Operating property and equipment is recorded at cost and depreciated or amortized to residual values over the asset's estimated useful life or the lease term, whichever is less, using the straight-line method. Residual values for aircraft, engines and related rotatable parts are generally 5% to 10% of original cost. Costs of major improvements that enhance the usefulness of the asset are capitalized and depreciated or amortized over the estimated useful life of the asset or the lease term, whichever is less. The estimated useful lives for the principal property and equipment classifications are as follows:

<u>Principal Property and Equipment Classification</u>	<u>Estimated Useful Life</u>
Aircraft, engines and related rotatable parts	20 – 30 years
Buildings and improvements	5 – 30 years
Furniture, fixtures and other equipment	3 – 10 years
Capitalized software	5 – 10 years

Total depreciation and amortization expense was \$2.3 billion for each of the years ended December 31, 2022 and 2021 and \$2.4 billion for the year ended December 31, 2020.

We assess impairment of operating property and equipment when events and circumstances indicate that the assets may be impaired. An impairment of an asset or group of assets exists only when the sum of the estimated undiscounted cash flows expected to be generated directly by the assets are less than the carrying value of the assets. We group assets principally by fleet-type when estimating future cash flows, which is generally the lowest level for which identifiable cash flows exist. Estimates of future cash flows are based on historical results adjusted to reflect management's best estimate of future market and operating conditions, including our current fleet plan. If such assets are impaired, the impairment charge recognized is the amount by which the carrying value of the assets exceed their fair value. Fair value reflects management's best estimate including inputs from published pricing guides and bids from third parties as well as contracted sales agreements when applicable. In 2022, we recorded \$149 million in non-cash special impairment charges to write down the carrying value of our retired Airbus A330 fleet to the estimated fair value due to the market conditions for certain used aircraft.

(i) Leases

We determine if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use (ROU) assets, current operating lease liabilities and noncurrent operating lease liabilities on our consolidated balance sheets. Finance leases are included in property and equipment, current maturities of long-term debt and finance leases and long-term debt and finance leases, net of current maturities, on our consolidated balance sheets.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. ROU assets and liabilities are recognized at the lease commencement date based on the estimated present value of lease payments over the lease term.

We use our estimated incremental borrowing rate, which is derived from information available at the lease commencement date, in determining the present value of lease payments. We give consideration to our recent debt issuances as well as publicly available data for instruments with similar characteristics when calculating our incremental borrowing rates.

Our lease term includes options to extend the lease when it is reasonably certain that we will exercise that option. Leases with a term of 12 months or less are not recorded on our consolidated balance sheets.

Under certain of our capacity purchase agreements with third-party regional carriers, we do not own the underlying aircraft. However, since we control the marketing, scheduling, ticketing, pricing and seat inventories of these aircraft and therefore control the asset, the aircraft is deemed to be leased for accounting purposes. For these capacity purchase agreements, we account for the lease and non-lease components separately. The lease component consists of the aircraft and the non-lease components consist of services, such as the crew and maintenance. We allocate the consideration in the capacity purchase agreements to the lease and non-lease components using their estimated relative standalone prices. See Note 11(b) for additional information on our capacity purchase agreements.

For real estate, we account for the lease and non-lease components as a single lease component.

(j) Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are recorded net as noncurrent deferred income taxes.

We provide a valuation allowance for our deferred tax assets when it is more likely than not that some portion, or all of our deferred tax assets, will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income. We consider all available positive and negative evidence and make certain assumptions in evaluating the realizability of our deferred tax assets. Many factors are considered that impact our assessment of future profitability, including conditions which are beyond our control, such as the health of the economy, the availability and price volatility of aircraft fuel and travel demand. We have determined that positive factors outweigh negative factors in the determination of the realizability of our deferred tax assets.

(k) Goodwill

Goodwill represents the purchase price in excess of the fair value of the net assets acquired and liabilities assumed in connection with the 2013 merger with US Airways Group, Inc. (US Airways Group). We have one reporting unit. We assess goodwill for impairment annually or more frequently if events or circumstances indicate that the fair value of goodwill may be lower than the carrying value. Our annual assessment date is October 1.

Goodwill is assessed for impairment by initially performing a qualitative assessment. If we determine that it is more likely than not that our goodwill may be impaired, we use a quantitative approach to assess the asset's fair value and the amount of the impairment, if any. Based upon our annual assessment, there was no goodwill impairment in 2022. The carrying value of our goodwill on our consolidated balance sheets was \$4.1 billion as of December 31, 2022 and 2021.

(l) Other Intangibles, Net

Intangible assets consist primarily of certain domestic airport slots and gate leasehold rights, customer relationships, marketing agreements, commercial agreements, international slots and route authorities and tradenames.

Definite-Lived Intangible Assets

Definite-lived intangible assets are originally recorded at their acquired fair values, subsequently amortized over their respective estimated useful lives and are assessed for impairment whenever events and circumstances indicate that the assets may be impaired.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

The following table provides information relating to our amortizable intangible assets as of December 31, 2022 and 2021 (in millions):

	December 31,	
	2022	2021
Domestic airport slots	\$ 365	\$ 365
Customer relationships	300	300
Marketing agreements	105	105
Tradenames	35	35
Airport gate leasehold rights	137	137
Accumulated amortization	(827)	(786)
Total	\$ 115	\$ 156

Certain domestic airport slots and airport gate leasehold rights are amortized on a straight-line basis over 25 years. Certain marketing agreements were identified as intangible assets subject to amortization and are amortized on a straight-line basis over approximately 30 years. Customer relationships and tradenames are fully amortized.

We recorded amortization expense related to these intangible assets of \$41 million for each of the years ended December 31, 2022, 2021 and 2020. We expect to record annual amortization expense for these intangible assets as follows (in millions):

2023	\$ 7
2024	7
2025	7
2026	6
2027	6
2028 and thereafter	82
Total	\$ 115

Indefinite-Lived Intangible Assets

Indefinite-lived intangible assets include certain domestic airport slots, international slots and route authorities and in 2022, our commercial agreement with GOL Linhas Aéreas Inteligentes S.A. (GOL). We assess indefinite-lived intangible assets for impairment annually or more frequently if events or circumstances indicate that the fair values of indefinite-lived intangible assets may be lower than their carrying values. Our annual assessment date is October 1.

Indefinite-lived intangible assets are assessed for impairment by initially performing a qualitative assessment. If we determine that it is more likely than not that our indefinite-lived intangible assets may be impaired, we use a quantitative approach to assess the asset's fair value and the amount of the impairment, if any. Based upon our annual assessment, there were no material indefinite-lived intangible asset impairments in 2022. We had \$1.9 billion and \$1.8 billion of indefinite-lived intangible assets on our consolidated balance sheets as of December 31, 2022 and 2021, respectively.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

(m) Revenue Recognition

Revenue

The following are the significant categories comprising our operating revenues (in millions):

	Year Ended December 31,		
	2022	2021	2020
Passenger revenue:			
Passenger travel	\$ 41,425	\$ 23,896	\$ 13,456
Loyalty revenue - travel ⁽¹⁾	3,143	2,167	1,062
Total passenger revenue	44,568	26,063	14,518
Cargo	1,233	1,314	769
Other:			
Loyalty revenue - marketing services	2,657	2,166	1,825
Other revenue	513	339	225
Total other revenue	3,170	2,505	2,050
Total operating revenues	\$ 48,971	\$ 29,882	\$ 17,337

⁽¹⁾ Loyalty revenue included in passenger revenue is principally comprised of mileage credit redemptions, which were earned from travel or co-branded credit card and other partners. See “*Loyalty Revenue*” below for further discussion on these mileage credits.

The following is our total passenger revenue by geographic region (in millions):

	Year Ended December 31,		
	2022	2021	2020
Domestic	\$ 32,911	\$ 21,453	\$ 11,765
Latin America	6,150	3,506	1,852
Atlantic	5,070	965	654
Pacific	437	139	247
Total passenger revenue	\$ 44,568	\$ 26,063	\$ 14,518

We attribute passenger revenue by geographic region based upon the origin and destination of each flight segment.

Passenger Revenue

We recognize all revenues generated from transportation on American and our regional flights operated under the brand name American Eagle, including associated baggage fees and other inflight services, as passenger revenue when transportation is provided. Ticket and other related sales for transportation that has not yet been provided are initially deferred and recorded as air traffic liability on our consolidated balance sheets. The air traffic liability principally represents tickets sold for future travel on American and partner airlines.

The majority of tickets sold are nonrefundable. A small percentage of tickets, some of which are partially used tickets, expire unused. The estimate for tickets expected to expire unused is generally based on an analysis of our historical data. We have consistently applied this accounting method to estimate and recognize revenue from unused tickets at the date of travel. This estimate is periodically evaluated based on subsequent activity to validate its accuracy. Any adjustments resulting from periodic evaluations of the estimated air traffic liability are included in passenger revenue during the period in which the evaluations are completed.

Various taxes and fees assessed on the sale of tickets to end customers are collected by us as an agent and remitted to taxing authorities. These taxes and fees have been presented on a net basis in the accompanying consolidated statements of operations and recorded as a liability until remitted to the appropriate taxing authority.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Loyalty Revenue

We currently operate the loyalty program, AAdvantage. This program awards mileage credits to passengers who fly on American, any **oneworld** airline or other partner airlines, or by using the services of other program participants, such as our co-branded credit cards, and certain hotels and car rental companies. Mileage credits can be redeemed for travel on American and other participating partner airlines, as well as other non-air travel awards such as hotels and rental cars. For mileage credits earned by AAdvantage loyalty program members, we apply the deferred revenue method.

Mileage credits earned through travel

For mileage credits earned through travel, we apply a relative selling price approach whereby the total amount collected from each passenger ticket sale is allocated between the air transportation and the mileage credits earned. The portion of each passenger ticket sale attributable to mileage credits earned is initially deferred and then recognized in passenger revenue when mileage credits are redeemed and transportation is provided. The estimated selling price of mileage credits is determined using an equivalent ticket value approach, which uses historical data, including award redemption patterns by geographic region and class of service, as well as similar fares as those used to settle award redemptions. The estimated selling price of mileage credits is adjusted for an estimate of mileage credits that will not be redeemed using a statistical model based on historical redemption patterns to develop an estimate of the likelihood of future redemption.

Mileage credits sold to co-branded credit cards and other partners

We sell mileage credits to participating airline partners and non-airline business partners, including our co-branded credit card partners, under contracts with remaining terms generally from one to seven years as of December 31, 2022. Consideration received from the sale of mileage credits is variable and payment terms typically are within 30 days subsequent to the month of mileage sale. Sales of mileage credits to non-airline business partners are comprised of two components, transportation and marketing. We allocate the consideration received from these sales of mileage credits based on the relative selling price of each product or service delivered.

Our most significant mileage credit partner agreements are our co-branded credit card agreements with Citi and Barclaycard US. We identified two revenue elements in these co-branded credit card agreements: the transportation component and the marketing component.

The transportation component represents the estimated selling price of future travel awards and is determined using the same equivalent ticket value approach described above. The portion of each mileage credit sold attributable to transportation is initially deferred and then recognized in passenger revenue when mileage credits are redeemed and transportation is provided.

The marketing component includes the use of intellectual property, including the American brand and access to loyalty program member lists, which is the predominant element in these agreements, as well as advertising. We recognize the marketing component in other revenue in the period of the mileage credit sale following the sales-based royalty method.

For the portion of our outstanding mileage credits that we estimate will not be redeemed, we recognize the associated value proportionally as the remaining mileage credits are redeemed. Our estimates use a statistical model based on historical redemption patterns to develop an estimate of the likelihood of future redemption.

Cargo Revenue

Cargo revenue is recognized when we provide the transportation.

Other Revenue

Other revenue includes revenue associated with our loyalty program, which is comprised principally of the marketing component of mileage credit sales to co-branded credit card and other partners and other marketing related payments. The accounting and recognition for the loyalty program marketing services are discussed above in "*Loyalty Revenue*." The remaining amounts included within other revenue relate to airport clubs, other commission revenue, advertising and vacation-related services.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Contract Balances

Our significant contract liabilities are comprised of (1) outstanding loyalty program mileage credits that may be redeemed for future travel and other non-air travel awards, reported as loyalty program liability on our consolidated balance sheets and (2) ticket sales for transportation that has not yet been provided, reported as air traffic liability on our consolidated balance sheets.

	December 31,	
	2022	2021
	(in millions)	
Loyalty program liability	\$ 9,145	\$ 9,135
Air traffic liability	6,745	6,087
Total	\$ 15,890	\$ 15,222

The balance of the loyalty program liability fluctuates based on seasonal patterns, which impact the volume of mileage credits issued through travel or sold to co-branded credit card and other partners (deferral of revenue) and mileage credits redeemed (recognition of revenue). Changes in loyalty program liability are as follows (in millions):

Balance at December 31, 2021	\$ 9,135
Deferral of revenue	3,221
Recognition of revenue ⁽¹⁾	(3,211)
Balance at December 31, 2022 ⁽²⁾	\$ 9,145

⁽¹⁾ Principally relates to revenue recognized from the redemption of mileage credits for both air and non-air travel awards. Mileage credits are combined in one homogenous pool and are not separately identifiable. As such, the revenue is comprised of mileage credits that were part of the loyalty program deferred revenue balance at the beginning of the period, as well as mileage credits that were issued during the period.

⁽²⁾ Mileage credits can be redeemed at any time and generally do not expire as long as that AAdvantage member has any type of qualifying activity at least every 24 months or if the AAdvantage member is the primary holder of a co-branded credit card. As of December 31, 2022, our current loyalty program liability was \$3.2 billion and represents our current estimate of revenue expected to be recognized in the next 12 months based on historical as well as projected trends, with the balance reflected in long-term loyalty program liability expected to be recognized as revenue in periods thereafter.

The air traffic liability principally represents tickets sold for future travel on American and partner airlines. The balance in our air traffic liability also fluctuates with seasonal travel patterns. The contract duration of passenger tickets is generally one year. Accordingly, any revenue associated with tickets sold for future travel will be recognized within 12 months. In response to the COVID-19 pandemic, we extended the contract duration for certain tickets to September 30, 2022, principally those tickets which were issued in 2020 and 2021. Additionally, we extended the contract duration to December 31, 2022 for tickets to certain international destinations. For 2022, \$4.8 billion of revenue was recognized in passenger revenue that was included in our air traffic liability at December 31, 2021. Tickets issued in 2022 and thereafter are no longer subject to change fees which provides more flexibility for customers to change travel plans. Given this new flexibility offered to our customers, our estimate of revenue that will be recognized from the air traffic liability for future flown or unused tickets may be subject to variability and differ from historical experience.

(n) Maintenance, Materials and Repairs

Maintenance and repair costs for owned and leased flight equipment are charged to operating expense as incurred, except costs incurred for maintenance and repair under certain flight hour maintenance contract agreements, which are accrued based on contractual terms when an obligation exists.

(o) Selling Expenses

Selling expenses include credit card fees, commissions, third party distribution channel fees and advertising. Selling expenses associated with passenger revenue are expensed when the transportation or service is provided. Advertising costs are expensed as incurred. Advertising expense was \$105 million for each of the years ended December 31, 2022 and 2021 and \$57 million for the year ended December 31, 2020.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

(p) Share-based Compensation

We account for our share-based compensation expense based on the fair value of the stock award at the time of grant, which is recognized ratably over the vesting period of the stock award. The majority of our stock awards are time vested restricted stock units, and the fair value of such awards is based on the market price of the underlying shares of AAG common stock on the date of grant. See Note 14 for further discussion of share-based compensation.

(q) Foreign Currency Gains and Losses

Foreign currency gains and losses are recorded as part of other income, net within total nonoperating expense, net on our consolidated statements of operations. For the years ended December 31, 2022, 2021 and 2020, respectively, foreign currency losses were \$38 million, \$4 million and \$24 million.

(r) Other Operating Expenses

Other operating expenses includes costs associated with aircraft food and catering, crew travel, ground and cargo handling, passenger accommodation, international navigation fees, aircraft cleaning and certain general and administrative expenses.

(s) Regional Expenses

Our regional carriers provide scheduled air transportation under the brand name "American Eagle." The American Eagle carriers include our wholly-owned regional carriers as well as third-party regional carriers. Our regional carrier arrangements are in the form of capacity purchase agreements. Expenses associated with American Eagle operations are classified as regional expenses on the consolidated statements of operations.

Regional expenses for the years ended December 31, 2022, 2021, and 2020 include \$321 million, \$316 million and \$325 million of depreciation and amortization, respectively, and \$5 million, \$6 million and \$13 million of aircraft rent, respectively.

In 2022, 2021, and 2020, we recognized \$592 million, \$495 million and \$438 million, respectively, of expense under our capacity purchase agreement with Republic Airways Inc. (Republic). We hold a 25% equity interest in Republic Airways Holdings Inc. (Republic Holdings), the parent company of Republic.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

2. Special Items, Net

Special items, net on our consolidated statements of operations consisted of the following (in millions):

	Year Ended December 31,		
	2022	2021	2020
Fleet impairment ⁽¹⁾	\$ 149	\$ —	\$ 1,484
Litigation reserve adjustments	37	(19)	—
PSP Financial Assistance ⁽²⁾	—	(4,162)	(3,710)
Severance expenses ⁽³⁾	—	168	1,408
Mark-to-market adjustments on bankruptcy obligations, net	—	(3)	(49)
Labor contract expenses ⁽⁴⁾	—	—	228
Other operating special items, net	7	10	(18)
Mainline operating special items, net	193	(4,006)	(657)
PSP Financial Assistance ⁽²⁾	—	(539)	(444)
Regional pilot retention program ⁽⁵⁾	—	61	—
Fleet impairment ⁽¹⁾	—	27	117
Severance expenses ⁽³⁾	—	2	18
Other operating special items, net	5	—	—
Regional operating special items, net	5	(449)	(309)
Operating special items, net	198	(4,455)	(966)
Mark-to-market adjustments on equity and other investments, net ⁽⁶⁾	71	31	135
Debt refinancing, extinguishment and other, net	3	29	35
Nonoperating special items, net	74	60	170
Income tax special items, net	(9)	—	—

⁽¹⁾ Fleet impairment for 2022 included a non-cash impairment charge to write down the carrying value of our retired Airbus A330 fleet to the estimated fair value due to the market conditions for certain used aircraft.

Fleet impairment for 2021 and 2020 included charges resulting from the retirement of certain aircraft earlier than planned driven by the severe decline in air travel due to the COVID-19 pandemic. In 2021, we retired our remaining Embraer 140 fleet resulting in a non-cash write down of these regional aircraft. In 2020, we retired our entire Airbus A330-200, Boeing 757, Boeing 767, Airbus A330-300 and Embraer 190 fleets as well as certain Embraer 140 and Bombardier CRJ200 aircraft resulting in a \$1.5 billion non-cash write down of mainline and regional aircraft and associated spare parts and \$109 million in cash charges primarily for impairment of ROU assets and lease return costs.

⁽²⁾ The PSP Financial Assistance represents recognition of a portion of the financial assistance received from Treasury pursuant to the payroll support programs established by the U.S. Government. See Note 1(b) for further information.

⁽³⁾ Severance expenses include salary and medical costs primarily associated with certain team members who opted into voluntary early retirement programs offered as a result of reductions to our operation due to the COVID-19 pandemic.

⁽⁴⁾ Labor contract expenses primarily related to one-time charges due to the ratification of a new contract with the Transport Workers Union and International Association of Machinists & Aerospace Workers (TWU-IAM Association) for our maintenance and fleet service team members, including signing bonuses and adjustments to vacation accruals resulting from pay rate increases.

⁽⁵⁾ Our regional pilot retention program provides for, among other things, a cash retention bonus paid in the fourth quarter of 2021 to eligible captains at our wholly-owned regional carriers included on the pilot seniority list as of September 1, 2021.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

⁽⁶⁾ Mark-to-market adjustments on equity and other investments, net principally included net unrealized gains and losses associated with certain equity investments and certain other investments. See Note 8 for further information related to our equity investments.

3. Earnings (Loss) Per Common Share

The following table provides the computation of basic and diluted earnings (loss) per common share (EPS) (in millions, except share and per share amounts):

	Year Ended December 31,		
	2022	2021	2020
Basic EPS:			
Net income (loss)	\$ 127	\$ (1,993)	\$ (8,885)
Weighted average common shares outstanding (in thousands)	650,345	644,015	483,888
Basic EPS	\$ 0.20	\$ (3.09)	\$ (18.36)
Diluted EPS:			
Net income (loss) for purposes of computing diluted EPS	\$ 127	\$ (1,993)	\$ (8,885)
Share computation for diluted EPS (in thousands):			
Basic weighted average common shares outstanding	650,345	644,015	483,888
Dilutive effect of restricted stock unit awards	1,579	—	—
Dilutive effect of certain PSP Warrants and Treasury Loan Warrants	3,198	—	—
Diluted weighted average common shares outstanding	655,122	644,015	483,888
Diluted EPS	\$ 0.19	\$ (3.09)	\$ (18.36)

The following were excluded from the calculation of diluted EPS because inclusion of such shares would be antidilutive (in thousands):

	Year Ended December 31,		
	2022	2021	2020
6.50% convertible senior notes	61,728	61,728	31,882
Restricted stock unit awards	3,987	3,420	4,584

In addition, certain shares underlying our PSP Warrants and Treasury Loan Warrants for the years ended December 31, 2022, 2021 and 2020, were excluded from the calculation of diluted EPS because inclusion of such shares would be antidilutive.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

4. Debt

Long-term debt included on our consolidated balance sheets consisted of (in millions):

	December 31,	
	2022	2021
Secured		
2013 Term Loan Facility, variable interest rate of 6.14%, installments through 2025 ^(a)	\$ 1,752	\$ 1,770
2014 Term Loan Facility, variable interest rate of 6.14%, installments through 2027 ^(a)	1,196	1,208
December 2016 Term Loan Facility ^(a)	—	1,188
11.75% senior secured notes, interest only payments until due in July 2025 ^(b)	2,500	2,500
10.75% senior secured IP notes, interest only payments until due in February 2026 ^(b)	1,000	1,000
10.75% senior secured LGA/DCA notes, interest only payments until due in February 2026 ^(b)	200	200
5.50% senior secured notes, installments beginning in July 2023 until due in April 2026 ^(c)	3,500	3,500
5.75% senior secured notes, installments beginning in July 2026 until due in April 2029 ^(c)	3,000	3,000
AAAdvantage Term Loan Facility, variable interest rate of 8.99%, installments beginning in July 2023 through April 2028 ^(c)	3,500	3,500
Enhanced equipment trust certificates (EETCs), fixed interest rates ranging from 2.88% to 7.13%, averaging 3.74%, maturing from 2023 to 2034 ^(d)	9,175	9,357
Equipment loans and other notes payable, fixed and variable interest rates ranging from 3.33% to 8.01%, averaging 5.95%, maturing from 2023 to 2034 ^(e)	3,170	3,433
Special facility revenue bonds, fixed interest rates ranging from 2.25% to 5.38%, maturing from 2026 to 2036 ^(f)	1,050	1,129
	<hr/> 30,043	<hr/> 31,785
Unsecured		
PSP1 Promissory Note, interest only payments until due in April 2030 ^(g)	1,757	1,765
PSP2 Promissory Note, interest only payments until due in January 2031 ^(g)	1,030	1,035
PSP3 Promissory Note, interest only payments until due in April 2031 ^(g)	959	946
6.50% convertible senior notes, interest only payments until due in July 2025 ^(h)	1,000	1,000
3.75% senior notes, interest only payments until due in March 2025 ⁽ⁱ⁾	500	500
5.000% senior notes	—	750
	<hr/> 5,246	<hr/> 5,996
Total long-term debt	35,289	37,781
Less: Total unamortized debt discount, premium and issuance costs	386	458
Less: Current maturities	3,059	2,315
Long-term debt, net of current maturities	<hr/> \$ 31,844	<hr/> \$ 35,008

As of December 31, 2022, the maximum availability under our revolving credit and other facilities is as follows (in millions):

2013 Revolving Facility	\$ 736
2014 Revolving Facility	1,631
April 2016 Revolving Facility	446
Short-term Revolving and Other Facilities	220
Total	\$ 3,033

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

As of December 31, 2022, American had an undrawn \$150 million short-term revolving credit facility which expired in January 2023. American also had \$70 million of available borrowing base under cargo receivables facility that was set to expire in December 2022, but which has been extended through December 2023.

Secured financings, including revolving credit and other facilities, are collateralized by assets, consisting primarily of aircraft, engines, simulators, aircraft spare parts, airport gate leasehold rights, route authorities, airport slots, certain receivables, certain intellectual property and certain loyalty program assets.

At December 31, 2022, the maturities of long-term debt are as follows (in millions):

2023	\$ 3,059
2024	3,535
2025	9,317
2026	4,480
2027	4,515
2028 and thereafter	10,383
Total	\$ 35,289

(a) 2013 and 2014 Credit Facilities, April 2016 Revolving Facility and December 2016 Credit Facilities

2013 Credit Facilities

In November 2019, American and AAG entered into the Sixth Amendment to Amended and Restated Credit and Guaranty Agreement, amending the Amended and Restated Credit and Guaranty Agreement dated as of May 21, 2015 (as previously amended, the 2013 Credit Agreement; the revolving credit facility established thereunder, the 2013 Revolving Facility; the term loan facility established thereunder, the 2013 Term Loan Facility; and the 2013 Revolving Facility together with the 2013 Term Loan Facility, the 2013 Credit Facilities), which reduced the total aggregate commitments under the 2013 Revolving Facility to \$750 million from \$1.0 billion. In addition, certain lenders party to the 2013 Credit Agreement extended the maturity date of a substantial portion of their commitments under the 2013 Revolving Facility to October 2024 from October 2023. As of December 31, 2022, there were no borrowings or letters of credit outstanding under the 2013 Revolving Facility.

2014 Credit Facilities

In November 2019, American and AAG entered into the Seventh Amendment to Amended and Restated Credit and Guaranty Agreement, amending the Amended and Restated Credit and Guaranty Agreement dated as of April 20, 2015 (as previously amended, the 2014 Credit Agreement; the revolving credit facility established thereunder, the 2014 Revolving Facility; the term loan facility established thereunder, the 2014 Term Loan Facility; and the 2014 Revolving Facility together with the 2014 Term Loan Facility, the 2014 Credit Facilities), which increased the total aggregate commitments under the 2014 Revolving Facility to \$1.6 billion from \$1.5 billion. In addition, certain lenders party to the 2014 Credit Agreement extended the maturity date of a substantial portion of their commitments under the 2014 Revolving Facility to October 2024 from October 2023.

In January 2020, American and AAG entered into the Eighth Amendment to the 2014 Credit Agreement, pursuant to which American refinanced the 2014 Term Loan Facility, increasing the total aggregate principal amount outstanding to \$1.2 billion, reducing the LIBOR margin from 2.00% to 1.75%, with a LIBOR floor of 0%, and reducing the base rate margin from 1.00% to 0.75%. In addition, the maturity date for the 2014 Term Loan Facility was extended to January 2027 from October 2021. As of December 31, 2022, there were no borrowings or letters of credit outstanding under the 2014 Revolving Facility.

April 2016 Revolving Facility

In November 2019, American and AAG entered into the Fifth Amendment to Credit and Guaranty Agreement, amending the Credit and Guaranty Agreement dated as of April 29, 2016 (as previously amended, the April 2016 Credit Agreement; the revolving credit facility established thereunder, the April 2016 Revolving Facility), which increased the total aggregate commitments under the April 2016 Revolving Facility to \$450 million from \$300 million. In addition, certain lenders party to the April 2016 Credit Agreement extended the maturity date of a substantial portion of their commitments under the April 2016 Revolving Facility to October 2024 from October 2023. As of December 31, 2022, there were no borrowings outstanding under the April 2016 Revolving Facility.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

December 2016 Credit Facilities

In December 2016, American and AAG entered into the Amended and Restated Credit and Guaranty Agreement, dated as of December 15, 2016 (as amended, the December 2016 Credit Agreement; the term loan facility established thereunder, the December 2016 Term Loan Facility; and together with the revolving credit facility contemplated but never established thereunder, the December 2016 Credit Facilities). In December 2022, American repaid in full the \$1.2 billion aggregate principal amount of outstanding term loans under the December 2016 Term Loan Facility which was due to mature in December 2023 and terminated the December 2016 Credit Facilities.

Certain details of our 2013 and 2014 Credit Facilities (collectively referred to as the Credit Facilities) and April 2016 Revolving Facility are shown in the table below as of December 31, 2022:

	2013 Credit Facilities		2014 Credit Facilities		April 2016 Revolving Facility
	2013 Term Loan	2013 Revolving Facility	2014 Term Loan	2014 Revolving Facility	
Aggregate principal issued or credit facility availability (in millions)	\$1,919	\$736	\$1,280	\$1,631	\$446
Principal outstanding or drawn (in millions)	\$1,752	\$—	\$1,196	\$—	\$—
Maturity date	June 2025	October 2024	January 2027	October 2024	October 2024
LIBOR margin	1.75%	2.00%	1.75%	2.00%	2.00%

The term loans under each of the Credit Facilities are repayable in annual installments in an amount equal to 1.00% of the aggregate principal amount issued, with any unpaid balance due on the respective maturity dates. Voluntary prepayments may be made by American at any time.

The 2013 Revolving Facility, 2014 Revolving Facility and April 2016 Revolving Facility provide that American may from time to time borrow, repay and reborrow loans thereunder. The 2013 Revolving Facility and 2014 Revolving Facility have the ability to issue letters of credit thereunder in an aggregate amount outstanding at any time up to \$100 million and \$200 million, respectively. The 2013 Revolving Facility, 2014 Revolving Facility and April 2016 Revolving Facility are each subject to an undrawn annual fee of 0.63%.

Subject to certain limitations and exceptions, the Credit Facilities and April 2016 Revolving Facility are secured by collateral, including certain spare parts, slots, route authorities, simulators and leasehold rights. American has the ability to make future modifications to the collateral pledged, subject to certain restrictions. American's obligations under the Credit Facilities and April 2016 Revolving Facility are guaranteed by AAG. The Credit Facilities and April 2016 Revolving Facility contain events of default customary for similar financings, including cross default and cross-acceleration to other material indebtedness.

(b) Senior Secured Notes

11.75% Senior Secured Notes

In June 2020, American issued \$2.5 billion aggregate principal amount of 11.75% senior secured notes due 2025 (the 11.75% Senior Secured Notes) at a price equal to 99% of their aggregate principal amount. The 11.75% Senior Secured Notes bear interest at a rate of 11.75% per annum (subject to increase if the collateral coverage ratio described below is not met). Interest on the 11.75% Senior Secured Notes is payable semiannually in arrears on January 15 and July 15 of each year, which began on January 15, 2021. The 11.75% Senior Secured Notes will mature on July 15, 2025. The obligations of American under the 11.75% Senior Secured Notes are fully and unconditionally guaranteed on a senior unsecured basis by AAG.

The 11.75% Senior Secured Notes are American's senior secured obligations. Subject to certain limitations and exceptions, the 11.75% Senior Secured Notes are secured on a first-lien basis by security interests in certain assets, rights and properties utilized by American in providing its scheduled air carrier services to and from certain airports in the United States and certain airports in Australia, Canada, the Caribbean, Central America, China, Hong Kong, Japan, Mexico, South Korea, and Switzerland (collectively, the First Lien 11.75% Senior Secured Notes Collateral). American's obligations with respect to the 11.75% Senior Secured Notes are also secured on a second-lien basis by security interests.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

in certain assets, rights and properties utilized by American in providing its scheduled air carrier services to and from certain airports in the United States and certain airports in the European Union and the United Kingdom (collectively, the Second Lien 11.75% Senior Secured Notes Collateral and together with the First Lien 11.75% Senior Secured Notes Collateral, the 11.75% Senior Secured Notes Collateral). The Second Lien 11.75% Senior Secured Notes Collateral also secures the 2014 Credit Facilities on a first-lien basis.

American may redeem the 11.75% Senior Secured Notes, in whole at any time or in part from time to time, at a redemption price equal to 100% of the principal amount of the 11.75% Senior Secured Notes being redeemed plus a make whole premium, together with accrued and unpaid interest thereon, if any, to (but not including) the redemption date.

10.75% Senior Secured Notes

On September 25, 2020 (the 10.75% Senior Secured Notes Closing Date), American issued \$1.0 billion in initial principal amount of senior secured IP notes (the IP Notes) and \$200 million in initial principal amount of senior secured LGA/DCA notes (the LGA/DCA Notes and together with the IP Notes, the 10.75% Senior Secured Notes). The obligations of American under the 10.75% Senior Secured Notes are fully and unconditionally guaranteed (the 10.75% Senior Secured Notes Guarantees) on a senior unsecured basis by AAG. The 10.75% Senior Secured Notes bear interest at a rate of 10.75% per annum in cash. Interest on the 10.75% Senior Secured Notes is payable semiannually in arrears on September 1 and March 1 of each year, which began on March 1, 2021. The 10.75% Senior Secured Notes will mature on February 15, 2026.

The IP Notes are secured by a first lien security interest on certain intellectual property of American, including the "American Airlines" trademark and the "aa.com" domain name in the United States and certain foreign jurisdictions (the IP Collateral), and a second lien on certain slots related to American's operations at New York LaGuardia and Ronald Reagan Washington National airports and certain other assets (the LGA/DCA Collateral and together with the IP Collateral, the 10.75% Senior Secured Notes Collateral). Subject to certain conditions, American will be permitted to incur up to \$4.0 billion of additional pari passu debt and unlimited second lien debt secured by the IP Collateral securing the IP Notes. The LGA/DCA Notes are secured by a first lien security interest in the LGA/DCA Collateral.

On or prior to the fourth anniversary of the 10.75% Senior Secured Notes Closing Date, American may redeem all or any part of the 10.75% Senior Secured Notes, at its option, at a redemption price equal to 100% of the principal amount of the 10.75% Senior Secured Notes redeemed plus a make whole premium, together with accrued and unpaid interest thereon, if any. After the fourth anniversary of the 10.75% Senior Secured Notes Closing Date and on or prior to the fifth anniversary of the 10.75% Senior Secured Notes Closing Date, American may redeem all or any part of the 10.75% Senior Secured Notes, at its option, at a redemption price equal to 105.375% of the principal amount of the 10.75% Senior Secured Notes redeemed, together with accrued and unpaid interest thereon, if any. After the fifth anniversary of the 10.75% Senior Secured Notes Closing Date, American may redeem all or any part of the 10.75% Senior Secured Notes, at its option, at par, together with accrued and unpaid interest thereon, if any.

(c) AAdvantage Financing

On March 24, 2021 (the AAdvantage Financing Closing Date), American and AAdvantage Loyalty IP Ltd., a Cayman Islands exempted company incorporated with limited liability and an indirect wholly-owned subsidiary of American (Loyalty Issuer and, together with American, the AAdvantage Issuers), completed the offering of \$3.5 billion aggregate principal amount of 5.50% Senior Secured Notes due 2026 (the 2026 Notes) and \$3.0 billion aggregate principal amount of 5.75% Senior Secured Notes due 2029 (the 2029 Notes, and together with the 2026 Notes, the AAdvantage Notes). The AAdvantage Notes are fully and unconditionally guaranteed on a senior unsecured basis by the SPV Guarantors and AAG.

Concurrent with the issuance of the AAdvantage Notes, the AAdvantage Issuers, as co-borrowers, entered into a term loan credit and guaranty agreement, dated March 24, 2021, providing for a \$3.5 billion term loan facility (the AAdvantage Term Loan Facility and collectively with the AAdvantage Notes, the AAdvantage Financing) and pursuant to which the full \$3.5 billion of term loans (the AAdvantage Loans) were drawn on the AAdvantage Financing Closing Date. The AAdvantage Loans are fully and unconditionally guaranteed (together with the AAdvantage Note Guarantees, the AAdvantage Guarantees) by the SPV Guarantors and AAG.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Subject to certain permitted liens and other exceptions, the AAdvantage Notes, AAdvantage Loans and AAdvantage Guarantees provided by the SPV Guarantors are secured by a first-priority security interest in, and pledge of, various agreements with respect to the AAdvantage program (the AAdvantage Agreements) (including all payments thereunder) and certain IP Licenses, certain deposit accounts that will receive cash under the AAdvantage Agreements, certain reserve accounts, the equity of each of Loyalty Issuer and the SPV Guarantors and substantially all other assets of Loyalty Issuer and the SPV Guarantors including American's rights to certain data and other intellectual property used in the AAdvantage program (subject to certain exceptions) (collectively, the AAdvantage Collateral).

Payment Terms of the AAdvantage Notes and AAdvantage Loans under the AAdvantage Term Loan Facility

Interest on the AAdvantage Notes is payable in cash, quarterly in arrears on the 20th day of each January, April, July and October (each, an AAdvantage Payment Date), which began on July 20, 2021. The 2026 Notes will mature on April 20, 2026, and the 2029 Notes will mature on April 20, 2029. The outstanding principal on the 2026 Notes will be repaid in quarterly installments of \$292 million on each AAdvantage Payment Date, beginning on July 20, 2023. The outstanding principal on the 2029 Notes will be repaid in quarterly installments of \$250 million on each AAdvantage Payment Date, beginning on July 20, 2026.

The AAdvantage Issuers may redeem the AAdvantage Notes, at their option, in whole at any time or in part from time to time, at a redemption price equal to 100% of the principal amount of the AAdvantage Notes redeemed plus a "make-whole" premium, together with accrued and unpaid interest to the date of redemption.

The scheduled maturity date of the AAdvantage Loans under the AAdvantage Term Loan Facility is April 20, 2028. The AAdvantage Loans bear interest at a variable rate equal to LIBOR (but not less than 0.75% per annum), plus a margin of 4.75% per annum, payable on each AAdvantage Payment Date. The outstanding principal on the AAdvantage Loans will be repaid in quarterly installments of \$175 million, on each AAdvantage Payment Date beginning with the AAdvantage Payment Date in July 2023. These amortization payments (as well as those for the AAdvantage Notes) will be subject to the occurrence of certain early amortization events, including the failure to satisfy a minimum debt service coverage ratio at specified determination dates.

Prepayment of some or all of the AAdvantage Loans outstanding under the AAdvantage Term Loan Facility is permitted, although payment of an applicable premium is required as specified in the AAdvantage Term Loan Facility.

The AAdvantage Indenture and the AAdvantage Term Loan Facility contain mandatory prepayment provisions triggered upon (i) the issuance or incurrence by Loyalty Issuer or the SPV Guarantors of certain indebtedness or (ii) the receipt by American or its subsidiaries of net proceeds from pre-paid frequent flyer (i.e., AAdvantage) mile sales exceeding \$505 million. Each of these prepayments would also require payment of an applicable premium. Certain other events, including the occurrence of a change of control with respect to AAG and certain AAdvantage Collateral sales exceeding a specified threshold, will also trigger mandatory repurchase or mandatory prepayment provisions under the AAdvantage Indenture and the AAdvantage Term Loan Facility, respectively.

(d) EETCs

2021-1 Aircraft EETCs

In November 2021, American created two pass-through trusts which issued \$960 million aggregate face amount of Series 2021-1 Class A and Class B EETCs (the 2021-1 Aircraft EETCs) in connection with the financing of 26 aircraft previously delivered or originally scheduled to be delivered to American through September 2022 (the 2021-1 Aircraft). In 2021, \$94 million of the proceeds had been used to purchase equipment notes issued by American in connection with the financing of five aircraft under the 2021-1 Aircraft EETCs, all of which was used to repay existing indebtedness. During 2022, \$866 million of proceeds had been used to purchase equipment notes issued by American in connection with the financing of 21 aircraft under the 2021-1 Aircraft EETCs. As of December 31, 2022, there are no remaining proceeds held in escrow, and all proceeds have been used to purchase equipment notes issued by American. Interest and principal payments on equipment notes issued in connection with the 2021-1 Aircraft EETCs are payable semi-annually in January and July of each year. Interest payments began in July 2022 and principal payments began in January 2023.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Certain information regarding the 2021-1 Aircraft EETC equipment notes, as of December 31, 2022, is set forth in the table below:

	2021-1 Aircraft EETCs	
	Series A	Series B
Aggregate principal issued	\$758 million	\$202 million
Fixed interest rate per annum	2.875%	3.95%
Maturity date	July 2034	July 2030

(e) Equipment Loans and Other Notes Payable Issued in 2022

In 2022, American entered into agreements under which it borrowed \$205 million in connection with the financing of certain aircraft. Debt incurred under these agreements mature in 2034 and bear interest at variable rates (comprised of the Secured Overnight Financing Rate (SOFR) plus an applicable margin) averaging 6.77% as of December 31, 2022.

(f) Special Facility Revenue Bonds

In January 2020, American and British Airways announced the start of construction projects to upgrade New York's JFK Terminal 8. The construction project is expected to be fully completed in early 2023 and is estimated to cost \$439 million, of which \$298 million was funded with proceeds of the special facility revenue bonds issued by the New York Transportation Development Corporation (NYTDC) on behalf of American in June 2020 (the 2020 JFK Bonds) and approximately \$84 million of which was funded with proceeds of the approximately \$150 million of special facility revenue bonds NYTDC issued in June 2021 (the 2021 JFK Bonds).

American is required to pay debt service on the 2021 JFK Bonds through payments under a loan agreement with NYTDC (as amended), and American and AAG guarantee the 2021 JFK Bonds. American continues to pay debt service on the outstanding bonds issued by NYTDC on behalf of American in 2016 and 2020 (the 2016 and 2020 JFK Bonds) and American and AAG continue to guarantee the 2016 and 2020 JFK Bonds. American's and AAG's obligations under these guarantees are secured by a leasehold mortgage on American's lease of Terminal 8 and related property from the Port Authority of New York and New Jersey.

The 2021 JFK Bonds, in aggregate, were priced at par value. The gross proceeds from the issuance of the 2021 JFK Bonds were approximately \$150 million. Of this amount, \$4 million was used to fund the costs of issuance of the 2021 JFK Bonds, \$62 million was used to fund the redemption of the 2016 and 2020 JFK Bonds due August 2021, with the remaining amount of proceeds received held in restricted cash and short-term investments on the consolidated balance sheet and to be used to finance a portion of the cost of the renovation and expansion of Terminal 8. The 2021 JFK Bonds are comprised of term bonds, \$70 million of which bear interest at 2.25% per annum and mature on August 1, 2026, and \$80 million of which bear interest at 3.00% per annum and mature on August 1, 2031. As of December 31, 2022, \$72 million of proceeds funded by the issuance of the 2020 and 2021 JFK Bonds are included in restricted cash and short-term investments on the accompanying consolidated balance sheet.

(g) PSP Promissory Notes

As partial compensation to the U.S. Government for the provision of financial assistance under the PSP Agreements, AAG issued promissory notes to Treasury (PSP1 Promissory Note, PSP2 Promissory Note and PSP3 Promissory Note, collectively the PSP Promissory Notes), in the aggregate principal sum of \$3.7 billion which provides for the guarantee of our obligations under the PSP Promissory Notes by the Subsidiaries.

The PSP Promissory Notes bear interest on the outstanding principal amount at a rate equal to 1.00% per annum until the fifth anniversary of the applicable PSP closing date and 2.00% plus an interest rate based on SOFR per annum or other benchmark replacement rate consistent with customary market conventions (but not to be less than 0.00%) thereafter until the tenth anniversary of the applicable PSP closing date, and interest accrued thereon will be payable in arrears on the last business day of March and September of each year. The aggregate principal amount outstanding under the PSP Promissory Notes, together with all accrued and unpaid interest thereon and all other amounts payable under the PSP Promissory Notes, will be due and payable on the maturity date.

The PSP Promissory Notes are our senior unsecured obligation and each guarantee of the PSP Promissory Notes is the senior unsecured obligation of each of the Subsidiaries, respectively.

[Table of Contents](#)**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.**

We may, at any time and from time to time, voluntarily prepay amounts outstanding under the PSP Promissory Notes, in whole or in part, without penalty or premium. Within 30 days of the occurrence of certain change of control triggering events, we are required to prepay the aggregate outstanding principal amount of the PSP Promissory Notes at such time, together with any accrued interest or other amounts owing under the PSP Promissory Notes at such time.

(h) 6.50% Convertible Senior Notes

In June 2020, AAG completed the public offering of \$1.0 billion aggregate principal amount of AAG's 6.50% convertible senior notes due 2025 (the Convertible Notes). The Convertible Notes are fully and unconditionally guaranteed by American on a senior unsecured basis (the Convertible Notes Guarantee). The net proceeds from the Convertible Notes were approximately \$970 million, after deducting the underwriters' discounts and commissions and our estimated offering expenses.

The Convertible Notes bear interest at a rate of 6.50% per annum. Interest on the Convertible Notes is payable semiannually in arrears on January 1 and July 1 of each year, which began on January 1, 2021. The Convertible Notes will mature on July 1, 2025, unless earlier converted, redeemed or repurchased by us.

Upon conversion, AAG will pay or deliver, as the case may be, cash, shares of AAG common stock or a combination of cash and shares of AAG common stock, at AAG's election. The initial conversion rate is 61.7284 shares of AAG common stock per \$1,000 principal amount of Convertible Notes (equivalent to an initial conversion price of approximately \$16.20 per share of AAG common stock). The conversion rate is subject to adjustment in some events as described in the Convertible Notes Indenture.

Holders may convert their Convertible Notes at their option only in the following circumstances: (1) during any calendar quarter (and only during such calendar quarter) commencing after the calendar quarter ending on September 30, 2020, if the last reported sale price per share of AAG common stock exceeds 130% of the conversion price for each of at least 20 trading days (whether or not consecutive) during the 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter; (2) during the five consecutive business days immediately after any 10 consecutive trading day period (such 10 consecutive trading day period, the measurement period) in which the trading price per \$1,000 principal amount of Convertible Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price per share of AAG common stock on such trading day and the conversion rate on such trading day; (3) upon the occurrence of certain corporate events or distributions on AAG common stock; (4) if AAG calls such Convertible Notes for redemption; and (5) at any time from, and including, April 1, 2025 until the close of business on the scheduled trading day immediately before the maturity date of the Convertible Notes.

In addition, following certain corporate events that occur prior to the maturity date or upon AAG's issuance of a notice of redemption, AAG will increase the conversion rate for a holder who elects to convert its Convertible Notes in connection with such corporate event or during the related redemption period in certain circumstances by a specified number of shares of AAG common stock as described in the Convertible Notes Indenture.

AAG will not have the right to redeem the Convertible Notes prior to July 5, 2023. On or after July 5, 2023 and on or before the 20th scheduled trading day immediately before the maturity date, AAG may redeem the Convertible Notes, in whole or in part, if the last reported sale price of AAG common stock has been at least 130% of the conversion price then in effect on (1) each of at least 20 trading days (whether or not consecutive) during the 30 consecutive trading days ending on, and including, the trading day immediately before the date AAG sends the related redemption notice; and (2) the trading day immediately before the date AAG sends such notice. In the case of any optional redemption, AAG will redeem the Convertible Notes at a redemption price equal to 100% of the principal amount of such Convertible Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date.

The following table provides information relating to the Convertible Notes as of December 31, 2022 and 2021 (in millions):

	December 31,	
	2022	2021
Principal amount	\$ 1,000	\$ 1,000
Unamortized debt discount	(16)	(22)
Net carrying amount	\$ 984	\$ 978

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

The effective interest rate for the Convertible Notes was 7% for each of the years ended December 31, 2022 and 2021, and 20% for the year ended December 31, 2020. As of January 1, 2021, we early adopted ASU 2020-06 related to convertible instruments. Accordingly, our unamortized debt discount as of January 1, 2021 was reduced by \$389 million, increasing the liability and decreasing the effective interest rate on the Convertible Notes from approximately 20% at December 31, 2020 to approximately 7% at December 31, 2021. Interest recognized for the Convertible Notes is as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Contractual coupon interest	\$ 65	\$ 65	\$ 33
Non-cash amortization of debt discount	6	5	28
Total interest expense	\$ 71	\$ 70	\$ 61

At December 31, 2022, the if-converted value of the Convertible Notes did not exceed the principal amount. The last reported sale price per share of our common stock (as defined in the Convertible Notes Indenture) did not exceed 130% of the conversion price of the Convertible Notes for at least 20 of the 30 consecutive trading days ending on December 31, 2022. Accordingly, pursuant to the terms of the Convertible Notes Indenture, the holders of the Convertible Notes cannot convert at their option at any time during the quarter ending March 31, 2023. Each \$1,000 principal amount of Convertible Notes is convertible at a rate of 61.7284 shares of our common stock, subject to adjustment as provided in the Convertible Notes Indenture. We may settle conversions by paying or delivering, as applicable, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election.

(i) Unsecured Senior Notes

3.75% Senior Notes

In February 2020, AAG issued \$500 million aggregate principal amount of 3.75% senior notes due 2025 (the 3.75% Senior Notes). The 3.75% Senior Notes bear interest at a rate of 3.75% per annum, payable semiannually in arrears in March and September of each year, which began in September 2020. The 3.75% Senior Notes mature in March 2025.

The 3.75% Senior Notes are senior unsecured obligations of AAG. These Senior Notes are fully and unconditionally guaranteed by American. The indentures for these Senior Notes contain covenants and events of default generally customary for similar financings.

Other Financing Activities

During the year ended December 31, 2022, we repurchased \$349 million of unsecured notes in the open market.

Guarantees

As of December 31, 2022, AAG had issued guarantees covering approximately \$18.3 billion of American's secured debt (and interest thereon), including the Credit Facilities, the AAdvantage Financing, certain EETC financings and \$1.1 billion of American's special facility revenue bonds (and interest thereon).

Certain Covenants

Our debt agreements contain customary terms and conditions as well as various affirmative, negative and financial covenants that, among other things, may restrict the ability of us and our subsidiaries to incur additional indebtedness, pay dividends or repurchase stock. Our debt agreements also contain customary change of control provisions, which may require us to repay or redeem such indebtedness upon certain events constituting a change of control under the relevant agreement, in certain cases at a premium. Certain of our debt financing agreements (including our secured notes, term loans, revolving credit facilities and spare engine EETCs) contain loan to value (LTV), collateral coverage or peak debt service coverage ratio covenants and certain agreements require us to appraise the related collateral annually or semiannually. Pursuant to such agreements, if the applicable LTV, collateral coverage or peak debt service coverage ratio exceeds or falls below a specified threshold, as the case may be, we will be required, as applicable, to pledge additional qualifying collateral (which in some cases may include cash or investment securities), withhold additional cash in certain accounts, or pay down such financing, in whole or in part, or the interest rate for the relevant financing will be increased. Additionally, a significant portion of our debt financing agreements contain covenants requiring us to maintain an aggregate of at least \$2.0 billion of unrestricted cash and cash equivalents and amounts available to be drawn under

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

revolving credit facilities, and our AAdvantage Financing contains a peak debt service coverage ratio, pursuant to which failure to comply with a certain threshold may result in early repayment, in whole or in part, of the AAdvantage Financing.

Specifically, we are required to meet certain collateral coverage tests for our Credit Facilities, April 2016 Revolving Facility, 10.75% Senior Secured Notes and 11.75% Senior Secured Notes, as described below:

	2013 Credit Facilities	2014 Credit Facilities	April 2016 Revolving Facility	10.75% Senior Secured Notes	11.75% Senior Secured Notes
Frequency of Appraisals of Appraised Collateral	Annual	Annual	Annual	Annual	Semi-Annual
LTV Requirement		1.6x Collateral valuation to amount of debt outstanding (62.5% LTV)			
LTV as of Last Measurement Date	34.4%	17.8%	Not Applicable	7.2%	32.5%
Collateral Description	Generally, certain slots, route authorities and airport gate leasehold rights used by American to operate all services between the U.S. and South America	Generally, certain slots, route authorities and airport gate leasehold rights used by American to operate certain services between the U.S. and European Union (including London Heathrow)	Generally, certain spare parts	Generally, certain DCA slots, certain LGA slots, certain simulators and certain leasehold rights and, in the case of the IP Notes, certain intellectual property of American	Generally, certain slots, route authorities and airport gate leasehold rights used by American to operate certain services between the U.S. and the Caribbean, Central America and various other countries

At December 31, 2022, we were in compliance with the applicable collateral coverage tests as of the most recent measurement dates.

5. Leases

We lease certain aircraft and engines, including aircraft under capacity purchase agreements. As of December 31, 2022, we operated 722 leased aircraft, with remaining terms ranging from less than one year to 11 years.

At each airport where we conduct flight operations, we have agreements, generally with a governmental unit or authority, for the use of passenger, operations and baggage handling space as well as runways and taxiways. These agreements, particularly in the U.S., often contain provisions for periodic adjustments to rates and charges applicable under such agreements. These rates and charges also vary with our level of operations and the operations of the airport. Because of the variable nature of these rates, these leases are not recorded on our consolidated balance sheets as a ROU asset or a lease liability. Additionally, at our hub locations and in certain other cities we serve, we lease administrative offices, catering, cargo, training, maintenance and other facilities.

The components of lease expense were as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Operating lease cost	\$ 2,007	\$ 2,012	\$ 1,957
Finance lease cost:			
Amortization of assets	143	107	92
Interest on lease liabilities	47	44	38
Variable lease cost	2,580	2,471	1,801
Total net lease cost	\$ 4,777	\$ 4,634	\$ 3,888

Included in the table above is \$242 million, \$190 million and \$172 million of operating lease cost under our capacity purchase agreement with Republic for the years ended December 31, 2022, 2021 and 2020, respectively. We hold a 25% equity interest in Republic Holdings, the parent company of Republic.

Additionally, not included in the table above, we recognized \$109 million in cash special charges in 2020 related to the impairment of ROU assets and lease return costs resulting from our decision to retire certain leased aircraft earlier than planned driven by the severe decline in air travel due to the COVID-19 pandemic.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Supplemental balance sheet information related to leases was as follows (in millions, except lease term and discount rate):

	December 31,	
	2022	2021
Operating leases:		
Operating lease ROU assets	\$ 8,094	\$ 7,850
Current operating lease liabilities	\$ 1,465	\$ 1,507
Noncurrent operating lease liabilities	6,559	6,610
Total operating lease liabilities	<u>\$ 8,024</u>	<u>\$ 8,117</u>
Finance leases:		
Property and equipment, at cost	\$ 1,364	\$ 1,201
Accumulated amortization	(779)	(653)
Property and equipment, net	<u>\$ 585</u>	<u>\$ 548</u>
Current finance lease liabilities	\$ 216	\$ 174
Noncurrent finance lease liabilities	545	563
Total finance lease liabilities	<u>\$ 761</u>	<u>\$ 737</u>
Weighted average remaining lease term (in years):		
Operating leases	8.3	7.6
Finance leases	5.1	4.6
Weighted average discount rate:		
Operating leases	7.4 %	6.3 %
Finance leases	7.2 %	6.1 %

Supplemental cash flow and other information related to leases was as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	\$ 1,990	\$ 2,053	\$ 2,028
Operating cash flows from finance leases	47	37	39
Financing cash flows from finance leases	190	126	114
Non-cash transactions:			
ROU assets acquired through operating leases	1,483	1,386	917
Property and equipment acquired through finance leases	46	180	11
Operating lease conversion to finance lease	107	102	5
Finance lease conversion to operating lease	3	—	—
Gain on sale leaseback transactions, net	2	25	107

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Maturities of lease liabilities were as follows (in millions):

	December 31, 2022	
	Operating Leases	Finance Leases
2023	\$ 1,954	\$ 265
2024	1,663	215
2025	1,324	141
2026	1,054	115
2027	862	69
2028 and thereafter	3,918	87
Total lease payments	10,775	892
Less: Imputed interest	(2,751)	(131)
Total lease obligations	8,024	761
Less: Current obligations	(1,465)	(216)
Long-term lease obligations	\$ 6,559	\$ 545

As of December 31, 2022, we had additional operating lease commitments that have not yet commenced of approximately \$1.1 billion for nine Boeing 787 Family aircraft scheduled to be delivered in 2023 through 2024 with lease terms of 10 years.

6. Income Taxes

The significant components of the income tax provision (benefit) were (in millions):

	Year Ended December 31,		
	2022	2021	2020
Current income tax benefit:			
State, local and foreign	\$ (6)	\$ —	\$ —
Deferred income tax provision (benefit):			
Federal	59	(508)	(2,335)
State and local	6	(47)	(233)
Deferred income tax provision (benefit)	65	(555)	(2,568)
Total income tax provision (benefit)	\$ 59	\$ (555)	\$ (2,568)

The income tax provision (benefit) differed from amounts computed at the statutory federal income tax rate as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Statutory income tax provision (benefit)	\$ 39	\$ (535)	\$ (2,405)
State, local and foreign income tax benefit, net of federal tax effect	—	(37)	(183)
Book expenses not deductible for tax purposes	22	23	22
Other, net	(2)	(6)	(2)
Income tax provision (benefit)	\$ 59	\$ (555)	\$ (2,568)

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

The components of our deferred tax assets and liabilities were (in millions):

	December 31,	
	2022	2021
Deferred tax assets:		
Operating loss and other carryforwards	\$ 4,679	\$ 4,612
Loyalty program liability	1,809	1,903
Leases	1,819	1,833
Pensions	474	941
Postretirement benefits other than pensions	179	214
Rent expense	130	92
Other	742	784
Total deferred tax assets	9,832	10,379
Valuation allowance	(19)	(34)
Net deferred tax assets	9,813	10,345
Deferred tax liabilities:		
Accelerated depreciation and amortization	(4,630)	(4,747)
Leases	(1,832)	(1,767)
Other	(262)	(284)
Total deferred tax liabilities	(6,724)	(6,798)
Net deferred tax asset	\$ 3,089	\$ 3,547

At December 31, 2022, we had approximately \$16.2 billion of gross federal net operating losses (NOLs) and \$4.3 billion of other carryforwards available to reduce future federal taxable income, of which \$5.9 billion will expire beginning in 2024 if unused and \$14.6 billion can be carried forward indefinitely. We also had approximately \$6.0 billion of NOL carryforwards to reduce future state taxable income at December 31, 2022, which will expire in taxable years 2022 through 2042 if unused.

Our ability to use our NOLs and other carryforwards depends on the amount of taxable income generated in future periods. We provide a valuation allowance for our deferred tax assets, which include our NOLs, when it is more likely than not that some portion, or all of our deferred tax assets, will not be realized. We consider all available positive and negative evidence and make certain assumptions in evaluating the realizability of our deferred tax assets. Many factors are considered that impact our assessment of future profitability, including conditions which are beyond our control, such as the health of the economy, the availability and price volatility of aircraft fuel and travel demand. We have determined that positive factors outweigh negative factors in the determination of the realizability of our deferred tax assets. There can be no assurance that an additional valuation allowance on our net deferred tax assets will not be required. Such valuation allowance could be material.

Our ability to deduct our NOL carryforwards and to utilize certain other available tax attributes can be substantially constrained under the general annual limitation rules of Section 382 where an "ownership change" has occurred. Substantially all of our remaining federal NOL carryforwards attributable to US Airways Group are subject to limitation under Section 382; however, our ability to utilize such NOL carryforwards is not anticipated to be effectively constrained as a result of such limitation. Similar limitations may apply for state income tax purposes. Our ability to utilize any new NOL carryforwards arising after the ownership changes is not affected by the annual limitation rules imposed by Section 382 unless another ownership change occurs. Under the Section 382 limitation, cumulative stock ownership changes among material stockholders exceeding 50% during a rolling three-year period can potentially limit our future use of NOLs and tax credits.

In 2022, we recorded an income tax provision of \$59 million, with an effective rate of approximately 32%, which was substantially non-cash. Substantially all of our income before income taxes is attributable to the United States.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

The Inflation Reduction Act (IRA) was enacted on August 16, 2022, which among other provisions, introduced a corporate minimum tax on certain corporations with average adjusted financial statement income over a three-tax year period in excess of \$1.0 billion, an excise tax on certain stock repurchases by certain covered corporations for taxable years beginning after December 31, 2022, and several tax incentives to promote clean energy. Based on our current analysis and pending future guidance to be issued by the U.S. Department of Treasury, we do not believe these provisions will have a material impact on our consolidated financial statements.

We file our tax returns as prescribed by the tax laws of the jurisdictions in which we operate. Our 2019 through 2021 tax years are still subject to examination by the Internal Revenue Service. Various state and foreign jurisdiction tax years remain open to examination and we are under examination, in administrative appeals, or engaged in tax litigation in certain jurisdictions. We believe that the effect of any assessments will not be material to our consolidated financial statements.

The amount of, and changes to, our uncertain tax positions were not material in any of the years presented. We accrue interest and penalties related to unrecognized tax benefits in interest expense and operating expense, respectively.

7. Fair Value Measurements

Assets Measured at Fair Value on a Recurring Basis

Fair value is defined as the price that would be received from the sale of an asset or paid to transfer a liability (i.e. an exit price) on the measurement date in an orderly transaction between market participants in the principal or most advantageous market for the asset or liability. Accounting standards include disclosure requirements around fair values used for certain financial instruments and establish a fair value hierarchy. The hierarchy prioritizes valuation inputs into three levels based on the extent to which inputs used in measuring fair value are observable in the market. Each fair value measurement is reported in one of three levels:

- Level 1 – Observable inputs such as quoted prices in active markets;
- Level 2 – Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and
- Level 3 – Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

When available, we use quoted market prices to determine the fair value of our financial assets. If quoted market prices are not available, we measure fair value using valuation techniques that use, when possible, current market-based or independently-sourced market parameters, such as interest rates and currency rates.

We utilize the market approach to measure the fair value of our financial assets. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets. Our short-term investments, restricted cash and restricted short-term investments classified as Level 2 primarily utilize broker quotes in a non-active market for valuation of these securities. No changes in valuation techniques or inputs occurred during the year ended December 31, 2022.

Assets measured at fair value on a recurring basis are summarized below (in millions):

	Fair Value Measurements as of December 31, 2022				
	Total	Level 1	Level 2	Level 3	
Short-term investments ^{(1), (2)} :					
Money market funds	\$ 732	\$ 732	\$ —	\$ —	
Corporate obligations	3,688	—	3,688	—	
Bank notes/certificates of deposit/time deposits	3,655	—	3,655	—	
Repurchase agreements	450	—	450	—	
	8,525	732	7,793	—	
Restricted cash and short-term investments ^{(1), (3)}	995	535	460	—	
Long-term investments ⁽⁴⁾	245	245	—	—	
Total	\$ 9,765	\$ 1,512	\$ 8,253	\$ —	

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

	Fair Value Measurements as of December 31, 2021			
	Total	Level 1	Level 2	Level 3
Short-term investments ⁽¹⁾:				
Money market funds	\$ 108	\$ 108	\$ —	\$ —
Corporate obligations	8,665	—	8,665	—
Bank notes/certificates of deposit/time deposits	2,195	—	2,195	—
Repurchase agreements	1,190	—	1,190	—
	12,158	108	12,050	—
Restricted cash and short-term investments ^{(1), (3)}	990	654	336	—
Long-term investments ⁽⁴⁾	239	239	—	—
Total	\$ 13,387	\$ 1,001	\$ 12,386	\$ —

⁽¹⁾ All short-term investments are classified as available-for-sale and stated at fair value. Unrealized gains and losses are recorded in accumulated other comprehensive loss at each reporting period. There were no credit losses.

⁽²⁾ Our short-term investments as of December 31, 2022 mature in one year or less.

⁽³⁾ Restricted cash and short-term investments primarily include collateral held to support workers' compensation obligations, collateral associated with the payment of interest for the AAdvantage Financing and money market funds to be used to finance a substantial portion of the cost of the renovation and expansion of Terminal 8 at JFK.

⁽⁴⁾ Long-term investments include our equity investments in China Southern Airlines Company Limited (China Southern Airlines) and Vertical Aerospace Ltd. (Vertical) and as of December 31, 2022, our long-term investments also include GOL. See Note 8 for further information on our equity investments.

Fair Value of Debt

The fair value of our long-term debt was estimated using quoted market prices or discounted cash flow analyses based on our current estimated incremental borrowing rates for similar types of borrowing arrangements. If our long-term debt was measured at fair value, it would have been classified as Level 2 except for \$3.7 billion as of December 31, 2022 and December 31, 2021, which would have been classified as Level 3 in the fair value hierarchy. The fair value of the Convertible Notes, which would have been classified as Level 2, was \$1.1 billion and \$1.4 billion as of December 31, 2022 and December 31, 2021, respectively.

The carrying value and estimated fair value of our long-term debt, including current maturities, were as follows (in millions):

	December 31, 2022		December 31, 2021	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Long-term debt, including current maturities	\$ 34,903	\$ 32,569	\$ 37,323	\$ 38,567

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

8. Investments

To help expand our network and as part of our ongoing commitment to sustainability, we enter into various commercial relationships or other strategic partnerships, including equity investments, with other airlines and companies. Our equity investments are reflected in other assets on our consolidated balance sheets. Our share of equity method investees' financial results and changes in fair value are recorded in nonoperating other income, net on the consolidated statements of operations.

Our equity investments ownership interest and carrying value were:

Accounting Treatment	Ownership Interest		Carrying Value (in millions)	
	December 31,		December 31,	
	2022	2021	2022	2021
Republic Holdings	Equity Method	25.0 %	25.0 %	\$ 222 \$ 202
China Southern Airlines	Fair Value	1.5 %	1.8 %	176 163
Other investments ^(a)	Various			212 83
Total			\$ 610	\$ 448

(a) Other investments

Other investments primarily include our investment in Vertical, which is accounted for at fair value, and in 2022, our investments in JetSmart Airlines SpA (JetSMART) and GOL.

In April 2022, we completed an investment agreement with GOL, a Brazilian low-cost airline, and invested \$200 million in 22.2 million of newly issued preferred shares. The total consideration of \$200 million was allocated on our consolidated balance sheet as follows based on relative fair values: \$81 million to the preferred shares, which is reflected within other assets, and \$119 million to the indefinite-lived intangible asset derived from the related commercial agreements. The ownership interest is accounted for at fair value based on GOL's stock price and mark-to-market adjustments are recorded to nonoperating other income, net on the consolidated statement of operations.

In December 2022, we completed an investment agreement with JetSMART, an ultra-low-cost carrier operating in South America, representing a 35.4% ownership. This ownership interest is accounted for under the equity method and our portion of JetSMART's financial results is recognized within nonoperating other income, net on the consolidated statement of operations.

9. Employee Benefit Plans

We sponsor defined benefit and defined contribution pension plans for eligible employees. The defined benefit pension plans provide benefits for participating employees based on years of service and average compensation for a specified period of time before retirement. Effective November 1, 2012, substantially all of our defined benefit pension plans were frozen and we began providing enhanced benefits under our defined contribution pension plans for certain employee groups. We use a December 31 measurement date for all of our defined benefit pension plans. We also provide certain retiree medical and other postretirement benefits, including health care and life insurance benefits, to retired employees.

Effective January 1, 2021, health coverage under our retiree medical benefit program that is currently provided to certain retirees age 65 and over who retired prior to November 1, 2012, transitioned from a self-insured plan to a fully-insured Medicare Advantage plan. Benefits coverage has not been reduced and cost shared has not changed as a result of this transition. Due to this transition, as of December 31, 2020, we recognized a negative plan amendment to reduce our benefit obligation, which was included as a component of prior service benefit in accumulated other comprehensive income (loss) (AOCI) and will be amortized over the average remaining life expectancy of all retirees. As of December 31, 2022, \$179 million of prior service benefit remains to be amortized over a remaining period of approximately 11 years.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Benefit Obligations, Fair Value of Plan Assets and Funded Status

The following tables provide a reconciliation of the changes in the pension and retiree medical and other postretirement benefits obligations, fair value of plan assets and a statement of funded status as of December 31, 2022 and 2021:

	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2022	2021
	(In millions)			
Benefit obligation at beginning of period	\$ 18,910	\$ 19,812	\$ 1,098	\$ 1,046
Service cost	3	4	16	12
Interest cost	556	526	30	30
Actuarial gain ^{(1), (2)}	(4,563)	(609)	(167)	(57)
Special termination benefits ⁽³⁾	—	—	—	139
Other	—	(1)	3	—
Benefit payments	(869)	(822)	(74)	(72)
Benefit obligation at end of period	<u>\$ 14,037</u>	<u>\$ 18,910</u>	<u>\$ 906</u>	<u>\$ 1,098</u>
Fair value of plan assets at beginning of period	\$ 14,691	\$ 13,557	\$ 167	\$ 170
Actual return (loss) on plan assets	(1,943)	1,710	(18)	21
Employer contributions ⁽⁴⁾	5	247	58	48
Settlements	—	(1)	—	—
Benefit payments	(869)	(822)	(74)	(72)
Fair value of plan assets at end of period	<u>\$ 11,884</u>	<u>\$ 14,691</u>	<u>\$ 133</u>	<u>\$ 167</u>
Funded status at end of period	<u>\$ (2,153)</u>	<u>\$ (4,219)</u>	<u>\$ (773)</u>	<u>\$ (931)</u>

⁽¹⁾ The 2022 and 2021 pension actuarial gain primarily relates to the change in our weighted average discount rate assumption.

⁽²⁾ The 2022 and 2021 retiree medical and other postretirement benefits actuarial gain primarily relates to the change in our weighted average discount rate assumption and, in 2021, plan experience adjustments.

⁽³⁾ During the first quarter of 2021, we remeasured our retiree medical and other postretirement benefits to account for enhanced healthcare benefits provided to eligible team members who opted into voluntary early retirement programs offered as a result of reductions to our operation due to the COVID-19 pandemic. As a result, during 2021, we recognized a \$139 million special charge for these enhanced healthcare benefits and increased our postretirement benefits obligation by \$139 million.

⁽⁴⁾ In January 2021, we made \$241 million in contributions to our pension plans, including a contribution of \$130 million for the 2020 calendar year that was permitted to be deferred to January 4, 2021 as provided under the CARES Act.

Balance Sheet Position

	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2022	2021
	(In millions)			
<u>As of December 31,</u>				
Current liability	\$ 4	\$ 7	\$ 85	\$ 90
Noncurrent liability	2,149	4,212	688	841
Total liabilities	<u>\$ 2,153</u>	<u>\$ 4,219</u>	<u>\$ 773</u>	<u>\$ 931</u>

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2022	2021
	(In millions)			
Net actuarial loss (gain)	\$ 3,613	\$ 5,252	\$ (505)	\$ (396)
Prior service cost (benefit)	18	47	(148)	(167)
Total accumulated other comprehensive loss (income), pre-tax	<u>\$ 3,631</u>	<u>\$ 5,299</u>	<u>\$ (653)</u>	<u>\$ (563)</u>

Plans with Projected Benefit Obligations Exceeding Fair Value of Plan Assets

	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2022	2021
	(In millions)			
Projected benefit obligation	\$ 14,037	\$ 18,910		
Fair value of plan assets	11,884			14,691

Plans with Accumulated Benefit Obligations Exceeding Fair Value of Plan Assets

	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2022	2021
	(In millions)			
Accumulated benefit obligation	\$ 14,030	\$ 18,899	\$ —	\$ —
Accumulated postretirement benefit obligation	—	—	906	1,098
Fair value of plan assets	11,884	14,691	133	167

Net Periodic Benefit Cost (Income)

	Pension Benefits			Retiree Medical and Other Postretirement Benefits		
	2022	2021	2020	2022	2021	2020
	(In millions)					
Defined benefit plans:						
Service cost	\$ 3	\$ 4	\$ 2	\$ 16	\$ 12	\$ 8
Interest cost	556	526	615	30	30	30
Expected return on assets	(1,138)	(1,084)	(1,010)	(12)	(12)	(11)
Special termination benefits	—	—	—	—	139	410
Settlements	—	—	12	—	—	—
Amortization of:						
Prior service cost (benefit)	28	28	30	(14)	(13)	(135)
Unrecognized net loss (gain)	156	212	164	(30)	(24)	(24)
Net periodic benefit cost (income)	<u>\$ (395)</u>	<u>\$ (314)</u>	<u>\$ (187)</u>	<u>\$ (10)</u>	<u>\$ 132</u>	<u>\$ 278</u>

The service cost component of net periodic benefit cost (income) is included in operating expenses, the cost for the special termination benefits is included in special items, net and the other components of net periodic benefit cost (income) are included in nonoperating other income, net on our consolidated statements of operations.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Assumptions

The following actuarial assumptions were used to determine our benefit obligations and net periodic benefit cost (income) for the periods presented:

	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2022	2021
Benefit obligations:				
Weighted average discount rate	5.6%	3.0%	5.7%	2.8%
Net periodic benefit cost (income):				
Weighted average discount rate	3.0%	2.7%	3.4%	2.8%
Weighted average expected rate of return on plan assets	8.0%	8.0%	8.0%	8.0%
Weighted average health care cost trend rate assumed for next year ⁽¹⁾	N/A	N/A	N/A	5.8%
				4.8%
				4.0%

⁽¹⁾ The weighted average health care cost trend rate at December 31, 2022 is assumed to decline gradually to 4.4% by 2029 and remain level thereafter.

As of December 31, 2022, our estimate of the long-term rate of return on plan assets was 8.0% based on the target asset allocation. Expected returns on long duration bonds are based on yields to maturity of the bonds held at year-end. Expected returns on other assets are based on a combination of long-term historical returns, actual returns on plan assets achieved over the last 10 years, current and expected market conditions, and expected value to be generated through active management and securities lending programs.

Minimum Contributions

We are required to make minimum contributions to our defined benefit pension plans under the minimum funding requirements of the Employee Retirement Income Security Act of 1974 (ERISA) and various other laws for U.S. based plans as well as underfunding rules specific to countries where we maintain defined benefit plans. Based on current funding assumptions, we have minimum required contributions of \$69 million for 2023 including contributions to defined benefit plans for our wholly-owned subsidiaries. Our funding obligations will depend on the performance of our investments held in a trust by the pension plans, interest rates for determining liabilities, the amount of and timing of any supplemental contributions and our actuarial experience.

Benefit Payments

The following benefit payments, which reflect expected future service as appropriate, are expected to be paid (approximately, in millions):

	2023	2024	2025	2026	2027	2028-2032
Pension benefits	\$ 920	\$ 949	\$ 978	\$ 1,003	\$ 1,024	\$ 5,264
Retiree medical and other postretirement benefits	102	100	98	97	95	428

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Plan Assets

The objectives of our investment policies are to: maintain sufficient income and liquidity to pay retirement benefits; produce a long-term rate of return that meets or exceeds the assumed rate of return for plan assets; limit the volatility of asset performance and funded status; and diversify assets among asset classes and investment managers.

Based on these investment objectives, a long-term strategic asset allocation has been established. This strategic allocation seeks to balance the potential benefit of improving the funded position with the potential risk that the funded position would decline. The current strategic target asset allocation is as follows:

<u>Asset Class/Sub-Class</u>	<u>Allowed Range</u>
Equity	45% - 80%
Public:	
U.S. Large	10% - 40%
U.S. Small/Mid	2% - 10%
International	10% - 25%
International Small/Mid	0% - 10%
Emerging Markets	2% - 15%
Private Equity	5% - 30%
Fixed Income	20% - 55%
Public:	
U.S. Long Duration	15% - 45%
High Yield and Emerging Markets	0% - 10%
Private Income	0% - 15%
Other	0% - 5%
Cash Equivalents	0% - 20%

Public equity investments are intended to provide a real return over a full market cycle and, therefore, to contribute to the pension plan's long-term objective. Public fixed income investments are intended to provide income to the plan and offer the potential for long term capital appreciation. Private investments, such as private equity and private income, are used to provide higher expected returns than public markets over the long-term by assuming reduced levels of liquidity and higher levels of risk. The pension plan's master trust participates in securities lending programs to generate additional income by loaning plan assets to borrowers on a fully collateralized basis. The pension plan's master trust will also engage in derivative instruments to equitize residual levels of cash as well as hedge the pension plan's exposure to interest rates. Such programs are subject to market risk and counterparty risk.

Investments in securities traded on recognized securities exchanges are valued at the last reported sales price on the last business day of the year. Securities traded in the over-the-counter market are valued at the last bid price. Investments in limited partnerships are carried at estimated net asset value (NAV) as determined by and reported by the general partners of the partnerships and represent the proportionate share of the estimated fair value of the underlying assets of the limited partnerships. Mutual funds are valued once daily through a NAV calculation provided at the end of each trade day. Common/collective trusts are valued at NAV based on the fair values of the underlying investments of the trusts as determined by the sponsor of the trusts. No changes in valuation techniques or inputs occurred during the year.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Benefit Plan Assets Measured at Fair Value on a Recurring Basis

The fair value of our pension plan assets at December 31, 2022 and 2021, by asset category, were as follows (in millions) ⁽¹⁾:

	December 31, 2022				December 31, 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Equity ⁽²⁾	\$ 3,097	\$ —	\$ —	\$ 3,097	\$ 4,639	\$ 2	\$ 4	\$ 4,645
Fixed income ⁽³⁾	227	2,917	—	3,144	183	3,994	—	4,177
Other ⁽⁴⁾	74	278	75	427	134	340	54	528
Measured at NAV ⁽⁵⁾ :								
Common collective trusts ⁽⁶⁾	—	—	—	1,694	—	—	—	2,514
Private investments ⁽⁷⁾	—	—	—	3,522	—	—	—	2,827
Total plan assets	<u>\$ 3,398</u>	<u>\$ 3,195</u>	<u>\$ 75</u>	<u>\$ 11,884</u>	<u>\$ 4,956</u>	<u>\$ 4,336</u>	<u>\$ 58</u>	<u>\$ 14,691</u>

⁽¹⁾ See Note 7 for a description of the levels within the fair value hierarchy.

⁽²⁾ Equity investments include domestic and international common stock, preferred stock, mutual funds and exchange traded funds invested in equity securities.

⁽³⁾ Fixed income investments include corporate, government and U.S. municipal bonds, as well as mutual funds invested in fixed income securities.

⁽⁴⁾ Other primarily includes a short-term investment fund, cash and cash equivalents, and net receivables and payables of the master trust for dividends, interest and amounts due to or from the sale and purchase of securities.

⁽⁵⁾ Includes investments that were measured at NAV per share (or its equivalent) as a practical expedient that have not been classified in the fair value hierarchy.

⁽⁶⁾ Common collective trusts include commingled funds primarily invested in equity securities. For some trusts, requests for withdrawals must meet specific requirements with advance notice of redemption preferred.

⁽⁷⁾ Private investments include limited partnerships that invest primarily in domestic private equity and private income opportunities. The pension plan's master trust does not have the right to redeem its limited partnership investment at its NAV, but rather receives distributions as the underlying assets are liquidated. It is estimated that the underlying assets of these funds will be gradually liquidated over the next 10 years. As of December 31, 2022, the pension plan's master trust has future funding commitments to these limited partnerships of approximately \$1.5 billion over the next five years.

Changes in fair value measurements of Level 3 investments during the years ended December 31, 2022 and 2021, were as follows (in millions):

	2022	2021
Balance at beginning of year	\$ 58	\$ 17
Actual gain on plan assets:		
Relating to assets still held at the reporting date	1	10
Purchases	29	32
Sales	(9)	(1)
Transfers out	(4)	—
Balance at end of year	<u>\$ 75</u>	<u>\$ 58</u>

Plan assets in the retiree medical and other postretirement benefits plans' are primarily Level 2 mutual funds valued by quoted prices on the active market, which is fair value, and represents the NAV of the shares of such funds as of the close of business at the end of the period. NAV is based on the fair market value of the funds' underlying assets and liabilities at the date of determination.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Defined Contribution and Multiemployer Plans

The costs associated with our defined contribution plans were \$949 million, \$920 million and \$860 million for the years ended December 31, 2022, 2021 and 2020, respectively.

We participate in the International Association of Machinists & Aerospace Workers (IAM) National Pension Fund, Employer Identification No. 51-6031295 and Plan No. 002 (the IAM Pension Fund). Our contributions to the IAM Pension Fund were \$46 million, \$43 million and \$40 million for the years ended December 31, 2022, 2021 and 2020, respectively. The IAM Pension Fund reported \$507 million in employers' contributions for the year ended December 31, 2021, which is the most recent year for which such information is available. For 2021, our contributions represented more than 5% of total contributions to the IAM Pension Fund.

On March 29, 2019, the actuary for the IAM Pension Fund certified that the fund was in "endangered" status despite reporting a funded status of over 80%. Additionally, the IAM Pension Fund's Board voluntarily elected to enter into "critical" status on April 17, 2019. Upon entry into critical status, the IAM Pension Fund was required by law to adopt a rehabilitation plan aimed at restoring the financial health of the pension plan and did so on April 17, 2019 (the Rehabilitation Plan). Under the Rehabilitation Plan, we were subject to an immaterial contribution surcharge, which ceased to apply June 14, 2019 upon our mandatory adoption of a contribution schedule under the Rehabilitation Plan. The contribution schedule requires 2.5% annual increases to our contribution rate. This contribution schedule will remain in effect through the earlier of December 31, 2031 or the date the IAM Pension Fund emerges from critical status.

10. Accumulated Other Comprehensive Loss

The components of AOCI are as follows (in millions):

	Pension, Retiree Medical and Other Postretirement Benefits	Unrealized Loss on Investments	Income Tax Provision ⁽¹⁾	Total
Balance at December 31, 2020	\$ (6,236)	\$ (2)	\$ (865)	\$ (7,103)
Other comprehensive income (loss) before reclassifications	1,297	—	(293)	1,004
Amounts reclassified from AOCI	203	—	(46) ⁽²⁾	157
Net current-period other comprehensive income (loss)	1,500	—	(339)	1,161
Balance at December 31, 2021	(4,736)	(2)	(1,204)	(5,942)
Other comprehensive income (loss) before reclassifications	1,618	(4)	(365)	1,249
Amounts reclassified from AOCI	140	—	(32) ⁽²⁾	108
Net current-period other comprehensive income (loss)	1,758	(4)	(397)	1,357
Balance at December 31, 2022	\$ (2,978)	\$ (6)	\$ (1,601)	\$ (4,585)

⁽¹⁾ Relates principally to pension, retiree medical and other postretirement benefits obligations that will not be recognized in net income (loss) until the obligations are fully extinguished.

⁽²⁾ Relates to pension, retiree medical and other postretirement benefits obligations and is recognized within the income tax provision (benefit) on our consolidated statements of operations.

Reclassifications out of AOCI for the years ended December 31, 2022 and 2021 are as follows (in millions):

AOCI Components	Amounts reclassified from AOCI		Affected line items on the consolidated statements of operations
	Year Ended December 31, 2022	2021	
Amortization of pension, retiree medical and other postretirement benefits:			
Prior service cost	\$ 11	\$ 11	Nonoperating other income, net
Actuarial loss	97	146	Nonoperating other income, net
Total reclassifications for the period, net of tax	\$ 108	\$ 157	

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Amounts allocated to other comprehensive income (loss) for income taxes will remain in AOCI until we cease all related activities, such as termination of the pension plan.

11. Commitments, Contingencies and Guarantees

(a) Aircraft, Engine and Other Purchase Commitments

Under all of our aircraft and engine purchase agreements, our total future commitments as of December 31, 2022 are expected to be as follows (approximately, in millions):

	2023	2024	2025	2026	2027	2028 and Thereafter	Total
Payments for aircraft and engine commitments ⁽¹⁾	\$ 1,485	\$ 2,678	\$ 3,896	\$ 3,214	\$ 988	\$ 65	\$ 12,326

⁽¹⁾ These amounts are net of purchase deposits currently held by the manufacturers. Our purchase deposits held by all manufacturers totaled \$613 million and \$517 million as of December 31, 2022 and 2021, respectively.

Due to the uncertainty surrounding the timing of delivery of certain aircraft, the amounts in the table represent our most current estimate based on contractual delivery schedules adjusted for updates and revisions to such schedules communicated to management by the applicable equipment manufacturer. However, the actual delivery schedule may differ, potentially materially, based on various potential factors including production delays by the manufacturer and regulatory concerns.

Additionally, the amounts in the table exclude four Boeing 787-8 aircraft scheduled to be delivered in 2023 and five Boeing 787-9 aircraft scheduled to be delivered in 2024, for which we have obtained committed lease financing. See Note 5 for information regarding this operating lease commitment.

Additionally, we have purchase commitments related to aircraft fuel, flight equipment maintenance, information technology support and construction projects as follows (approximately): \$5.7 billion in 2023, \$3.0 billion in 2024, \$1.7 billion in 2025, \$231 million in 2026, \$126 million in 2027 and \$941 million in 2028 and thereafter. These amounts exclude obligations under certain fuel offtake agreements or other agreements for which the timing of the related expenditure is uncertain, or which are subject to material contingencies, such as the construction of a production facility.

(b) Capacity Purchase Agreements with Third-Party Regional Carriers

American has capacity purchase agreements with third-party regional carriers. The capacity purchase agreements provide that all revenues, including passenger, in-flight, ancillary, mail and freight revenues, go to American. American controls marketing, scheduling, ticketing, pricing and seat inventories. In return, American agrees to pay predetermined fees to these airlines for operating an agreed-upon number of aircraft, without regard to the number of passengers on board. In addition, these agreements provide that American either reimburses or pays 100% of certain variable costs, such as airport landing fees, fuel and passenger liability insurance.

As of December 31, 2022, American's capacity purchase agreements with third-party regional carriers had expiration dates ranging from 2023 to 2033, with rights of American to extend the respective terms of certain agreements.

As of December 31, 2022, American's minimum obligations under its capacity purchase agreements with third-party regional carriers are as follows (approximately, in millions):

	2023	2024	2025	2026	2027	2028 and Thereafter	Total
Minimum obligations under capacity purchase agreements with third-party regional carriers ⁽¹⁾	\$ 1,791	\$ 1,950	\$ 1,866	\$ 1,298	\$ 944	\$ 1,399	\$ 9,248

⁽¹⁾ Represents minimum payments under capacity purchase agreements with third-party regional carriers. These commitments are estimates of costs based on assumed minimum levels of flying under the capacity purchase agreements and American's actual payments could differ materially. Excludes rental payments under operating leases for certain aircraft flown under these capacity purchase agreements, which are reflected in the operating lease obligations in Note 5.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

(c) Airport Redevelopment

Los Angeles International Airport (LAX)

From time to time, airports where we have operations engage in construction projects, often substantial, that result in new or improved facilities that are ultimately funded through increases in the rent and other occupancy costs payable by airlines using the airport. Unlike this construction and funding model, we are managing a project at LAX where we have legal title to the assets during construction. In 2018, we executed a lease agreement with Los Angeles World Airports (LAWA), which owns and operates LAX, in connection with a \$1.6 billion modernization project related to LAX Terminals 4 and 5. Construction, which started in October 2018 and is expected to be completed in 2028, will occur in a phased approach. The modernization project will include a unified departure hall to the entranceway of Terminals 4 and 5, reconfigured ticket counter and check-in areas with seamless access to security screening areas, 10 new security screening lanes with automated technology in addition to the existing Terminal 5 lanes, and a new Terminal 4 South concourse with more open and upgraded amenities at gate areas. The project will also include renovated break rooms, multi-use meeting rooms and team gathering spaces throughout the terminals to support our team members at LAX. In 2022, American completed construction of the Terminal 4 and 5 core, which provides a central location between the terminals and allows direct access to the check-in lobby and baggage claim in Terminal 5.

As each phase is completed and ready for use, the assets will be sold and transferred to LAWA, including the site improvements and non-proprietary improvements. As we control the assets during construction, they are recognized on our balance sheet until the assets are sold and transferred to LAWA. As of December 31, 2022, we have incurred approximately \$579 million in costs relating to the LAX modernization project, of which \$241 million were incurred in 2022 and have been included within operating property and equipment on our consolidated balance sheets and included within airport construction projects, net of reimbursements on our consolidated statements of cash flows. As of December 31, 2022, we have sold and transferred \$176 million of non-proprietary improvements to LAWA, of which \$44 million occurred during 2022. For non-proprietary improvements which are not yet ready for use, any cash payments received from LAWA will be reflected as a financial liability. As of December 31, 2022, we have received \$141 million in cash proceeds for non-proprietary improvements which are not yet ready for use, and therefore have not been sold and transferred back to LAWA. These proceeds are currently included in other accrued liabilities and noncurrent other liabilities on our consolidated balance sheet and are reflected as financing activities on our consolidated statement of cash flows.

JFK

In January 2020, American and British Airways announced the start of construction projects to upgrade New York's JFK Terminal 8. The renovation projects at Terminal 8 include: (i) the reconfiguration or elimination of certain existing gates and the construction of widebody gates, (ii) the construction of approximately 51,000 square feet of new terminal building space and the refurbishment of 73,300 square feet of existing terminal space, (iii) the expansion of the baggage system capacity of Terminal 8, (iv) improvements to the premium passenger lounges, check-in and, potentially, security access areas, and (v) bathroom refreshment, new signage, and other upgrades. The construction project is substantially complete and remaining construction on the baggage handling system expansion and bathroom refurbishments are expected to be fully completed in early 2023. As of December 31, 2022, we have incurred \$348 million in construction costs to upgrade Terminal 8, of which \$172 million was incurred in 2022. These costs have been included in airport construction projects, net of reimbursements on our consolidated statements of cash flows.

(d) Off-Balance Sheet Arrangements

Pass-Through Trusts

American currently has 352 owned aircraft and 60 owned spare aircraft engines, which in each case were financed with EETCs issued by pass-through trusts. These trusts are off-balance sheet entities, the primary purpose of which is to finance the acquisition of flight equipment or to permit issuance of debt backed by existing flight equipment. In the case of aircraft EETCs, rather than finance each aircraft separately when such aircraft is purchased, delivered or refinanced, these trusts allow American to raise the financing for a number of aircraft at one time and, if applicable, place such funds in escrow pending a future purchase, delivery or refinancing of the relevant aircraft. Similarly, in the case of the spare engine EETCs, the trusts allow American to use its existing pool of spare engines to raise financing under a single facility. The trusts have also been structured to provide for certain credit enhancements, such as liquidity facilities to cover certain interest payments, that reduce the risks to the purchasers of the trust certificates and, as a result, reduce the cost of aircraft financing to American.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Each trust covers a set number of aircraft or spare engines scheduled to be delivered, financed or refinanced upon the issuance of the EETC or within a specific period of time thereafter. At the time of each covered aircraft or spare engine financing, the relevant trust used the proceeds of the issuance of the EETC (which may have been available at the time of issuance thereof or held in escrow until financing of the applicable aircraft following its delivery) to purchase equipment notes relating to the financed aircraft or engines. The equipment notes are issued, at American's election, in connection with a mortgage financing of the aircraft or spare engines. The equipment notes are secured by a security interest in the aircraft or engines, as applicable. The pass-through trust certificates are not direct obligations of, nor are they guaranteed by, AAG or American. However, the equipment notes issued to the trusts are direct obligations of American and, in certain instances, have been guaranteed by AAG. As of December 31, 2022, \$9.2 billion associated with these mortgage financings is reflected as debt in the accompanying consolidated balance sheet.

Letters of Credit and Other

We provide financial assurance, such as letters of credit and surety bonds, primarily to support airport commitments. As of December 31, 2022, we had \$218 million of letters of credit and surety bonds securing various obligations, of which \$100 million is collateralized with our restricted cash. The letters of credit and surety bonds that are subject to expiration will expire on various dates through 2026.

(e) Legal Proceedings

Private Party Antitrust Action Related to Passenger Capacity. We, along with Delta Air Lines, Inc., Southwest Airlines Co., United Airlines, Inc. and, in the case of litigation filed in Canada, Air Canada, were named as defendants in approximately 100 putative class action lawsuits alleging unlawful agreements with respect to air passenger capacity. The U.S. lawsuits were consolidated in the Federal District Court for the District of Columbia (the DC Court). On June 15, 2018, we reached a settlement agreement with the plaintiffs in the amount of \$45 million to resolve all class claims in the U.S. lawsuits. That settlement was approved by the DC Court on May 13, 2019, however three parties who objected to the settlement have appealed that decision to the United States Court of Appeals for the District of Columbia. We believe these appeals are without merit and intend to vigorously defend against them.

Private Party Antitrust Action Related to the Merger. On August 6, 2013, a lawsuit captioned Carolyn Fjord, et al., v. AMR Corporation, et al., was filed in the United States Bankruptcy Court for the Southern District of New York (Bankruptcy Court). The complaint named as defendants US Airways Group, US Airways, Inc., AMR Corporation and American, alleged that the effect of the merger of US Airways Group and AMR Corporation (the Merger) may be to create a monopoly in violation of Section 7 of the Clayton Antitrust Act, and sought injunctive relief and/or divestiture. On November 27, 2013, the Bankruptcy Court denied plaintiffs' motion to preliminarily enjoin the Merger. On August 29, 2018, the Bankruptcy Court denied in part defendants' motion for summary judgment, and fully denied plaintiffs' cross-motion for summary judgment. The parties' evidentiary cases were presented before the Bankruptcy Court in a bench trial in March 2019 and the parties submitted proposed findings of fact and conclusions of law and made closing arguments in April 2019. On January 29, 2021, the Bankruptcy Court published its decision finding in our favor. On March 25, 2022, the U.S. District Court for the Southern District of New York entered judgment affirming the Bankruptcy Court's decision. On April 21, 2022, plaintiffs appealed that decision to the United States Court of Appeals for the Second Circuit. The appeal is fully briefed and scheduled for oral argument on March 13, 2023. We believe this lawsuit is without merit and intend to continue to vigorously defend against it, including against any further appeals by the plaintiffs.

Government Antitrust Action Related to the Northeast Alliance. On September 21, 2021, the United States Department of Justice (the DOJ), joined by Attorneys General from six states and the District of Columbia, filed an antitrust complaint against American and JetBlue Airways Corporation (JetBlue) in the District of Massachusetts alleging that American and JetBlue violated U.S. antitrust law in connection with the previously disclosed Northeast Alliance arrangement (NEA). The parties presented their respective cases in a bench trial that commenced on September 27, 2022. Closing arguments from both parties were presented on November 18, 2022. A decision is expected in the first quarter of 2023.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

Also on September 21, 2021, the United States Department of Transportation (DOT) published a Clarification Notice relating to the agreement that had been reached between the DOT, American, and JetBlue in January 2021, at the conclusion of the DOT's review of the NEA (DOT Agreement). The DOT Clarification Notice stated, among other things, that the DOT Agreement remains in force during the pendency of the DOJ action against the NEA and, while the DOT retains independent statutory authority to prohibit unfair methods of competition in air transportation, the DOT intends to defer to the DOJ to resolve the antitrust concerns that the DOJ has identified with respect to the NEA. The DOT simultaneously published a Notice Staying Proceeding in relation to a complaint by Spirit Airlines, Inc. regarding the NEA, pending resolution of the DOJ action described above. On September 30, 2022, the DOT issued a further statement referencing the prior Clarification Notice and, among other things, indicating its intention to continue working with the DOJ in its efforts to resolve the ongoing proceedings regarding the NEA.

Private Party Antitrust Actions Related to the Northeast Alliance. On December 5, 2022 and December 7, 2022, two private party plaintiffs filed putative class action antitrust complaints against American and JetBlue in the Eastern District of New York alleging that American and JetBlue violated U.S. antitrust law in connection with the previously disclosed NEA. These actions were consolidated on January 10, 2023. The private party plaintiffs filed an amended consolidated complaint on February 3, 2023. In February 2023, private party plaintiffs filed two additional putative class action antitrust complaints against American and JetBlue in the District of Massachusetts and the Eastern District of New York, respectively. We believe these lawsuits are without merit and are defending against them vigorously.

General. In addition to the specifically identified legal proceedings, we and our subsidiaries are also engaged in other legal proceedings from time to time. Legal proceedings can be complex and take many months, or even years, to reach resolution, with the final outcome depending on a number of variables, some of which are not within our control. Therefore, although we will vigorously defend ourselves in each of the actions described above and such other legal proceedings, their ultimate resolution and potential financial and other impacts on us are uncertain but could be material.

(f) Guarantees and Indemnifications

We are party to many routine contracts in which we provide general indemnities in the normal course of business to third parties for various risks. We are not able to estimate the potential amount of any liability resulting from the indemnities. These indemnities are discussed in the following paragraphs.

In our aircraft financing agreements, we generally indemnify the financing parties, trustees acting on their behalf and other relevant parties against liabilities (including certain taxes) resulting from the financing, manufacture, design, ownership, operation and maintenance of the aircraft regardless of whether these liabilities (including certain taxes) relate to the negligence of the indemnified parties.

Our loan agreements and certain other financing transactions may obligate us to reimburse the applicable lender for incremental costs due to a change in law that imposes (i) any reserve or special deposit requirement against assets of, deposits with or credit extended by such lender related to the loan, (ii) any tax, duty or other charge with respect to the loan (except standard income tax) or (iii) capital adequacy requirements. In addition, our loan agreements and other financing arrangements typically contain a withholding tax provision that requires us to pay additional amounts to the applicable lender or other financing party, generally if withholding taxes are imposed on such lender or other financing party as a result of a change in the applicable tax law.

In certain transactions, including certain aircraft financing leases and loans, the lessors, lenders and/or other parties have rights to terminate the transaction based on changes in foreign tax law, illegality or certain other events or circumstances. In such a case, we may be required to make a lump sum payment to terminate the relevant transaction.

We have general indemnity clauses in many of our airport and other real estate leases where we as lessee indemnify the lessor (and related parties) against liabilities related to our use of the leased property. Generally, these indemnifications cover liabilities resulting from the negligence of the indemnified parties, but not liabilities resulting from the gross negligence or willful misconduct of the indemnified parties. In addition, we provide environmental indemnities in many of these leases for contamination related to our use of the leased property.

Under certain contracts with third parties, we indemnify the third-party against legal liability arising out of an action by the third-party, or certain other parties. The terms of these contracts vary and the potential exposure under these indemnities cannot be determined. We have liability insurance protecting us for some of the obligations we have undertaken under these indemnities.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

American is required to make principal and interest payments for certain special facility revenue bonds issued by municipalities primarily to build or improve airport facilities and purchase equipment, which are leased to American. The payment of principal and interest of certain special facility revenue bonds is guaranteed by AAG. As of December 31, 2022, the remaining lease payments through 2035 guaranteeing the principal and interest on these bonds are \$538 million and the current carrying amount of the associated operating lease liability in the accompanying consolidated balance sheet is \$321 million.

As of December 31, 2022, AAG had issued guarantees covering approximately \$18.3 billion of American's secured debt (and interest thereon), including the Credit Facilities, the AAdvantage Financing, certain EETC financings and \$1.1 billion of American's special facility revenue bonds (and interest thereon).

(g) Credit Card Processing Agreements

We have agreements with companies that process customer credit card transactions for the sale of air travel and other services. Our agreements allow these credit card processing companies, under certain conditions, to hold an amount of our cash (referred to as a holdback) equal to all or a portion of advance ticket sales that have been processed by that company, but for which we have not yet provided the air transportation. These holdback requirements can be implemented at the discretion of the credit card processing companies upon the occurrence of specific events, including material adverse changes in our financial condition or the triggering of a liquidity covenant. These credit card processing companies are not currently entitled to maintain any holdbacks. The imposition of holdback requirements would reduce our liquidity.

(h) Labor Negotiations

As of December 31, 2022, we employed approximately 129,700 active full-time equivalent (FTE) employees, of which 27,700 were employed by our wholly-owned regional subsidiaries. Of the total active FTE employees, 87% are covered by collective bargaining agreements (CBAs) with various labor unions and 48% are covered by CBAs that are currently amendable or that will become amendable within one year. CBAs covering our mainline pilots, flight attendants and passenger service are now amendable. The CBAs covering certain employee groups at our wholly-owned regional subsidiaries are also amendable.

12. Supplemental Cash Flow Information

Supplemental disclosure of cash flow information and non-cash investing and financing activities are as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Non-cash investing and financing activities:			
Equity investments	\$ 12	\$ 88	\$ —
Settlement of bankruptcy obligations	—	(1)	56
Deferred financing costs paid through issuance of debt	—	—	17
Supplemental information:			
Interest paid, net	1,852	1,632	944
Income taxes paid	2	3	6

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

13. Operating Segments and Related Disclosures

We are managed as a single business unit that provides air transportation for passengers and cargo. This allows us to benefit from an integrated revenue pricing and route network that includes American and our wholly-owned and third-party regional carriers that fly under capacity purchase agreements operating as American Eagle. The flight equipment of all these carriers is combined to form one fleet that is deployed through a single route scheduling system. Financial information and annual operational plans and forecasts are prepared and reviewed by the chief operating decision maker at the consolidated level. When making operational decisions, the chief operating decision maker evaluates flight profitability data, which considers aircraft type and route economics, but is indifferent to the results of the individual regional carriers. The objective in making operational decisions is to maximize consolidated financial results, not the individual results of American or American Eagle.

See Note 1(m) for our passenger revenue by geographic region. Our tangible assets consist primarily of flight equipment, which are mobile across geographic markets and, therefore, have not been allocated.

14. Share-based Compensation

The 2013 AAG Incentive Award Plan (the 2013 Plan) provides that awards may be in the form of an option, restricted stock award, restricted stock unit award, performance award, dividend equivalent award, deferred stock award, deferred stock unit award, stock payment award or stock appreciation right. The 2013 Plan initially authorized the grant of awards for the issuance of up to 40 million shares. Any shares underlying awards granted under the 2013 Plan that are forfeited, terminate or are settled in cash (in whole or in part) without the delivery of shares will again be available for grant.

For the years ended December 31, 2022, 2021 and 2020, we recorded \$78 million, \$98 million and \$91 million, respectively, of share-based compensation costs principally in salaries, wages and benefits expense on our consolidated statements of operations.

During 2022, 2021 and 2020, we withheld approximately 1.2 million, 1.0 million and 0.7 million shares of AAG common stock, respectively, and paid approximately \$21 million, \$18 million and \$15 million, respectively, in satisfaction of certain tax withholding obligations associated with employee equity awards.

Restricted Stock Unit Awards (RSUs)

The majority of our RSUs have service conditions (time vested primarily over three years). The grant-date fair value of these RSUs is equal to the market price of the underlying shares of AAG common stock on the date of grant. The expense for these RSUs is recognized on a straight-line basis over the vesting period for the entire award. RSUs are classified as equity awards as the vesting results in the issuance of shares of AAG common stock.

RSU award activity for all plans for the years ended December 31, 2022, 2021 and 2020 is as follows:

	<u>Number of Shares (In thousands)</u>	<u>Weighted Average Grant Date Fair Value</u>
Outstanding at December 31, 2019	5,187	\$ 37.01
Granted	5,883	22.07
Vested and released	(2,268)	39.46
Forfeited	(920)	29.78
Outstanding at December 31, 2020	7,882	\$ 23.66
Granted	5,525	18.34
Vested and released	(3,314)	25.58
Forfeited	(692)	18.78
Outstanding at December 31, 2021	9,401	\$ 20.17
Granted	5,882	15.93
Vested and released	(4,131)	21.04
Forfeited	(889)	18.04
Outstanding at December 31, 2022	<u>10,263</u>	<u>\$ 17.51</u>

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

As of December 31, 2022, there was \$99 million of unrecognized compensation cost related to RSUs. These costs are expected to be recognized over a weighted average period of one year. The total fair value of RSUs vested during the years ended December 31, 2022, 2021 and 2020 was \$70 million, \$62 million and \$51 million, respectively.

15. Valuation and Qualifying Accounts (in millions)

	Balance at Beginning of Year	Additions Charged to Statement of Operations Accounts	Deductions	Balance at End of Year
Allowance for obsolescence of spare parts				
Year ended December 31, 2022	\$ 634	\$ 96	\$ (114)	\$ 616
Year ended December 31, 2021	490	177	(33)	634
Year ended December 31, 2020	784	100	(394)	490

16. Subsequent Events

2013 Term Loan Facility Refinancing

In February 2023, American and AAG entered into the Seventh Amendment to Amended and Restated Credit and Guaranty Agreement (the Seventh Amendment) to the 2013 Credit Agreement, pursuant to which American extended the maturity date of all remaining term loans outstanding under the 2013 Term Loan Facility to February 2028 from June 2025. The Seventh Amendment also amended certain other terms of the 2013 Credit Agreement, including the interest rate for the 2013 Term Loan Facility, amortization schedule, the requirements for delivery of appraisals and certain covenants relating to dispositions of collateral. Additionally, the Seventh Amendment transitioned the benchmark interest rate from LIBOR to SOFR. As a result, the 2013 Term Loan Facility bears interest at a base rate (subject to a floor of 1.00%) plus an applicable margin of 1.75% or, at American's option, the SOFR rate for a tenor of one, three or six months, depending on the interest period selected by American (subject to a floor of 0.00%), plus the SOFR adjustment applicable to such interest period and an applicable margin of 2.75%. After giving effect to the issuance of the 7.25% Senior Secured Notes (as discussed below) and the application of the proceeds therefrom, there was \$1.0 billion aggregate principal outstanding under the 2013 Term Loan Facility.

7.25% Senior Secured Notes

In February 2023, American issued \$750 million aggregate principal amount of 7.25% senior secured notes due 2028 (the 7.25% Senior Secured Notes). The 7.25% Senior Secured Notes bear interest at a rate of 7.25% per annum (subject to increase if the collateral coverage ratio described below is not met). Interest on the 7.25% Senior Secured Notes is payable semiannually in arrears on February 15 and August 15 of each year, beginning on August 15, 2023. The 7.25% Senior Secured Notes will mature on February 15, 2028. The obligations of American under the 7.25% Senior Secured Notes are fully and unconditionally guaranteed on a senior unsecured basis by AAG. American used the proceeds from the offering of the 7.25% Senior Secured Notes, together with cash on hand, to repay a portion of the term loans outstanding under the 2013 Term Loan Facility and to pay related fees and expenses.

The 7.25% Senior Secured Notes were issued pursuant to an indenture, dated as of February 15, 2023 (the 7.25% Senior Secured Notes Indenture), by and among American, AAG and Wilmington Trust, National Association, as trustee and collateral agent (the 7.25% Senior Secured Notes Trustee). The 7.25% Senior Secured Notes are American's senior secured obligations and are secured on a first lien basis by security interests in certain assets, rights and properties that American uses to provide non-stop scheduled air carrier services between certain airports in the United States and airports in countries in South America and New Zealand (the 7.25% Senior Secured Notes Collateral). The 7.25% Senior Secured Notes Collateral presently secures (and will continue to secure), on a first lien, pari passu basis with the 7.25% Senior Secured Notes, the 2013 Credit Facilities under the 2013 Credit Agreement.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES GROUP INC.

American may redeem the 7.25% Senior Secured Notes, in whole at any time or in part from time to time prior to February 15, 2025, at a redemption price equal to 100% of the principal amount of the 7.25% Senior Secured Notes to be redeemed, plus a "make-whole" premium, plus any accrued and unpaid interest thereon to but excluding the date of redemption. At any time on or after February 15, 2025, American may redeem all or any of the 7.25% Senior Secured Notes in whole at any time, or in part from time to time, at the redemption prices described under the 7.25% Senior Secured Notes Indenture, plus any accrued and unpaid interest thereon to but excluding the date of redemption. In addition, at any time prior to February 15, 2025, American may redeem up to 40% of the original aggregate principal amount of the 7.25% Senior Secured Notes (calculated after giving effect to any issuance of additional notes) with the net cash proceeds of certain equity offerings, at a redemption price equal to 107.250% of the aggregate principal amount of the 7.25% Senior Secured Notes to be redeemed, plus any accrued and unpaid interest thereon to but excluding the date of redemption.

Further, if certain change of control transactions occur, each holder of 7.25% Senior Secured Notes may require American to repurchase the 7.25% Senior Secured Notes in whole or in part at a repurchase price of 101% of the aggregate principal amount thereof, plus accrued and unpaid interest, if any, to but not including the repurchase date.

American is required to deliver an appraisal of the 7.25% Senior Secured Notes Collateral and officer's certificate twice a year demonstrating the calculation of a collateral coverage ratio in relation to the 7.25% Senior Secured Notes Collateral (the 7.25% Senior Secured Notes Collateral Coverage Ratio) as of the date of delivery of the appraisal for the applicable period. If the 7.25% Senior Secured Notes Collateral Coverage Ratio is less than 1.6 to 1.0 as of the date of delivery of the appraisal for the applicable period, then, subject to a cure period in which additional collateral can be provided or debt repaid such that American meets the required 7.25% Senior Secured Notes Collateral Coverage Ratio, American will be required to pay special interest in an additional amount equal to 2.0% per annum of the principal amount of the 7.25% Senior Secured Notes until the 7.25% Senior Secured Notes Collateral Coverage Ratio is established to be at least 1.6 to 1.0.

Table of Contents

ITEM 8B. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA OF AMERICAN AIRLINES, INC.

Report of Independent Registered Public Accounting Firm

To the Stockholder and Board of Directors
American Airlines, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of American Airlines, Inc. and subsidiaries (American) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income (loss), cash flows, and stockholder's equity, for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of American as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), American's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 22, 2023 expressed an unqualified opinion on the effectiveness of American's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of American's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to American in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Table of Contents

Sufficiency of audit evidence over realizability of tax operating loss and other carryforwards

As discussed in Notes 1(j) and 5 to the consolidated financial statements, American had \$4.5 billion of tax operating loss and other carryforwards, which are recorded as deferred tax assets at December 31, 2022. Deferred tax assets are recognized related to tax operating loss and other carryforwards that will reduce future taxable income. American provides a valuation allowance for deferred tax assets when it is more likely than not that some portion, or all of the deferred tax assets, will not be realized. In evaluating the need for a valuation allowance, management considers all available positive and negative evidence.

We identified the evaluation of the sufficiency of audit evidence over the realizability of tax operating loss and other carryforwards as a critical audit matter. Evaluating the sufficiency of audit evidence required subjective auditor judgment in order to assess the extent of procedures performed in assessing the realizability of the tax operating loss and other carryforwards.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to American's deferred tax asset valuation allowance process, including controls related to the realizability of tax operating loss and other carryforwards. We evaluated positive and negative evidence used in assessing whether the tax operating loss and other carryforwards were more likely than not to be realized in the future. We evaluated the reasonableness of management's projections of future profitability considering historical profitability of American, and consistency with industry data. We involved tax professionals with specialized skills and knowledge, who assisted in evaluating the application of tax law. We assessed the sufficiency of audit evidence obtained over the realizability of the tax operating loss and other carryforwards by evaluating the cumulative results of the audit procedures.

/s/ KPMG LLP

We have served as American's auditor since 2014.

Dallas, Texas
February 22, 2023

[Table of Contents](#)

AMERICAN AIRLINES, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In millions)

	Year Ended December 31,		
	2022	2021	2020
Operating revenues:			
Passenger	\$ 44,568	\$ 26,063	\$ 14,518
Cargo	1,233	1,314	769
Other	3,164	2,503	2,048
Total operating revenues	<u>48,965</u>	<u>29,880</u>	<u>17,335</u>
Operating expenses:			
Aircraft fuel and related taxes	13,791	6,792	3,402
Salaries, wages and benefits	12,965	11,811	11,224
Regional expenses	4,345	3,111	2,746
Maintenance, materials and repairs	2,684	1,979	1,585
Other rent and landing fees	2,730	2,619	2,004
Aircraft rent	1,395	1,425	1,341
Selling expenses	1,815	1,098	666
Depreciation and amortization	1,969	2,019	2,040
Special items, net	193	(4,006)	(657)
Other	5,425	3,993	3,208
Total operating expenses	<u>47,312</u>	<u>30,841</u>	<u>27,559</u>
Operating income (loss)	1,653	(961)	(10,224)
Nonoperating income (expense):			
Interest income	349	34	337
Interest expense, net	(1,872)	(1,642)	(1,171)
Other income, net	324	292	155
Total nonoperating expense, net	<u>(1,199)</u>	<u>(1,316)</u>	<u>(679)</u>
Income (loss) before income taxes	454	(2,277)	(10,903)
Income tax provision (benefit)	116	(500)	(2,453)
Net income (loss)	\$ 338	\$ (1,777)	\$ (8,450)

See accompanying notes to consolidated financial statements.

[Table of Contents](#)

AMERICAN AIRLINES, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In millions)

	Year Ended December 31,		
	2022	2021	2020
Net income (loss)	\$ 338	\$ (1,777)	\$ (8,450)
Other comprehensive income (loss), net of tax:			
Pension, retiree medical and other postretirement benefits	1,354	1,153	(771)
Investments	(3)	—	—
Total other comprehensive income (loss), net of tax	1,351	1,153	(771)
Total comprehensive income (loss)	\$ 1,689	\$ (624)	\$ (9,221)

See accompanying notes to consolidated financial statements.

[Table of Contents](#)

AMERICAN AIRLINES, INC.
CONSOLIDATED BALANCE SHEETS
(In millions, except share and par value amounts)

	December 31,	
	2022	2021
ASSETS		
Current assets		
Cash	\$ 429	\$ 265
Short-term investments	8,523	12,155
Restricted cash and short-term investments	995	990
Accounts receivable, net	2,117	1,484
Receivables from related parties, net	6,588	5,547
Aircraft fuel, spare parts and supplies, net	2,157	1,692
Prepaid expenses and other	798	579
Total current assets	21,607	22,712
Operating property and equipment		
Flight equipment	39,359	37,520
Ground property and equipment	9,479	8,966
Equipment purchase deposits	613	517
Total property and equipment, at cost	49,451	47,003
Less accumulated depreciation and amortization	(19,569)	(17,770)
Total property and equipment, net	29,882	29,233
Operating lease right-of-use assets	8,033	7,810
Other assets		
Goodwill	4,091	4,091
Intangibles, net of accumulated amortization of \$827 and \$786, respectively	2,059	1,988
Deferred tax asset	2,893	3,408
Other assets	1,759	1,903
Total other assets	10,802	11,390
Total assets	\$ 70,324	\$ 71,145
LIABILITIES AND STOCKHOLDER'S EQUITY		
Current liabilities		
Current maturities of long-term debt and finance leases	\$ 3,267	\$ 1,742
Accounts payable	2,071	1,630
Accrued salaries and wages	1,529	1,385
Air traffic liability	6,745	6,087
Loyalty program liability	3,169	2,896
Operating lease liabilities	1,449	1,496
Other accrued liabilities	2,852	2,628
Total current liabilities	21,082	17,864
Noncurrent liabilities		
Long-term debt and finance leases, net of current maturities	27,155	30,352
Pension and postretirement benefits	2,811	5,020
Loyalty program liability	5,976	6,239
Operating lease liabilities	6,512	6,578
Other liabilities	1,195	1,266
Total noncurrent liabilities	43,649	49,455
Commitments and contingencies (Note 10)		
Stockholder's equity		
Common stock, \$1.00 par value; 1,000 shares authorized, issued and outstanding	—	—
Additional paid-in capital	17,230	17,152
Accumulated other comprehensive loss	(4,690)	(6,041)
Retained deficit	(6,947)	(7,285)
Total stockholder's equity	5,593	3,826
Total liabilities and stockholder's equity	\$ 70,324	\$ 71,145

See accompanying notes to consolidated financial statements.

[Table of Contents](#)

AMERICAN AIRLINES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net income (loss)	\$ 338	\$ (1,777)	\$ (8,450)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	2,238	2,282	2,313
Special items, net non-cash	227	83	1,588
Pension and postretirement	(404)	(320)	(319)
Deferred income tax provision (benefit)	122	(500)	(2,453)
Share-based compensation	75	95	91
Net gains from sale of property and equipment and sale-leaseback transactions	(3)	(26)	(98)
Other, net	(45)	24	14
Changes in operating assets and liabilities:			
Decrease (increase) in accounts receivable	(636)	(290)	595
Decrease (increase) in other assets	(744)	(370)	42
Increase (decrease) in accounts payable and accrued liabilities	549	335	(619)
Increase (decrease) in air traffic liability	658	1,454	(51)
Decrease (increase) in receivables from related parties, net	(1,044)	1,857	4,134
Increase (decrease) in loyalty program liability	10	(60)	580
Contributions to pension plans	(4)	(247)	(6)
Increase (decrease) in other liabilities	(8)	650	1,210
Net cash provided by (used in) operating activities	1,329	3,190	(1,429)
Cash flows from investing activities:			
Capital expenditures, net of aircraft purchase deposit returns	(2,489)	(169)	(1,922)
Airport construction projects, net of reimbursements	(360)	(204)	(173)
Proceeds from sale-leaseback transactions	86	181	665
Proceeds from sale of property and equipment	61	192	351
Sales of short-term investments	14,972	13,923	2,803
Purchases of short-term investments	(11,257)	(19,454)	(5,874)
Decrease (increase) in restricted short-term investments	1	(401)	(308)
Purchase of equity investments	(321)	(28)	—
Other investing activities	—	15	150
Net cash provided by (used in) investing activities	693	(5,945)	(4,308)
Cash flows from financing activities:			
Payments on long-term debt and finance leases	(2,991)	(7,320)	(3,029)
Proceeds from issuance of long-term debt	1,069	10,209	8,959
Deferred financing costs	(2)	(207)	(85)
Other financing activities	77	88	—
Net cash provided by (used in) financing activities	(1,847)	2,770	5,845
Net increase in cash and restricted cash	175	15	108
Cash and restricted cash at beginning of year	400	385	277
Cash and restricted cash at end of year ^(a)	<u>\$ 575</u>	<u>\$ 400</u>	<u>\$ 385</u>

^(a) The following table provides a reconciliation of cash and restricted cash to amounts reported within the consolidated balance sheets:

Cash	\$ 429	\$ 265	\$ 231
Restricted cash included in restricted cash and short-term investments	146	135	154
Total cash and restricted cash	<u>\$ 575</u>	<u>\$ 400</u>	<u>\$ 385</u>

See accompanying notes to consolidated financial statements.

[Table of Contents](#)

AMERICAN AIRLINES, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDER'S EQUITY
(In millions)

	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Retained Earnings (Deficit)	Total
Balance at December 31, 2019	\$ —	\$ 16,903	\$ (6,423)	\$ 2,942	\$ 13,422
Net loss	—	—	—	(8,450)	(8,450)
Other comprehensive loss, net	—	—	(771)	—	(771)
Share-based compensation expense	—	91	—	—	91
Intercompany equity transfer	—	56	—	—	56
Balance at December 31, 2020	—	17,050	(7,194)	(5,508)	4,348
Net loss	—	—	—	(1,777)	(1,777)
Other comprehensive income, net	—	—	1,153	—	1,153
Share-based compensation expense	—	95	—	—	95
Intercompany equity transfer	—	7	—	—	7
Balance at December 31, 2021	—	17,152	(6,041)	(7,285)	3,826
Net income	—	—	—	338	338
Other comprehensive income, net	—	—	1,351	—	1,351
Share-based compensation expense	—	75	—	—	75
Intercompany equity transfer	—	3	—	—	3
Balance at December 31, 2022	<u>\$ —</u>	<u>\$ 17,230</u>	<u>\$ (4,690)</u>	<u>\$ (6,947)</u>	<u>\$ 5,593</u>

See accompanying notes to consolidated financial statements.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

1. Basis of Presentation and Summary of Significant Accounting Policies

(a) Basis of Presentation

American Airlines, Inc. (American) is a Delaware corporation whose primary business activity is the operation of a major network air carrier, providing scheduled air transportation for passengers and cargo. American is the principal wholly-owned subsidiary of American Airlines Group Inc. (AAG), which owns all of American's outstanding common stock, par value \$1.00 per share. All significant intercompany transactions have been eliminated.

The preparation of financial statements in accordance with accounting principles generally accepted in the United States (GAAP) requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses, and the disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates. The most significant areas of judgment relate to passenger revenue recognition, the loyalty program, deferred tax assets, as well as pension and retiree medical and other postretirement benefits.

(b) Government Assistance

Payroll Support Programs

During 2020 and 2021, American, Envoy Air Inc. (Envoy), Piedmont Airlines, Inc. (Piedmont) and PSA Airlines, Inc. (PSA and together with American, Envoy and Piedmont, the Subsidiaries) entered into payroll support program agreements (PSP Agreements) with the U.S. Department of Treasury (Treasury) pursuant to the payroll support program established under the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) (PSP1), the payroll support program established under the Subtitle A of Title IV of Division N of the Consolidated Appropriations Act, 2021 (PSP Extension Law) (PSP2) and the payroll support program established under the American Rescue Plan Act of 2021 (ARP) (PSP3). The aggregate amount of financial assistance received was approximately \$12.8 billion, and as partial compensation to the U.S. Government for the provision of financial assistance provided under each of these programs, AAG issued promissory notes and warrants to Treasury.

The table below provides a summary of the financial assistance received and the promissory notes and the warrants issued under each program (in millions, except exercise price amounts):

Program	Closing Date	PSP Financial Assistance	Promissory Notes ⁽¹⁾	PSP Warrants	Total	Warrants Issued (Shares) ⁽²⁾	Exercise Price of Warrants
PSP1	April 20, 2020	\$ 4,138	\$ 1,757	\$ 63	\$ 5,958	14.0	\$ 12.51
PSP2	January 15, 2021	2,427	1,030	76	3,533	6.6	15.66
PSP3	April 23, 2021	2,290	959	46	3,295	4.4	21.75
Total		\$ 8,855	\$ 3,746	\$ 185	\$ 12,786	25.0	

⁽¹⁾ See Note 3 for further information on the promissory notes issued.

⁽²⁾ The payroll support program warrants (PSP Warrants) are subject to certain anti-dilution provisions, do not have any voting rights and are freely transferable, with registration rights. Each warrant expires on the fifth anniversary of the date of issuance, with expiration dates ranging from April 2025 to June 2026, and will be exercisable either through net share settlement or cash, at AAG's option. The warrants were issued solely as compensation to the U.S. Government related to entry into the PSP Agreements. No separate proceeds (apart from the financial assistance described below) were received upon issuance of the warrants or will be received upon exercise thereof.

In connection with the PSP Agreements entered into with Treasury, AAG and the Subsidiaries were required to comply with the relevant provisions of the CARES Act, the PSP Extension Law, and the ARP, which included the requirement that funds provided pursuant to these programs be used exclusively for the continuation of payment of eligible employee wages, salaries and benefits, the prohibition against involuntary furloughs and reductions in employee pay rates and benefits, the requirement that certain levels of commercial air service be maintained, provisions that prohibited the repurchase of AAG common stock and the payment of common stock dividends as well as provisions that restrict the

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

payment of certain executive compensation. As of December 31, 2022, all of these provisions have expired except for those related to the payment of certain executive compensation, which expire on April 1, 2023.

For accounting purposes, the \$12.8 billion of aggregate financial assistance received pursuant to the PSP Agreements was allocated to the promissory notes, warrants and other financial assistance (PSP Financial Assistance). The aggregate principal amount of the promissory notes was recorded as unsecured long-term debt and the total fair value of the warrants, estimated using a Black-Scholes option pricing model, was recorded in stockholders' deficit in AAG's consolidated balance sheets. The remaining amounts were recognized in 2020 and 2021 as a credit to special items, net in the consolidated statements of operations over the period which the continuation of payment of eligible employee wages, salaries and benefits was required.

Treasury Loan Agreement

On September 25, 2020 (the Treasury Loan Closing Date), AAG and American entered into a Loan and Guarantee Agreement (the Treasury Loan Agreement) with Treasury, which provided for a secured term loan facility (the Treasury Term Loan Facility) that permitted American to borrow up to \$5.5 billion. Subsequently, on October 21, 2020, AAG and American entered into an amendment to the Treasury Loan Agreement which increased the borrowing amount to up to \$7.5 billion. In connection with AAG's entry into the Treasury Loan Agreement, on the Treasury Loan Closing Date, AAG also entered into a warrant agreement (the Treasury Loan Warrant Agreement) with Treasury.

In September 2020, American borrowed \$550 million under the Treasury Term Loan Facility and on March 24, 2021, used a portion of the proceeds from the AAdvantage Financing to prepay in full the \$550 million of outstanding loans under the Treasury Term Loan Facility and terminated the Treasury Loan Agreement. Pursuant to the Treasury Loan Agreement, AAG issued to Treasury warrants (Treasury Loan Warrants) to purchase up to an aggregate of approximately 4.4 million shares of AAG common stock (the Treasury Loan Warrant Shares), which expire in September 2025. The exercise price of the Treasury Loan Warrant Shares is \$12.51 per share, subject to certain anti-dilution provisions provided for in the Treasury Loan Warrant Agreement. For accounting purposes, the fair value for the Treasury Loan Warrant Shares, estimated using a Black-Scholes option pricing model, was recorded in stockholders' deficit in AAG's consolidated balance sheet with an offsetting debt discount to the Treasury Term Loan Facility in American's consolidated balance sheet. The provisions of the Treasury Loan Warrants are substantially similar to the PSP Warrants.

(c) Recent Accounting Pronouncements

Accounting Standards Update (ASU) 2020-04: Reference Rate Reform (Topic 848) Facilitation of the Effects of Reference Rate Reform on Financial Reporting and ASU 2022-06: Deferral of the Sunset Date of Topic 848

ASU 2020-04 provides optional temporary guidance for applying GAAP to contracts, hedging relationships, and other transactions that reference the London Interbank Offered Rate (LIBOR) or another reference rate expected to be discontinued because of reference rate reform. Topic 848 is effective as of March 12, 2020 through December 31, 2022; however, because the intended cessation date of LIBOR was deferred to June 30, 2023, ASU 2022-06 was issued in December 2022 to extend the current relief in Topic 848 through December 31, 2024. American will adopt Topic 848 when its relevant contracts are modified upon transition to alternative reference rates and American does not expect the application of Topic 848 to have a material impact on its consolidated financial statements.

(d) Investments

Short-term investments primarily include debt securities and are classified as available-for-sale and stated at fair value. Realized gains and losses are recorded in nonoperating other income, net on American's consolidated statements of operations. Unrealized gains and losses are recorded as a component of accumulated other comprehensive loss on American's consolidated balance sheets. For investments in an unrealized loss position, American determines whether a credit loss exists by considering information about the collectability of the instrument, current market conditions and reasonable and supportable forecasts of economic conditions. There have been no credit losses.

Equity investments are accounted for under the equity method if American is able to exercise significant influence over an investee. Equity investments for which American does not have significant influence are recorded at fair value or at cost, if fair value is not readily determinable, with adjustments for observable changes in price or impairments (referred to as the measurement alternative). American's share of equity method investees' financial results and changes in fair value are recorded in nonoperating other income, net on the consolidated statements of operations. See Note 7 for additional information related to American's equity investments.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.**(e) Restricted Cash and Short-term Investments**

American has restricted cash and short-term investments related primarily to collateral held to support workers' compensation obligations, collateral associated with the AAdvantage Financing and money market funds to be used to finance a substantial portion of the cost of the renovation and expansion of Terminal 8 at John F. Kennedy International Airport (JFK).

(f) Accounts Receivable, Net

Accounts receivable primarily consist of amounts due from credit card processing companies for tickets sold to individual passengers, amounts due from airline and non-airline business partners, including American's co-branded credit card partners and cargo customers. Receivables from ticket sales are short-term, mostly settled within seven days after sale. Receivables from American's business partners are typically settled within 30 days. All accounts receivable are reported net of an allowance for credit losses, which was not material as of December 31, 2022 and 2021. American considers past and future financial and qualitative factors, including aging, payment history and other credit monitoring indicators, when establishing the allowance for credit losses.

(g) Aircraft Fuel, Spare Parts and Supplies, Net

Aircraft fuel is recorded on a first-in, first-out basis. Spare parts and supplies are recorded at average costs less an allowance for obsolescence, which is recognized over the weighted average remaining useful life of the related fleet. American also provides an allowance for spare parts and supplies identified as excess or obsolete to reduce the carrying cost to the lower of cost or net realizable value. Aircraft fuel, spare parts and supplies are expensed when used.

(h) Operating Property and Equipment

Operating property and equipment is recorded at cost and depreciated or amortized to residual values over the asset's estimated useful life or the lease term, whichever is less, using the straight-line method. Residual values for aircraft, engines and related rotatable parts are generally 5% to 10% of original cost. Costs of major improvements that enhance the usefulness of the asset are capitalized and depreciated or amortized over the estimated useful life of the asset or the lease term, whichever is less. The estimated useful lives for the principal property and equipment classifications are as follows:

<u>Principal Property and Equipment Classification</u>	<u>Estimated Useful Life</u>
Aircraft, engines and related rotatable parts	20 – 30 years
Buildings and improvements	5 – 30 years
Furniture, fixtures and other equipment	3 – 10 years
Capitalized software	5 – 10 years

Total depreciation and amortization expense was \$2.2 billion for the year ended December 31, 2022 and \$2.3 billion for each of the years ended December 31, 2021 and 2020.

American assesses impairment of operating property and equipment when events and circumstances indicate that the assets may be impaired. An impairment of an asset or group of assets exists only when the sum of the estimated undiscounted cash flows expected to be generated directly by the assets are less than the carrying value of the assets. American groups assets principally by fleet-type when estimating future cash flows, which is generally the lowest level for which identifiable cash flows exist. Estimates of future cash flows are based on historical results adjusted to reflect management's best estimate of future market and operating conditions, including American's current fleet plan. If such assets are impaired, the impairment charge recognized is the amount by which the carrying value of the assets exceed their fair value. Fair value reflects management's best estimate including inputs from published pricing guides and bids from third parties as well as contracted sales agreements when applicable. In 2022, American recorded \$149 million in non-cash special impairment charges to write down the carrying value of its retired Airbus A330 fleet to the estimated fair value due to the market conditions for certain used aircraft.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

(i) Leases

American determines if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use (ROU) assets, current operating lease liabilities and noncurrent operating lease liabilities on American's consolidated balance sheets. Finance leases are included in property and equipment, current maturities of long-term debt and finance leases and long-term debt and finance leases, net of current maturities, on American's consolidated balance sheets.

ROU assets represent American's right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease. ROU assets and liabilities are recognized at the lease commencement date based on the estimated present value of lease payments over the lease term.

American uses its estimated incremental borrowing rate, which is derived from information available at the lease commencement date, in determining the present value of lease payments. American gives consideration to its recent debt issuances as well as publicly available data for instruments with similar characteristics when calculating its incremental borrowing rates.

American's lease term includes options to extend the lease when it is reasonably certain that it will exercise that option. Leases with a term of 12 months or less are not recorded on its consolidated balance sheets.

Under certain of American's capacity purchase agreements with third-party regional carriers, American does not own the underlying aircraft. However, since American controls the marketing, scheduling, ticketing, pricing and seat inventories of these aircraft and therefore control the asset, the aircraft is deemed to be leased for accounting purposes. For these capacity purchase agreements, American accounts for the lease and non-lease components separately. The lease component consists of the aircraft and the non-lease components consist of services, such as the crew and maintenance. American allocates the consideration in the capacity purchase agreements to the lease and non-lease components using their estimated relative standalone prices. See Note 10(b) for additional information on its capacity purchase agreements.

For real estate, American accounts for the lease and non-lease components as a single lease component.

(j) Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are recorded net as noncurrent deferred income taxes.

American provides a valuation allowance for its deferred tax assets when it is more likely than not that some portion, or all of its deferred tax assets, will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income. American considers all available positive and negative evidence and makes certain assumptions in evaluating the realizability of its deferred tax assets. Many factors are considered that impact American's assessment of future profitability, including conditions which are beyond American's control, such as the health of the economy, the availability and price volatility of aircraft fuel and travel demand. American has determined that positive factors outweigh negative factors in the determination of the realizability of its deferred tax assets.

(k) Goodwill

Goodwill represents the purchase price in excess of the fair value of the net assets acquired and liabilities assumed in connection with the 2013 merger with US Airways Group, Inc. (US Airways Group). American has one reporting unit. American assesses goodwill for impairment annually or more frequently if events or circumstances indicate that the fair value of goodwill may be lower than the carrying value. American's annual assessment date is October 1.

Goodwill is assessed for impairment by initially performing a qualitative assessment. If American determines that it is more likely than not that its goodwill may be impaired, it uses a quantitative approach to assess the asset's fair value and the amount of the impairment, if any. Based upon American's annual assessment, there was no goodwill impairment in 2022. The carrying value of American's goodwill on its consolidated balance sheets was \$4.1 billion as of December 31, 2022 and 2021.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

(I) Other Intangibles, Net

Intangible assets consist primarily of certain domestic airport slots and gate leasehold rights, customer relationships, marketing agreements, commercial agreements, international slots and route authorities and tradenames.

Definite-Lived Intangible Assets

Definite-lived intangible assets are originally recorded at their acquired fair values, subsequently amortized over their respective estimated useful lives and are assessed for impairment whenever events and circumstances indicate that the assets may be impaired.

The following table provides information relating to American's amortizable intangible assets as of December 31, 2022 and 2021 (in millions):

	December 31,	
	2022	2021
Domestic airport slots	\$ 365	\$ 365
Customer relationships	300	300
Marketing agreements	105	105
Tradenames	35	35
Airport gate leasehold rights	137	137
Accumulated amortization	(827)	(786)
Total	\$ 115	\$ 156

Certain domestic airport slots and airport gate leasehold rights are amortized on a straight-line basis over 25 years. Certain marketing agreements were identified as intangible assets subject to amortization and are amortized on a straight-line basis over approximately 30 years. Customer relationships and tradenames are fully amortized.

American recorded amortization expense related to these intangible assets of \$41 million for each of the years ended December 31, 2022, 2021 and 2020. American expects to record annual amortization expense for these intangible assets as follows (in millions):

2023	\$ 7
2024	7
2025	7
2026	6
2027	6
2028 and thereafter	82
Total	\$ 115

Indefinite-Lived Intangible Assets

Indefinite-lived intangible assets include certain domestic airport slots, international slots and route authorities and in 2022, American's commercial agreement with GOL Linhas Aéreas Inteligentes S.A. (GOL). American assesses indefinite-lived intangible assets for impairment annually or more frequently if events or circumstances indicate that the fair values of indefinite-lived intangible assets may be lower than their carrying values. American's annual assessment date is October 1.

Indefinite-lived intangible assets are assessed for impairment by initially performing a qualitative assessment. If American determines that it is more likely than not that its indefinite-lived intangible assets may be impaired, American uses a quantitative approach to assess the asset's fair value and the amount of the impairment, if any. Based upon American's annual assessment, there were no material indefinite-lived intangible asset impairments in 2022. American had \$1.9 billion and \$1.8 billion of indefinite-lived intangible assets on its consolidated balance sheets as of December 31, 2022 and 2021, respectively.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

(m) Revenue Recognition

Revenue

The following are the significant categories comprising American's operating revenues (in millions):

	Year Ended December 31,		
	2022	2021	2020
Passenger revenue:			
Passenger travel	\$ 41,425	\$ 23,896	\$ 13,456
Loyalty revenue - travel ⁽¹⁾	3,143	2,167	1,062
Total passenger revenue	44,568	26,063	14,518
Cargo	1,233	1,314	769
Other:			
Loyalty revenue - marketing services	2,657	2,166	1,825
Other revenue	507	337	223
Total other revenue	3,164	2,503	2,048
Total operating revenues	\$ 48,965	\$ 29,880	\$ 17,335

⁽¹⁾ Loyalty revenue included in passenger revenue is principally comprised of mileage credit redemptions, which were earned from travel or co-branded credit card and other partners. See "Loyalty Revenue" below for further discussion on these mileage credits.

The following is American's total passenger revenue by geographic region (in millions):

	Year Ended December 31,		
	2022	2021	2020
Domestic	\$ 32,911	\$ 21,453	\$ 11,765
Latin America	6,150	3,506	1,852
Atlantic	5,070	965	654
Pacific	437	139	247
Total passenger revenue	\$ 44,568	\$ 26,063	\$ 14,518

American attributes passenger revenue by geographic region based upon the origin and destination of each flight segment.

Passenger Revenue

American recognizes all revenues generated from transportation on American and its regional flights operated under the brand name American Eagle, including associated baggage fees and other inflight services, as passenger revenue when transportation is provided. Ticket and other related sales for transportation that has not yet been provided are initially deferred and recorded as air traffic liability on American's consolidated balance sheets. The air traffic liability principally represents tickets sold for future travel on American and partner airlines.

The majority of tickets sold are nonrefundable. A small percentage of tickets, some of which are partially used tickets, expire unused. The estimate for tickets expected to expire unused is generally based on an analysis of American's historical data. American has consistently applied this accounting method to estimate and recognize revenue from unused tickets at the date of travel. This estimate is periodically evaluated based on subsequent activity to validate its accuracy. Any adjustments resulting from periodic evaluations of the estimated air traffic liability are included in passenger revenue during the period in which the evaluations are completed.

Various taxes and fees assessed on the sale of tickets to end customers are collected by American as an agent and remitted to taxing authorities. These taxes and fees have been presented on a net basis in the accompanying consolidated statements of operations and recorded as a liability until remitted to the appropriate taxing authority.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Loyalty Revenue

American currently operates the loyalty program, AAdvantage. This program awards mileage credits to passengers who fly on American, any oneworld airline or other partner airlines, or by using the services of other program participants, such as American's co-branded credit cards, and certain hotels and car rental companies. Mileage credits can be redeemed for travel on American and other participating partner airlines, as well as other non-air travel awards such as hotels and rental cars. For mileage credits earned by AAdvantage loyalty program members, American applies the deferred revenue method.

Mileage credits earned through travel

For mileage credits earned through travel, American applies a relative selling price approach whereby the total amount collected from each passenger ticket sale is allocated between the air transportation and the mileage credits earned. The portion of each passenger ticket sale attributable to mileage credits earned is initially deferred and then recognized in passenger revenue when mileage credits are redeemed and transportation is provided. The estimated selling price of mileage credits is determined using an equivalent ticket value approach, which uses historical data, including award redemption patterns by geographic region and class of service, as well as similar fares as those used to settle award redemptions. The estimated selling price of mileage credits is adjusted for an estimate of mileage credits that will not be redeemed using a statistical model based on historical redemption patterns to develop an estimate of the likelihood of future redemption.

Mileage credits sold to co-branded credit cards and other partners

American sells mileage credits to participating airline partners and non-airline business partners, including American's co-branded credit card partners, under contracts with remaining terms generally from one to seven years as of December 31, 2022. Consideration received from the sale of mileage credits is variable and payment terms typically are within 30 days subsequent to the month of mileage sale. Sales of mileage credits to non-airline business partners are comprised of two components, transportation and marketing. American allocates the consideration received from these sales of mileage credits based on the relative selling price of each product or service delivered.

American's most significant mileage credit partner agreements are its co-branded credit card agreements with Citi and Barclaycard US. American identified two revenue elements in these co-branded credit card agreements: the transportation component and the marketing component.

The transportation component represents the estimated selling price of future travel awards and is determined using the same equivalent ticket value approach described above. The portion of each mileage credit sold attributable to transportation is initially deferred and then recognized in passenger revenue when mileage credits are redeemed and transportation is provided.

The marketing component includes the use of intellectual property, including the American brand and access to loyalty program member lists, which is the predominant element in these agreements, as well as advertising. American recognizes the marketing component in other revenue in the period of the mileage credit sale following the sales-based royalty method.

For the portion of American's outstanding mileage credits that it estimates will not be redeemed, American recognizes the associated value proportionally as the remaining mileage credits are redeemed. American's estimates use a statistical model based on historical redemption patterns to develop an estimate of the likelihood of future redemption.

Cargo Revenue

Cargo revenue is recognized when American provides the transportation.

Other Revenue

Other revenue includes revenue associated with American's loyalty program, which is comprised principally of the marketing component of mileage credit sales to co-branded credit card and other partners and other marketing related payments. The accounting and recognition for the loyalty program marketing services are discussed above in "*Loyalty Revenue*." The remaining amounts included within other revenue relate to airport clubs, other commission revenue, advertising and vacation-related services.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Contract Balances

American's significant contract liabilities are comprised of (1) outstanding loyalty program mileage credits that may be redeemed for future travel and other non-air travel awards, reported as loyalty program liability on American's consolidated balance sheets and (2) ticket sales for transportation that has not yet been provided, reported as air traffic liability on American's consolidated balance sheets.

	December 31,	
	2022	2021
	(in millions)	
Loyalty program liability	\$ 9,145	\$ 9,135
Air traffic liability	6,745	6,087
Total	\$ 15,890	\$ 15,222

The balance of the loyalty program liability fluctuates based on seasonal patterns, which impact the volume of mileage credits issued through travel or sold to co-branded credit card and other partners (deferral of revenue) and mileage credits redeemed (recognition of revenue). Changes in loyalty program liability are as follows (in millions):

Balance at December 31, 2021	\$ 9,135
Deferral of revenue	3,221
Recognition of revenue ⁽¹⁾	(3,211)
Balance at December 31, 2022 ⁽²⁾	\$ 9,145

⁽¹⁾ Principally relates to revenue recognized from the redemption of mileage credits for both air and non-air travel awards. Mileage credits are combined in one homogenous pool and are not separately identifiable. As such, the revenue is comprised of mileage credits that were part of the loyalty program deferred revenue balance at the beginning of the period, as well as mileage credits that were issued during the period.

⁽²⁾ Mileage credits can be redeemed at any time and generally do not expire as long as that AAdvantage member has any type of qualifying activity at least every 24 months or if the AAdvantage member is the primary holder of a co-branded credit card. As of December 31, 2022, American's current loyalty program liability was \$3.2 billion and represents American's current estimate of revenue expected to be recognized in the next 12 months based on historical as well as projected trends, with the balance reflected in long-term loyalty program liability expected to be recognized as revenue in periods thereafter.

The air traffic liability principally represents tickets sold for future travel on American and partner airlines. The balance in American's air traffic liability also fluctuates with seasonal travel patterns. The contract duration of passenger tickets is generally one year. Accordingly, any revenue associated with tickets sold for future travel will be recognized within 12 months. In response to the COVID-19 pandemic, American extended the contract duration for certain tickets to September 30, 2022, principally those tickets which were issued in 2020 and 2021. Additionally, American extended the contract duration to December 31, 2022 for tickets to certain international destinations. For 2022, \$4.8 billion of revenue was recognized in passenger revenue that was included in American's air traffic liability at December 31, 2021. Tickets issued in 2022 and thereafter are no longer subject to change fees which provides more flexibility for customers to change travel plans. Given this new flexibility offered to its customers, American's estimate of revenue that will be recognized from the air traffic liability for future flown or unused tickets may be subject to variability and differ from historical experience.

(n) Maintenance, Materials and Repairs

Maintenance and repair costs for owned and leased flight equipment are charged to operating expense as incurred, except costs incurred for maintenance and repair under certain flight hour maintenance contract agreements, which are accrued based on contractual terms when an obligation exists.

(o) Selling Expenses

Selling expenses include credit card fees, commissions, third party distribution channel fees and advertising. Selling expenses associated with passenger revenue are expensed when the transportation or service is provided. Advertising costs are expensed as incurred. Advertising expense was \$105 million for each of the years ended December 31, 2022 and 2021 and \$57 million for the year ended December 31, 2020.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

(p) Share-based Compensation

American accounts for its share-based compensation expense based on the fair value of the stock award at the time of grant, which is recognized ratably over the vesting period of the stock award. The majority of American's stock awards are time vested restricted stock units, and the fair value of such awards is based on the market price of the underlying shares of AAG common stock on the date of grant. See Note 13 for further discussion of share-based compensation.

(q) Foreign Currency Gains and Losses

Foreign currency gains and losses are recorded as part of other income, net within total nonoperating expense, net on American's consolidated statements of operations. For the years ended December 31, 2022, 2021 and 2020, respectively, foreign currency losses were \$38 million, \$4 million and \$24 million.

(r) Other Operating Expenses

Other operating expenses includes costs associated with aircraft food and catering, crew travel, ground and cargo handling, passenger accommodation, international navigation fees, aircraft cleaning and certain general and administrative expenses.

(s) Regional Expenses

American's regional carriers provide scheduled air transportation under the brand name "American Eagle." The American Eagle carriers include AAG's wholly-owned regional carriers as well as third-party regional carriers. American's regional carrier arrangements are in the form of capacity purchase agreements. Expenses associated with American Eagle operations are classified as regional expenses on the consolidated statements of operations.

Regional expenses for the years ended December 31, 2022, 2021, and 2020 include \$269 million, \$263 million and \$273 million of depreciation and amortization, respectively, and \$5 million, \$6 million and \$13 million of aircraft rent, respectively.

In 2022, 2021, and 2020, American recognized \$592 million, \$495 million and \$438 million, respectively, of expense under its capacity purchase agreement with Republic Airways Inc. (Republic). American holds a 25% equity interest in Republic Airways Holdings Inc. (Republic Holdings), the parent company of Republic.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

2. Special Items, Net

Special items, net on American's consolidated statements of operations consisted of the following (in millions):

	Year Ended December 31,		
	2022	2021	2020
Fleet impairment ⁽¹⁾	\$ 149	\$ —	\$ 1,484
Litigation reserve adjustments	37	(19)	—
PSP Financial Assistance ⁽²⁾	—	(4,162)	(3,710)
Severance expenses ⁽³⁾	—	168	1,408
Mark-to-market adjustments on bankruptcy obligations, net	—	(3)	(49)
Labor contract expenses ⁽⁴⁾	—	—	228
Other operating special items, net	7	10	(18)
Mainline operating special items, net	193	(4,006)	(657)
PSP Financial Assistance ⁽²⁾	—	(539)	(444)
Fleet impairment ⁽¹⁾	—	27	106
Regional operating special items, net	—	(512)	(338)
Operating special items, net	193	(4,518)	(995)
Mark-to-market adjustments on equity and other investments, net ⁽⁵⁾	71	31	135
Debt refinancing, extinguishment and other, net	1	29	35
Nonoperating special items, net	72	60	170
Income tax special items, net	(9)	—	—

⁽¹⁾ Fleet impairment for 2022 included a non-cash impairment charge to write down the carrying value of American's retired Airbus A330 fleet to the estimated fair value due to the market conditions for certain used aircraft.

Fleet impairment for 2021 and 2020 included charges resulting from the retirement of certain aircraft earlier than planned driven by the severe decline in air travel due to the COVID-19 pandemic. In 2021, American retired its remaining Embraer 140 fleet resulting in a non-cash write down of these regional aircraft. In 2020, American retired its entire Airbus A330-200, Boeing 757, Boeing 767, Airbus A330-300 and Embraer 190 fleets as well as certain Embraer 140 and Bombardier CRJ200 aircraft resulting in a \$1.5 billion non-cash write down of mainline and regional aircraft and associated spare parts and \$109 million in cash charges primarily for impairment of ROU assets and lease return costs.

⁽²⁾ The PSP Financial Assistance represents recognition of a portion of the financial assistance received from Treasury pursuant to the payroll support programs established by the U.S. Government. See Note 1(b) for further information.

⁽³⁾ Severance expenses include salary and medical costs primarily associated with certain team members who opted into voluntary early retirement programs offered as a result of reductions to American's operation due to the COVID-19 pandemic.

⁽⁴⁾ Labor contract expenses primarily related to one-time charges due to the ratification of a new contract with the Transport Workers Union and International Association of Machinists & Aerospace Workers (TWU-IAM Association) for American's maintenance and fleet service team members, including signing bonuses and adjustments to vacation accruals resulting from pay rate increases.

⁽⁵⁾ Mark-to-market adjustments on equity and other investments, net principally included net unrealized gains and losses associated with certain equity investments and certain other investments. See Note 7 for further information related to American's equity investments.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

3. Debt

Long-term debt included on American's consolidated balance sheets consisted of (in millions):

	December 31,	
	2022	2021
Secured		
2013 Term Loan Facility, variable interest rate of 6.14%, installments through 2025 ^(a)	\$ 1,752	\$ 1,770
2014 Term Loan Facility, variable interest rate of 6.14%, installments through 2027 ^(a)	1,196	1,208
December 2016 Term Loan Facility ^(a)	—	1,188
11.75% senior secured notes, interest only payments until due in July 2025 ^(b)	2,500	2,500
10.75% senior secured IP notes, interest only payments until due in February 2026 ^(b)	1,000	1,000
10.75% senior secured LGA/DCA notes, interest only payments until due in February 2026 ^(b)	200	200
5.50% senior secured notes, installments beginning in July 2023 until due in April 2026 ^(c)	3,500	3,500
5.75% senior secured notes, installments beginning in July 2026 until due in April 2029 ^(c)	3,000	3,000
AAdvantage Term Loan Facility, variable interest rate of 8.99%, installments beginning in July 2023 through April 2028 ^(c)	3,500	3,500
Enhanced equipment trust certificates (EETCs), fixed interest rates ranging from 2.88% to 7.13%, averaging 3.74%, maturing from 2023 to 2034 ^(d)	9,175	9,357
Equipment loans and other notes payable, fixed and variable interest rates ranging from 3.33% to 8.01%, averaging 5.95%, maturing from 2023 to 2034 ^(e)	3,170	3,433
Special facility revenue bonds, fixed interest rates ranging from 2.25% to 5.38%, maturing from 2026 to 2036 ^(f)	1,050	1,129
Total long-term debt	30,043	31,785
Less: Total unamortized debt discount, premium and issuance costs	364	428
Less: Current maturities	3,059	1,568
Long-term debt, net of current maturities	<u>\$ 26,620</u>	<u>\$ 29,789</u>

As of December 31, 2022, the maximum availability under American's revolving credit and other facilities is as follows (in millions):

2013 Revolving Facility	\$ 736
2014 Revolving Facility	1,631
April 2016 Revolving Facility	446
Short-term Revolving and Other Facilities	220
Total	\$ 3,033

As of December 31, 2022, American had an undrawn \$150 million short-term revolving credit facility which expired in January 2023. American also had \$70 million of available borrowing base under cargo receivables facility that was set to expire in December 2022, but which has been extended through December 2023.

Secured financings, including revolving credit and other facilities, are collateralized by assets, consisting primarily of aircraft, engines, simulators, aircraft spare parts, airport gate leasehold rights, route authorities, airport slots, certain receivables, certain intellectual property and certain loyalty program assets.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

At December 31, 2022, the maturities of long-term debt are as follows (in millions):

2023	\$	3,059
2024		3,535
2025		7,817
2026		4,480
2027		4,515
2028 and thereafter		6,637
Total	\$	<u>30,043</u>

(a) 2013 and 2014 Credit Facilities, April 2016 Revolving Facility and December 2016 Credit Facilities

2013 Credit Facilities

In November 2019, American and AAG entered into the Sixth Amendment to Amended and Restated Credit and Guaranty Agreement, amending the Amended and Restated Credit and Guaranty Agreement dated as of May 21, 2015 (as previously amended, the 2013 Credit Agreement; the revolving credit facility established thereunder, the 2013 Revolving Facility; the term loan facility established thereunder, the 2013 Term Loan Facility; and the 2013 Revolving Facility together with the 2013 Term Loan Facility, the 2013 Credit Facilities), which reduced the total aggregate commitments under the 2013 Revolving Facility to \$750 million from \$1.0 billion. In addition, certain lenders party to the 2013 Credit Agreement extended the maturity date of a substantial portion of their commitments under the 2013 Revolving Facility to October 2024 from October 2023. As of December 31, 2022, there were no borrowings or letters of credit outstanding under the 2013 Revolving Facility.

2014 Credit Facilities

In November 2019, American and AAG entered into the Seventh Amendment to Amended and Restated Credit and Guaranty Agreement, amending the Amended and Restated Credit and Guaranty Agreement dated as of April 20, 2015 (as previously amended, the 2014 Credit Agreement; the revolving credit facility established thereunder, the 2014 Revolving Facility; the term loan facility established thereunder, the 2014 Term Loan Facility; and the 2014 Revolving Facility together with the 2014 Term Loan Facility, the 2014 Credit Facilities), which increased the total aggregate commitments under the 2014 Revolving Facility to \$1.6 billion from \$1.5 billion. In addition, certain lenders party to the 2014 Credit Agreement extended the maturity date of a substantial portion of their commitments under the 2014 Revolving Facility to October 2024 from October 2023.

In January 2020, American and AAG entered into the Eighth Amendment to the 2014 Credit Agreement, pursuant to which American refinanced the 2014 Term Loan Facility, increasing the total aggregate principal amount outstanding to \$1.2 billion, reducing the LIBOR margin from 2.00% to 1.75%, with a LIBOR floor of 0%, and reducing the base rate margin from 1.00% to 0.75%. In addition, the maturity date for the 2014 Term Loan Facility was extended to January 2027 from October 2021. As of December 31, 2022, there were no borrowings or letters of credit outstanding under the 2014 Revolving Facility.

April 2016 Revolving Facility

In November 2019, American and AAG entered into the Fifth Amendment to Credit and Guaranty Agreement, amending the Credit and Guaranty Agreement dated as of April 29, 2016 (as previously amended, the April 2016 Credit Agreement; the revolving credit facility established thereunder, the April 2016 Revolving Facility), which increased the total aggregate commitments under the April 2016 Revolving Facility to \$450 million from \$300 million. In addition, certain lenders party to the April 2016 Credit Agreement extended the maturity date of a substantial portion of their commitments under the April 2016 Revolving Facility to October 2024 from October 2023. As of December 31, 2022, there were no borrowings outstanding under the April 2016 Revolving Facility.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

December 2016 Credit Facilities

In December 2016, American and AAG entered into the Amended and Restated Credit and Guaranty Agreement, dated as of December 15, 2016 (as amended, the December 2016 Credit Agreement; the term loan facility established thereunder, the December 2016 Term Loan Facility; and together with the revolving credit facility contemplated but never established thereunder, the December 2016 Credit Facilities). In December 2022, American repaid in full the \$1.2 billion aggregate principal amount of outstanding term loans under the December 2016 Term Loan Facility which was due to mature in December 2023 and terminated the December 2016 Credit Facilities.

Certain details of American's 2013 and 2014 Credit Facilities (collectively referred to as the Credit Facilities) and April 2016 Revolving Facility are shown in the table below as of December 31, 2022:

	2013 Credit Facilities		2014 Credit Facilities		April 2016 Revolving Facility
	2013 Term Loan	2013 Revolving Facility	2014 Term Loan	2014 Revolving Facility	
Aggregate principal issued or credit facility availability (in millions)	\$1,919	\$736	\$1,280	\$1,631	\$446
Principal outstanding or drawn (in millions)	\$1,752	\$—	\$1,196	\$—	\$—
Maturity date	June 2025	October 2024	January 2027	October 2024	October 2024
LIBOR margin	1.75%	2.00%	1.75%	2.00%	2.00%

The term loans under each of the Credit Facilities are repayable in annual installments in an amount equal to 1.00% of the aggregate principal amount issued, with any unpaid balance due on the respective maturity dates. Voluntary prepayments may be made by American at any time.

The 2013 Revolving Facility, 2014 Revolving Facility and April 2016 Revolving Facility provide that American may from time to time borrow, repay and reborrow loans thereunder. The 2013 Revolving Facility and 2014 Revolving Facility have the ability to issue letters of credit thereunder in an aggregate amount outstanding at any time up to \$100 million and \$200 million, respectively. The 2013 Revolving Facility, 2014 Revolving Facility and April 2016 Revolving Facility are each subject to an undrawn annual fee of 0.63%.

Subject to certain limitations and exceptions, the Credit Facilities and April 2016 Revolving Facility are secured by collateral, including certain spare parts, slots, route authorities, simulators and leasehold rights. American has the ability to make future modifications to the collateral pledged, subject to certain restrictions. American's obligations under the Credit Facilities and April 2016 Revolving Facility are guaranteed by AAG. The Credit Facilities and April 2016 Revolving Facility contain events of default customary for similar financings, including cross default and cross-acceleration to other material indebtedness.

(b) Senior Secured Notes

11.75% Senior Secured Notes

In June 2020, American issued \$2.5 billion aggregate principal amount of 11.75% senior secured notes due 2025 (the 11.75% Senior Secured Notes) at a price equal to 99% of their aggregate principal amount. The 11.75% Senior Secured Notes bear interest at a rate of 11.75% per annum (subject to increase if the collateral coverage ratio described below is not met). Interest on the 11.75% Senior Secured Notes is payable semiannually in arrears on January 15 and July 15 of each year, which began on January 15, 2021. The 11.75% Senior Secured Notes will mature on July 15, 2025. The obligations of American under the 11.75% Senior Secured Notes are fully and unconditionally guaranteed on a senior unsecured basis by AAG.

The 11.75% Senior Secured Notes are American's senior secured obligations. Subject to certain limitations and exceptions, the 11.75% Senior Secured Notes are secured on a first-lien basis by security interests in certain assets, rights and properties utilized by American in providing its scheduled air carrier services to and from certain airports in the United States and certain airports in Australia, Canada, the Caribbean, Central America, China, Hong Kong, Japan, Mexico, South Korea, and Switzerland (collectively, the First Lien 11.75% Senior Secured Notes Collateral). American's obligations with respect to the 11.75% Senior Secured Notes are also secured on a second-lien basis by security interests.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

in certain assets, rights and properties utilized by American in providing its scheduled air carrier services to and from certain airports in the United States and certain airports in the European Union and the United Kingdom (collectively, the Second Lien 11.75% Senior Secured Notes Collateral and together with the First Lien 11.75% Senior Secured Notes Collateral, the 11.75% Senior Secured Notes Collateral). The Second Lien 11.75% Senior Secured Notes Collateral also secures the 2014 Credit Facilities on a first-lien basis.

American may redeem the 11.75% Senior Secured Notes, in whole at any time or in part from time to time, at a redemption price equal to 100% of the principal amount of the 11.75% Senior Secured Notes being redeemed plus a make whole premium, together with accrued and unpaid interest thereon, if any, to (but not including) the redemption date.

10.75% Senior Secured Notes

On September 25, 2020 (the 10.75% Senior Secured Notes Closing Date), American issued \$1.0 billion in initial principal amount of senior secured IP notes (the IP Notes) and \$200 million in initial principal amount of senior secured LGA/DCA notes (the LGA/DCA Notes and together with the IP Notes, the 10.75% Senior Secured Notes). The obligations of American under the 10.75% Senior Secured Notes are fully and unconditionally guaranteed (the 10.75% Senior Secured Notes Guarantees) on a senior unsecured basis by AAG. The 10.75% Senior Secured Notes bear interest at a rate of 10.75% per annum in cash. Interest on the 10.75% Senior Secured Notes is payable semiannually in arrears on September 1 and March 1 of each year, which began on March 1, 2021. The 10.75% Senior Secured Notes will mature on February 15, 2026.

The IP Notes are secured by a first lien security interest on certain intellectual property of American, including the "American Airlines" trademark and the "aa.com" domain name in the United States and certain foreign jurisdictions (the IP Collateral), and a second lien on certain slots related to American's operations at New York LaGuardia and Ronald Reagan Washington National airports and certain other assets (the LGA/DCA Collateral and together with the IP Collateral, the 10.75% Senior Secured Notes Collateral). Subject to certain conditions, American will be permitted to incur up to \$4.0 billion of additional pari passu debt and unlimited second lien debt secured by the IP Collateral securing the IP Notes. The LGA/DCA Notes are secured by a first lien security interest in the LGA/DCA Collateral.

On or prior to the fourth anniversary of the 10.75% Senior Secured Notes Closing Date, American may redeem all or any part of the 10.75% Senior Secured Notes, at its option, at a redemption price equal to 100% of the principal amount of the 10.75% Senior Secured Notes redeemed plus a make whole premium, together with accrued and unpaid interest thereon, if any. After the fourth anniversary of the 10.75% Senior Secured Notes Closing Date and on or prior to the fifth anniversary of the 10.75% Senior Secured Notes Closing Date, American may redeem all or any part of the 10.75% Senior Secured Notes, at its option, at a redemption price equal to 105.375% of the principal amount of the 10.75% Senior Secured Notes redeemed, together with accrued and unpaid interest thereon, if any. After the fifth anniversary of the 10.75% Senior Secured Notes Closing Date, American may redeem all or any part of the 10.75% Senior Secured Notes, at its option, at par, together with accrued and unpaid interest thereon, if any.

(c) AAdvantage Financing

On March 24, 2021 (the AAdvantage Financing Closing Date), American and AAdvantage Loyalty IP Ltd., a Cayman Islands exempted company incorporated with limited liability and an indirect wholly-owned subsidiary of American (Loyalty Issuer and, together with American, the AAdvantage Issuers), completed the offering of \$3.5 billion aggregate principal amount of 5.50% Senior Secured Notes due 2026 (the 2026 Notes) and \$3.0 billion aggregate principal amount of 5.75% Senior Secured Notes due 2029 (the 2029 Notes, and together with the 2026 Notes, the AAdvantage Notes). The AAdvantage Notes are fully and unconditionally guaranteed on a senior unsecured basis by the SPV Guarantors and AAG.

Concurrent with the issuance of the AAdvantage Notes, the AAdvantage Issuers, as co-borrowers, entered into a term loan credit and guaranty agreement, dated March 24, 2021, providing for a \$3.5 billion term loan facility (the AAdvantage Term Loan Facility and collectively with the AAdvantage Notes, the AAdvantage Financing) and pursuant to which the full \$3.5 billion of term loans (the AAdvantage Loans) were drawn on the AAdvantage Financing Closing Date. The AAdvantage Loans are fully and unconditionally guaranteed (together with the AAdvantage Note Guarantees, the AAdvantage Guarantees) by the SPV Guarantors and AAG.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Subject to certain permitted liens and other exceptions, the AAdvantage Notes, AAdvantage Loans and AAdvantage Guarantees provided by the SPV Guarantors are secured by a first-priority security interest in, and pledge of, various agreements with respect to the AAdvantage program (the AAdvantage Agreements) (including all payments thereunder) and certain IP Licenses, certain deposit accounts that will receive cash under the AAdvantage Agreements, certain reserve accounts, the equity of each of Loyalty Issuer and the SPV Guarantors and substantially all other assets of Loyalty Issuer and the SPV Guarantors including American's rights to certain data and other intellectual property used in the AAdvantage program (subject to certain exceptions) (collectively, the AAdvantage Collateral).

Payment Terms of the AAdvantage Notes and AAdvantage Loans under the AAdvantage Term Loan Facility

Interest on the AAdvantage Notes is payable in cash, quarterly in arrears on the 20th day of each January, April, July and October (each, an AAdvantage Payment Date), which began on July 20, 2021. The 2026 Notes will mature on April 20, 2026, and the 2029 Notes will mature on April 20, 2029. The outstanding principal on the 2026 Notes will be repaid in quarterly installments of \$292 million on each AAdvantage Payment Date, beginning on July 20, 2023. The outstanding principal on the 2029 Notes will be repaid in quarterly installments of \$250 million on each AAdvantage Payment Date, beginning on July 20, 2026.

The AAdvantage Issuers may redeem the AAdvantage Notes, at their option, in whole at any time or in part from time to time, at a redemption price equal to 100% of the principal amount of the AAdvantage Notes redeemed plus a "make-whole" premium, together with accrued and unpaid interest to the date of redemption.

The scheduled maturity date of the AAdvantage Loans under the AAdvantage Term Loan Facility is April 20, 2028. The AAdvantage Loans bear interest at a variable rate equal to LIBOR (but not less than 0.75% per annum), plus a margin of 4.75% per annum, payable on each AAdvantage Payment Date. The outstanding principal on the AAdvantage Loans will be repaid in quarterly installments of \$175 million, on each AAdvantage Payment Date beginning with the AAdvantage Payment Date in July 2023. These amortization payments (as well as those for the AAdvantage Notes) will be subject to the occurrence of certain early amortization events, including the failure to satisfy a minimum debt service coverage ratio at specified determination dates.

Prepayment of some or all of the AAdvantage Loans outstanding under the AAdvantage Term Loan Facility is permitted, although payment of an applicable premium is required as specified in the AAdvantage Term Loan Facility.

The AAdvantage Indenture and the AAdvantage Term Loan Facility contain mandatory prepayment provisions triggered upon (i) the issuance or incurrence by Loyalty Issuer or the SPV Guarantors of certain indebtedness or (ii) the receipt by American or its subsidiaries of net proceeds from pre-paid frequent flyer (i.e., AAdvantage) mile sales exceeding \$505 million. Each of these prepayments would also require payment of an applicable premium. Certain other events, including the occurrence of a change of control with respect to AAG and certain AAdvantage Collateral sales exceeding a specified threshold, will also trigger mandatory repurchase or mandatory prepayment provisions under the AAdvantage Indenture and the AAdvantage Term Loan Facility, respectively.

(d) EETCs

2021-1 Aircraft EETCs

In November 2021, American created two pass-through trusts which issued \$960 million aggregate face amount of Series 2021-1 Class A and Class B EETCs (the 2021-1 Aircraft EETCs) in connection with the financing of 26 aircraft previously delivered or originally scheduled to be delivered to American through September 2022 (the 2021-1 Aircraft). In 2021, \$94 million of the proceeds had been used to purchase equipment notes issued by American in connection with the financing of five aircraft under the 2021-1 Aircraft EETCs, all of which was used to repay existing indebtedness. During 2022, \$866 million of proceeds had been used to purchase equipment notes issued by American in connection with the financing of 21 aircraft under the 2021-1 Aircraft EETCs. As of December 31, 2022, there are no remaining proceeds held in escrow, and all proceeds have been used to purchase equipment notes issued by American. Interest and principal payments on equipment notes issued in connection with the 2021-1 Aircraft EETCs are payable semi-annually in January and July of each year. Interest payments began in July 2022 and principal payments began in January 2023.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Certain information regarding the 2021-1 Aircraft EETC equipment notes, as of December 31, 2022, is set forth in the table below:

	2021-1 Aircraft EETCs	
	Series A	Series B
Aggregate principal issued	\$758 million	\$202 million
Fixed interest rate per annum	2.875%	3.95%
Maturity date	July 2034	July 2030

(e) Equipment Loans and Other Notes Payable Issued in 2022

In 2022, American entered into agreements under which it borrowed \$205 million in connection with the financing of certain aircraft. Debt incurred under these agreements mature in 2034 and bear interest at variable rates (comprised of the Secured Overnight Financing Rate plus an applicable margin) averaging 6.77% as of December 31, 2022.

(f) Special Facility Revenue Bonds

In January 2020, American and British Airways announced the start of construction projects to upgrade New York's JFK Terminal 8. The construction project is expected to be fully completed in early 2023 and is estimated to cost \$439 million, of which \$298 million was funded with proceeds of the special facility revenue bonds issued by the New York Transportation Development Corporation (NYTDC) on behalf of American in June 2020 (the 2020 JFK Bonds) and approximately \$84 million of which was funded with proceeds of the approximately \$150 million of special facility revenue bonds NYTDC issued in June 2021 (the 2021 JFK Bonds).

American is required to pay debt service on the 2021 JFK Bonds through payments under a loan agreement with NYTDC (as amended), and American and AAG guarantee the 2021 JFK Bonds. American continues to pay debt service on the outstanding bonds issued by NYTDC on behalf of American in 2016 and 2020 (the 2016 and 2020 JFK Bonds) and American and AAG continue to guarantee the 2016 and 2020 JFK Bonds. American's and AAG's obligations under these guarantees are secured by a leasehold mortgage on American's lease of Terminal 8 and related property from the Port Authority of New York and New Jersey.

The 2021 JFK Bonds, in aggregate, were priced at par value. The gross proceeds from the issuance of the 2021 JFK Bonds were approximately \$150 million. Of this amount, \$4 million was used to fund the costs of issuance of the 2021 JFK Bonds, \$62 million was used to fund the redemption of the 2016 and 2020 JFK Bonds due August 2021, with the remaining amount of proceeds received held in restricted cash and short-term investments on the consolidated balance sheet and to be used to finance a portion of the cost of the renovation and expansion of Terminal 8. The 2021 JFK Bonds are comprised of term bonds, \$70 million of which bear interest at 2.25% per annum and mature on August 1, 2026, and \$80 million of which bear interest at 3.00% per annum and mature on August 1, 2031. As of December 31, 2022, \$72 million of proceeds funded by the issuance of the 2020 and 2021 JFK Bonds are included in restricted cash and short-term investments on the accompanying consolidated balance sheet.

Guarantees

As of December 31, 2022, American had issued guarantees covering AAG's \$1.8 billion aggregate principal amount of the PSP1 Promissory Note due April 2030, \$1.0 billion aggregate principal amount of the PSP2 Promissory Note due January 2031, \$959 million aggregate principal amount of the PSP3 Promissory Note due April 2031, \$1.0 billion aggregate principal amount of 6.50% convertible senior notes due July 2025 and \$500 million aggregate principal amount of 3.75% senior notes due March 2025.

Certain Covenants

American's debt agreements contain customary terms and conditions as well as various affirmative, negative and financial covenants that, among other things, may restrict the ability of American to incur additional indebtedness. American's debt agreements also contain customary change of control provisions, which may require it to repay or redeem such indebtedness upon certain events constituting a change of control under the relevant agreement, in certain cases at a premium. Certain of American's debt financing agreements (including its secured notes, term loans, revolving credit facilities and spare engine EETCs) contain loan to value (LTV), collateral coverage or peak debt service coverage ratio covenants and certain agreements require American to appraise the related collateral annually or semiannually. Pursuant to such agreements, if the applicable LTV, collateral coverage or peak debt service coverage ratio exceeds or

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

falls below a specified threshold, as the case may be, American will be required, as applicable, to pledge additional qualifying collateral (which in some cases may include cash or investment securities), withhold additional cash in certain accounts, or pay down such financing, in whole or in part, or the interest rate for the relevant financing will be increased. Additionally, a significant portion of American's debt financing agreements contain covenants requiring it to maintain an aggregate of at least \$2.0 billion of unrestricted cash and cash equivalents and amounts available to be drawn under revolving credit facilities, and its AAdvantage Financing contains a peak debt service coverage ratio, pursuant to which failure to comply with a certain threshold may result in early repayment, in whole or in part, of the AAdvantage Financing.

Specifically, American is required to meet certain collateral coverage tests for its Credit Facilities, April 2016 Revolving Facility, 10.75% Senior Secured Notes and 11.75% Senior Secured Notes, as described below:

	2013 Credit Facilities	2014 Credit Facilities	April 2016 Revolving Facility	10.75% Senior Secured Notes	11.75% Senior Secured Notes
Frequency of Appraisals of Appraised Collateral	Annual	Annual	Annual	Annual	Semi-Annual
LTV Requirement		1.6x Collateral valuation to amount of debt outstanding (62.5% LTV)			
LTV as of Last Measurement Date	34.4%	17.8%	Not Applicable	7.2%	32.5%
Collateral Description	Generally, certain slots, route authorities and airport gate leasehold rights used by American to operate all services between the U.S. and South America	Generally, certain slots, route authorities and airport gate leasehold rights used by American to operate certain services between the U.S. and European Union (including London Heathrow)	Generally, certain spare parts	Generally, certain DCA slots, certain LGA slots, certain simulators and certain leasehold rights and, in the case of the IP Notes, certain intellectual property of American	Generally, certain slots, route authorities and airport gate leasehold rights used by American to operate certain services between the U.S. and the Caribbean, Central America and various other countries

At December 31, 2022, American was in compliance with the applicable collateral coverage tests as of the most recent measurement dates.

4. Leases

American leases certain aircraft and engines, including aircraft under capacity purchase agreements. As of December 31, 2022, American operated 722 leased aircraft, with remaining terms ranging from less than one year to 11 years.

At each airport where American conducts flight operations, American has agreements, generally with a governmental unit or authority, for the use of passenger, operations and baggage handling space as well as runways and taxiways. These agreements, particularly in the U.S., often contain provisions for periodic adjustments to rates and charges applicable under such agreements. These rates and charges also vary with American's level of operations and the operations of the airport. Because of the variable nature of these rates, these leases are not recorded on American's consolidated balance sheets as a ROU asset or a lease liability. Additionally, at American's hub locations and in certain other cities it serves, American leases administrative offices, catering, cargo, training, maintenance and other facilities.

The components of lease expense were as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Operating lease cost	\$ 1,987	\$ 1,998	\$ 1,943
Finance lease cost:			
Amortization of assets	135	107	92
Interest on lease liabilities	46	44	38
Variable lease cost	2,572	2,461	1,786
Total net lease cost	\$ 4,740	\$ 4,610	\$ 3,859

[Table of Contents](#)**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.**

Included in the table above is \$242 million, \$190 million and \$172 million of operating lease cost under American's capacity purchase agreement with Republic for the years ended December 31, 2022, 2021 and 2020, respectively. American holds a 25% equity interest in Republic Holdings, the parent company of Republic.

Additionally, not included in the table above, American recognized \$109 million in cash special charges in 2020 related to the impairment of ROU assets and lease return costs resulting from its decision to retire certain leased aircraft earlier than planned driven by the severe decline in air travel due to the COVID-19 pandemic.

Supplemental balance sheet information related to leases was as follows (in millions, except lease term and discount rate):

	December 31,	
	2022	2021
Operating leases:		
Operating lease ROU assets	\$ 8,033	\$ 7,810
Current operating lease liabilities	\$ 1,449	\$ 1,496
Noncurrent operating lease liabilities	6,512	6,578
Total operating lease liabilities	\$ 7,961	\$ 8,074
Finance leases:		
Property and equipment, at cost	\$ 1,336	\$ 1,201
Accumulated amortization	(767)	(653)
Property and equipment, net	<u>569</u>	<u>548</u>
Current finance lease liabilities	\$ 209	\$ 174
Noncurrent finance lease liabilities	535	563
Total finance lease liabilities	\$ 744	\$ 737
Weighted average remaining lease term (in years):		
Operating leases	8.3	7.6
Finance leases	5.0	4.6
Weighted average discount rate:		
Operating leases	7.4 %	6.2 %
Finance leases	7.1 %	6.1 %

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Supplemental cash flow and other information related to leases was as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	\$ 1,968	\$ 2,040	\$ 2,015
Operating cash flows from finance leases	46	37	39
Financing cash flows from finance leases	179	126	114
Non-cash transactions:			
ROU assets acquired through operating leases	1,448	1,381	898
Property and equipment acquired through finance leases	46	180	11
Operating lease conversion to finance lease	107	102	5
Finance lease conversion to operating lease	3	—	—
Gain on sale leaseback transactions, net	2	25	107
Maturities of lease liabilities were as follows (in millions):			
	December 31, 2022		
	Operating Leases	Finance Leases	
2023	\$ 1,933	\$ 257	
2024	1,649	204	
2025	1,313	141	
2026	1,045	115	
2027	858	69	
2028 and thereafter	3,890	87	
Total lease payments	10,688	873	
Less: Imputed interest	(2,727)	(129)	
Total lease obligations	7,961	744	
Less: Current obligations	(1,449)	(209)	
Long-term lease obligations	\$ 6,512	\$ 535	

As of December 31, 2022, American had additional operating lease commitments that have not yet commenced of approximately \$1.1 billion for nine Boeing 787 Family aircraft scheduled to be delivered in 2023 through 2024 with lease terms of 10 years.

5. Income Taxes

The significant components of the income tax provision (benefit) were (in millions):

	Year Ended December 31,		
	2022	2021	2020
Current income tax benefit:			
State, local and foreign	\$ (6)	\$ —	\$ —
Deferred income tax provision (benefit):			
Federal	112	(453)	(2,224)
State and local	10	(47)	(229)
Deferred income tax provision (benefit)	122	(500)	(2,453)
Total income tax provision (benefit)	\$ 116	\$ (500)	\$ (2,453)

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

The income tax provision (benefit) differed from amounts computed at the statutory federal income tax rate as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Statutory income tax provision (benefit)	\$ 95	\$ (478)	\$ (2,290)
State, local and foreign income tax provision (benefit), net of federal tax effect	3	(37)	(181)
Book expenses not deductible for tax purposes	20	21	20
Other, net	(2)	(6)	(2)
Income tax provision (benefit)	\$ 116	\$ (500)	\$ (2,453)

The components of American's deferred tax assets and liabilities were (in millions):

	December 31,	
	2022	2021
Deferred tax assets:		
Operating loss and other carryforwards	\$ 4,492	\$ 4,476
Loyalty program liability	1,809	1,903
Leases	1,804	1,822
Pensions	467	934
Postretirement benefits other than pensions	179	215
Rent expense	130	92
Other	689	734
Total deferred tax assets	9,570	10,176
Valuation allowance	(9)	(24)
Net deferred tax assets	9,561	10,152
Deferred tax liabilities:		
Accelerated depreciation and amortization	(4,603)	(4,715)
Leases	(1,817)	(1,758)
Other	(256)	(279)
Total deferred tax liabilities	(6,676)	(6,752)
Net deferred tax asset	\$ 2,885	\$ 3,400

At December 31, 2022, American had approximately \$16.1 billion of gross federal net operating losses (NOLs) and \$3.5 billion of other carryforwards available to reduce future federal taxable income, of which \$6.2 billion will expire beginning in 2024 if unused and \$13.4 billion can be carried forward indefinitely. American is a member of AAG's consolidated federal and certain state income tax returns. American also had approximately \$5.9 billion of NOL carryforwards to reduce future state taxable income at December 31, 2022, which will expire in taxable years 2022 through 2042 if unused.

American's ability to use its NOLs and other carryforwards depends on the amount of taxable income generated in future periods. American provides a valuation allowance for its deferred tax assets, which include the NOLs, when it is more likely than not that some portion, or all of its deferred tax assets, will not be realized. American considers all available positive and negative evidence and makes certain assumptions in evaluating the realizability of its deferred tax assets. Many factors are considered that impact American's assessment of future profitability, including conditions which are beyond its control, such as the health of the economy, the availability and price volatility of aircraft fuel and travel demand. American has determined that positive factors outweigh negative factors in the determination of the realizability of its deferred tax assets. There can be no assurance that an additional valuation allowance on American's net deferred tax assets will not be required. Such valuation allowance could be material.

American's ability to deduct its NOL carryforwards and to utilize certain other available tax attributes can be substantially constrained under the general annual limitation rules of Section 382 where an "ownership change" has

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

occurred. Substantially all of American's remaining federal NOL carryforwards attributable to US Airways Group are subject to limitation under Section 382; however, American's ability to utilize such NOL carryforwards is not anticipated to be effectively constrained as a result of such limitation. Similar limitations may apply for state income tax purposes. American's ability to utilize any new NOL carryforwards arising after the ownership changes is not affected by the annual limitation rules imposed by Section 382 unless another ownership change occurs. Under the Section 382 limitation, cumulative stock ownership changes among material stockholders exceeding 50% during a rolling three-year period can potentially limit American's future use of NOLs and tax credits.

In 2022, American recorded an income tax provision of \$116 million, with an effective rate of approximately 26%, which was substantially non-cash. Substantially all of American's income before income taxes is attributable to the United States.

The Inflation Reduction Act (IRA) was enacted on August 16, 2022, which among other provisions, introduced a corporate minimum tax on certain corporations with average adjusted financial statement income over a three-tax year period in excess of \$1.0 billion, an excise tax on certain stock repurchases by certain covered corporations for taxable years beginning after December 31, 2022, and several tax incentives to promote clean energy. Based on American's current analysis and pending future guidance to be issued by the U.S. Department of Treasury, American does not believe these provisions will have a material impact on its consolidated financial statements.

American files its tax returns as prescribed by the tax laws of the jurisdictions in which it operates. American's 2019 through 2021 tax years are still subject to examination by the Internal Revenue Service. Various state and foreign jurisdiction tax years remain open to examination and American is under examination, in administrative appeals, or engaged in tax litigation in certain jurisdictions. American believes that the effect of any assessments will not be material to its consolidated financial statements.

The amount of, and changes to, American's uncertain tax positions were not material in any of the years presented. American accrues interest and penalties related to unrecognized tax benefits in interest expense and operating expense, respectively.

6. Fair Value Measurements

Assets Measured at Fair Value on a Recurring Basis

Fair value is defined as the price that would be received from the sale of an asset or paid to transfer a liability (i.e. an exit price) on the measurement date in an orderly transaction between market participants in the principal or most advantageous market for the asset or liability. Accounting standards include disclosure requirements around fair values used for certain financial instruments and establish a fair value hierarchy. The hierarchy prioritizes valuation inputs into three levels based on the extent to which inputs used in measuring fair value are observable in the market. Each fair value measurement is reported in one of three levels:

- Level 1 – Observable inputs such as quoted prices in active markets;
- Level 2 – Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and
- Level 3 – Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

When available, American uses quoted market prices to determine the fair value of its financial assets. If quoted market prices are not available, American measures fair value using valuation techniques that use, when possible, current market-based or independently-sourced market parameters, such as interest rates and currency rates.

American utilizes the market approach to measure the fair value of its financial assets. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets. American's short-term investments, restricted cash and restricted short-term investments classified as Level 2 primarily utilize broker quotes in a non-active market for valuation of these securities. No changes in valuation techniques or inputs occurred during the year ended December 31, 2022.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Assets measured at fair value on a recurring basis are summarized below (in millions):

	Fair Value Measurements as of December 31, 2022				
	Total	Level 1	Level 2	Level 3	
Short-term investments ^{(1), (2)}:					
Money market funds	\$ 731	\$ 731	\$ —	\$ —	
Corporate obligations	3,688	—	3,688	—	
Bank notes/certificates of deposit/time deposits	3,654	—	3,654	—	
Repurchase agreements	450	—	450	—	
	8,523	731	7,792	—	
Restricted cash and short-term investments ^{(1), (3)}	995	535	460	—	
Long-term investments ⁽⁴⁾	245	245	—	—	
Total	\$ 9,763	\$ 1,511	\$ 8,252	\$ —	

	Fair Value Measurements as of December 31, 2021				
	Total	Level 1	Level 2	Level 3	
Short-term investments ⁽¹⁾:					
Money market funds	\$ 106	\$ 106	\$ —	\$ —	
Corporate obligations	8,665	—	8,665	—	
Bank notes/certificates of deposit/time deposits	2,194	—	2,194	—	
Repurchase agreements	1,190	—	1,190	—	
	12,155	106	12,049	—	
Restricted cash and short-term investments ^{(1), (3)}	990	654	336	—	
Long-term investments ⁽⁴⁾	239	239	—	—	
Total	\$ 13,384	\$ 999	\$ 12,385	\$ —	

⁽¹⁾ All short-term investments are classified as available-for-sale and stated at fair value. Unrealized gains and losses are recorded in accumulated other comprehensive loss at each reporting period. There were no credit losses.

⁽²⁾ American's short-term investments as of December 31, 2022 mature in one year or less.

⁽³⁾ Restricted cash and short-term investments primarily include collateral held to support workers' compensation obligations, collateral associated with the payment of interest for the AAdvantage Financing and money market funds to be used to finance a substantial portion of the cost of the renovation and expansion of Terminal 8 at JFK.

⁽⁴⁾ Long-term investments include American's equity investments in China Southern Airlines Company Limited (China Southern Airlines) and Vertical Aerospace Ltd. (Vertical) and as of December 31, 2022, American's long-term investments also include GOL. See Note 7 for further information on American's equity investments.

Fair Value of Debt

The fair value of American's long-term debt was estimated using quoted market prices or discounted cash flow analyses based on American's current estimated incremental borrowing rates for similar types of borrowing arrangements. If American's long-term debt was measured at fair value, it would have been classified as Level 2 in the fair value hierarchy.

The carrying value and estimated fair value of American's long-term debt, including current maturities, were as follows (in millions):

	December 31, 2022		December 31, 2021	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Long-term debt, including current maturities	\$ 29,679	\$ 28,453	\$ 31,357	\$ 32,999

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

7. Investments

To help expand American's network and as part of its ongoing commitment to sustainability, American enters into various commercial relationships or other strategic partnerships, including equity investments, with other airlines and companies. American's equity investments are reflected in other assets on its consolidated balance sheets. American's share of equity method investees' financial results and changes in fair value are recorded in nonoperating other income, net on the consolidated statements of operations.

American's equity investments ownership interest and carrying value were:

Accounting Treatment	Ownership Interest		Carrying Value (in millions)	
	December 31,		December 31,	
	2022	2021	2022	2021
Republic Holdings	Equity Method	25.0 %	25.0 %	\$ 222 \$ 202
China Southern Airlines	Fair Value	1.5 %	1.8 %	176 163
Other investments ^(a)	Various			212 83
Total			\$ 610	\$ 448

(a) Other investments

Other investments primarily include American's investment in Vertical, which is accounted for at fair value, and in 2022, American's investments in JetSmart Airlines SpA (JetSMART) and GOL.

In April 2022, American completed an investment agreement with GOL, a Brazilian low-cost airline, and invested \$200 million in 22.2 million of newly issued preferred shares. The total consideration of \$200 million was allocated on its consolidated balance sheet as follows based on relative fair values: \$81 million to the preferred shares, which is reflected within other assets, and \$119 million to the indefinite-lived intangible asset derived from the related commercial agreements. The ownership interest is accounted for at fair value based on GOL's stock price and mark-to-market adjustments are recorded to nonoperating other income, net on the consolidated statement of operations.

In December 2022, American completed an investment agreement with JetSMART, an ultra-low-cost carrier operating in South America, representing a 35.4% ownership. This ownership interest is accounted for under the equity method and American's portion of JetSMART's financial results is recognized within nonoperating other income, net on the consolidated statement of operations.

8. Employee Benefit Plans

American sponsors defined benefit and defined contribution pension plans for eligible employees. The defined benefit pension plans provide benefits for participating employees based on years of service and average compensation for a specified period of time before retirement. Effective November 1, 2012, substantially all of American's defined benefit pension plans were frozen and American began providing enhanced benefits under its defined contribution pension plans for certain employee groups. American uses a December 31 measurement date for all of its defined benefit pension plans. American also provides certain retiree medical and other postretirement benefits, including health care and life insurance benefits, to retired employees.

Effective January 1, 2021, health coverage under American's retiree medical benefit program that is currently provided to certain retirees age 65 and over who retired prior to November 1, 2012, transitioned from a self-insured plan to a fully-insured Medicare Advantage plan. Benefits coverage has not been reduced and cost shared has not changed as a result of this transition. Due to this transition, as of December 31, 2020, American recognized a negative plan amendment to reduce its benefit obligation, which was included as a component of prior service benefit in accumulated other comprehensive income (loss) (AOCL) and will be amortized over the average remaining life expectancy of all retirees. As of December 31, 2022, \$179 million of prior service benefit remains to be amortized over a remaining period of approximately 11 years.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Benefit Obligations, Fair Value of Plan Assets and Funded Status

The following tables provide a reconciliation of the changes in the pension and retiree medical and other postretirement benefits obligations, fair value of plan assets and a statement of funded status as of December 31, 2022 and 2021:

	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2022	2021
	(In millions)			
Benefit obligation at beginning of period	\$ 18,791	\$ 19,690	\$ 1,098	\$ 1,046
Service cost	3	3	16	12
Interest cost	552	523	30	30
Actuarial gain ^{(1), (2)}	(4,534)	(606)	(167)	(57)
Special termination benefits ⁽³⁾	—	—	—	139
Other	—	(1)	3	—
Benefit payments	(864)	(818)	(74)	(72)
Benefit obligation at end of period	\$ 13,948	\$ 18,791	\$ 906	\$ 1,098
Fair value of plan assets at beginning of period	\$ 14,605	\$ 13,477	\$ 167	\$ 170
Actual return (loss) on plan assets	(1,924)	1,700	(18)	21
Employer contributions ⁽⁴⁾	4	247	58	48
Settlements	—	(1)	—	—
Benefit payments	(864)	(818)	(74)	(72)
Fair value of plan assets at end of period	\$ 11,821	\$ 14,605	\$ 133	\$ 167
Funded status at end of period	\$ (2,127)	\$ (4,186)	\$ (773)	\$ (931)

⁽¹⁾ The 2022 and 2021 pension actuarial gain primarily relates to the change in American's weighted average discount rate assumption.

⁽²⁾ The 2022 and 2021 retiree medical and other postretirement benefits actuarial gain primarily relates to the change in American's weighted average discount rate assumption and, in 2021, plan experience adjustments.

⁽³⁾ During the first quarter of 2021, American remeasured its retiree medical and other postretirement benefits to account for enhanced healthcare benefits provided to eligible team members who opted into voluntary early retirement programs offered as a result of reductions to its operation due to the COVID-19 pandemic. As a result, during 2021, American recognized a \$139 million special charge for these enhanced healthcare benefits and increased its postretirement benefits obligation by \$139 million.

⁽⁴⁾ In January 2021, American made \$241 million in contributions to its pension plans, including a contribution of \$130 million for the 2020 calendar year that was permitted to be deferred to January 4, 2021 as provided under the CARES Act.

Balance Sheet Position

	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2022	2021
	(In millions)			
<u>As of December 31,</u>				
Current liability	\$ 4	\$ 7	\$ 85	\$ 90
Noncurrent liability	2,123	4,179	688	841
Total liabilities	\$ 2,127	\$ 4,186	\$ 773	\$ 931

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2022	2021
	(In millions)			
Net actuarial loss (gain)	\$ 3,609	\$ 5,241	\$ (505)	\$ (396)
Prior service cost (benefit)	18	46	(148)	(167)
Total accumulated other comprehensive loss (income), pre-tax	<u>\$ 3,627</u>	<u>\$ 5,287</u>	<u>\$ (653)</u>	<u>\$ (563)</u>

Plans with Projected Benefit Obligations Exceeding Fair Value of Plan Assets

	Pension Benefits	
	2022	2021
	(In millions)	
Projected benefit obligation	\$ 13,948	\$ 18,791
Fair value of plan assets	11,821	14,605

Plans with Accumulated Benefit Obligations Exceeding Fair Value of Plan Assets

	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2022	2021
	(In millions)			
Accumulated benefit obligation	\$ 13,941	\$ 18,782	\$ —	\$ —
Accumulated postretirement benefit obligation	—	—	906	1,098
Fair value of plan assets	11,821	14,605	133	167

Net Periodic Benefit Cost (Income)

	Pension Benefits			Retiree Medical and Other Postretirement Benefits		
	2022	2021	2020	2022	2021	2020
	(In millions)					
Defined benefit plans:						
Service cost	\$ 3	\$ 3	\$ 2	\$ 16	\$ 12	\$ 8
Interest cost	552	523	611	30	30	30
Expected return on assets	(1,133)	(1,078)	(1,005)	(12)	(12)	(11)
Special termination benefits	—	—	—	—	139	410
Settlements	—	—	12	—	—	—
Amortization of:						
Prior service cost (benefit)	28	28	29	(14)	(13)	(135)
Unrecognized net loss (gain)	156	211	164	(30)	(24)	(24)
Net periodic benefit cost (income)	<u>\$ (394)</u>	<u>\$ (313)</u>	<u>\$ (187)</u>	<u>\$ (10)</u>	<u>\$ 132</u>	<u>\$ 278</u>

The service cost component of net periodic benefit cost (income) is included in operating expenses, the cost for the special termination benefits is included in special items, net and the other components of net periodic benefit cost (income) are included in nonoperating other income, net on American's consolidated statements of operations.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Assumptions

The following actuarial assumptions were used to determine American's benefit obligations and net periodic benefit cost (income) for the periods presented:

	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2022	2021
Benefit obligations:				
Weighted average discount rate	5.6%	3.0%	5.7%	2.8%
	Pension Benefits		Retiree Medical and Other Postretirement Benefits	
	2022	2021	2020	2022
Net periodic benefit cost (income):				
Weighted average discount rate	3.0%	2.7%	3.4%	2.8%
Weighted average expected rate of return on plan assets	8.0%	8.0%	8.0%	8.0%
Weighted average health care cost trend rate assumed for next year ⁽¹⁾	N/A	N/A	N/A	5.8%
				4.8%
				4.0%

⁽¹⁾ The weighted average health care cost trend rate at December 31, 2022 is assumed to decline gradually to 4.4% by 2029 and remain level thereafter.

As of December 31, 2022, American's estimate of the long-term rate of return on plan assets was 8.0% based on the target asset allocation. Expected returns on long duration bonds are based on yields to maturity of the bonds held at year-end. Expected returns on other assets are based on a combination of long-term historical returns, actual returns on plan assets achieved over the last 10 years, current and expected market conditions, and expected value to be generated through active management and securities lending programs.

Minimum Contributions

American is required to make minimum contributions to its defined benefit pension plans under the minimum funding requirements of the Employee Retirement Income Security Act of 1974 (ERISA) and various other laws for U.S. based plans as well as underfunding rules specific to countries where American maintains defined benefit plans. Based on current funding assumptions, American has minimum required contributions of \$67 million for 2023. American's funding obligations will depend on the performance of American's investments held in a trust by the pension plans, interest rates for determining liabilities, the amount of and timing of any supplemental contributions and American's actuarial experience.

Benefit Payments

The following benefit payments, which reflect expected future service as appropriate, are expected to be paid (approximately, in millions):

	2023	2024	2025	2026	2027	2028-2032
Pension benefits	\$ 915	\$ 944	\$ 973	\$ 997	\$ 1,018	\$ 5,233
Retiree medical and other postretirement benefits	102	100	98	97	95	428

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Plan Assets

The objectives of American's investment policies are to: maintain sufficient income and liquidity to pay retirement benefits; produce a long-term rate of return that meets or exceeds the assumed rate of return for plan assets; limit the volatility of asset performance and funded status; and diversify assets among asset classes and investment managers.

Based on these investment objectives, a long-term strategic asset allocation has been established. This strategic allocation seeks to balance the potential benefit of improving the funded position with the potential risk that the funded position would decline. The current strategic target asset allocation is as follows:

<u>Asset Class/Sub-Class</u>	<u>Allowed Range</u>
Equity	45% - 80%
Public:	
U.S. Large	10% - 40%
U.S. Small/Mid	2% - 10%
International	10% - 25%
International Small/Mid	0% - 10%
Emerging Markets	2% - 15%
Private Equity	5% - 30%
Fixed Income	20% - 55%
Public:	
U.S. Long Duration	15% - 45%
High Yield and Emerging Markets	0% - 10%
Private Income	0% - 15%
Other	0% - 5%
Cash Equivalents	0% - 20%

Public equity investments are intended to provide a real return over a full market cycle and, therefore, to contribute to the pension plan's long-term objective. Public fixed income investments are intended to provide income to the plan and offer the potential for long term capital appreciation. Private investments, such as private equity and private income, are used to provide higher expected returns than public markets over the long-term by assuming reduced levels of liquidity and higher levels of risk. The pension plan's master trust participates in securities lending programs to generate additional income by loaning plan assets to borrowers on a fully collateralized basis. The pension plan's master trust will also engage in derivative instruments to equitize residual levels of cash as well as hedge the pension plan's exposure to interest rates. Such programs are subject to market risk and counterparty risk.

Investments in securities traded on recognized securities exchanges are valued at the last reported sales price on the last business day of the year. Securities traded in the over-the-counter market are valued at the last bid price. Investments in limited partnerships are carried at estimated net asset value (NAV) as determined by and reported by the general partners of the partnerships and represent the proportionate share of the estimated fair value of the underlying assets of the limited partnerships. Mutual funds are valued once daily through a NAV calculation provided at the end of each trade day. Common/collective trusts are valued at NAV based on the fair values of the underlying investments of the trusts as determined by the sponsor of the trusts. No changes in valuation techniques or inputs occurred during the year.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Benefit Plan Assets Measured at Fair Value on a Recurring Basis

The fair value of American's pension plan assets at December 31, 2022 and 2021, by asset category, were as follows (in millions) ⁽¹⁾:

	December 31, 2022				December 31, 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Equity ⁽²⁾	\$ 3,055	\$ —	\$ —	\$ 3,055	\$ 4,583	\$ 2	\$ 4	\$ 4,589
Fixed income ⁽³⁾	206	2,917	—	3,123	153	3,994	—	4,147
Other ⁽⁴⁾	74	278	75	427	134	340	54	528
Measured at NAV ⁽⁵⁾ :								
Common collective trusts ⁽⁶⁾	—	—	—	1,694	—	—	—	2,514
Private investments ⁽⁷⁾	—	—	—	3,522	—	—	—	2,827
Total plan assets	\$ 3,335	\$ 3,195	\$ 75	\$ 11,821	\$ 4,870	\$ 4,336	\$ 58	\$ 14,605

⁽¹⁾ See Note 6 for a description of the levels within the fair value hierarchy.

⁽²⁾ Equity investments include domestic and international common stock, preferred stock and exchange traded funds invested in equity securities.

⁽³⁾ Fixed income investments include corporate, government and U.S. municipal bonds, as well as mutual funds invested in fixed income securities.

⁽⁴⁾ Other primarily includes a short-term investment fund, cash and cash equivalents, and net receivables and payables of the master trust for dividends, interest and amounts due to or from the sale and purchase of securities.

⁽⁵⁾ Includes investments that were measured at NAV per share (or its equivalent) as a practical expedient that have not been classified in the fair value hierarchy.

⁽⁶⁾ Common collective trusts include commingled funds primarily invested in equity securities. For some trusts, requests for withdrawals must meet specific requirements with advance notice of redemption preferred.

⁽⁷⁾ Private investments include limited partnerships that invest primarily in domestic private equity and private income opportunities. The pension plan's master trust does not have the right to redeem its limited partnership investment at its NAV, but rather receives distributions as the underlying assets are liquidated. It is estimated that the underlying assets of these funds will be gradually liquidated over the next 10 years. As of December 31, 2022, the pension plan's master trust has future funding commitments to these limited partnerships of approximately \$1.5 billion over the next five years.

Changes in fair value measurements of Level 3 investments during the years ended December 31, 2022 and 2021, were as follows (in millions):

	2022	2021
Balance at beginning of year	\$ 58	\$ 17
Actual gain on plan assets:		
Relating to assets still held at the reporting date	1	10
Purchases	29	32
Sales	(9)	(1)
Transfers out	(4)	—
Balance at end of year	\$ 75	\$ 58

Plan assets in the retiree medical and other postretirement benefits plans' are primarily Level 2 mutual funds valued by quoted prices on the active market, which is fair value, and represents the NAV of the shares of such funds as of the close of business at the end of the period. NAV is based on the fair market value of the funds' underlying assets and liabilities at the date of determination.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Defined Contribution and Multiemployer Plans

The costs associated with American's defined contribution plans were \$916 million, \$893 million and \$835 million for the years ended December 31, 2022, 2021 and 2020, respectively.

American participates in the International Association of Machinists & Aerospace Workers (IAM) National Pension Fund, Employer Identification No. 51-6031295 and Plan No. 002 (the IAM Pension Fund). American's contributions to the IAM Pension Fund were \$46 million, \$43 million and \$40 million for the years ended December 31, 2022, 2021 and 2020, respectively. The IAM Pension Fund reported \$507 million in employers' contributions for the year ended December 31, 2021, which is the most recent year for which such information is available. For 2021, American's contributions represented more than 5% of total contributions to the IAM Pension Fund.

On March 29, 2019, the actuary for the IAM Pension Fund certified that the fund was in "endangered" status despite reporting a funded status of over 80%. Additionally, the IAM Pension Fund's Board voluntarily elected to enter into "critical" status on April 17, 2019. Upon entry into critical status, the IAM Pension Fund was required by law to adopt a rehabilitation plan aimed at restoring the financial health of the pension plan and did so on April 17, 2019 (the Rehabilitation Plan). Under the Rehabilitation Plan, American was subject to an immaterial contribution surcharge, which ceased to apply June 14, 2019 upon American's mandatory adoption of a contribution schedule under the Rehabilitation Plan. The contribution schedule requires 2.5% annual increases to its contribution rate. This contribution schedule will remain in effect through the earlier of December 31, 2031 or the date the IAM Pension Fund emerges from critical status.

9. Accumulated Other Comprehensive Loss

The components of AOCI are as follows (in millions):

	Pension, Retiree Medical and Other Postretirement Benefits	Unrealized Loss on Investments	Income Tax Provision ⁽¹⁾	Total
Balance at December 31, 2020	\$ (6,215)	\$ (2)	\$ (977)	\$ (7,194)
Other comprehensive income (loss) before reclassifications	1,289	—	(292)	997
Amounts reclassified from AOCI	202	—	(46) ⁽²⁾	156
Net current-period other comprehensive income (loss)	1,491	—	(338)	1,153
Balance at December 31, 2021	(4,724)	(2)	(1,315)	(6,041)
Other comprehensive income (loss) before reclassifications	1,610	(4)	(363)	1,243
Amounts reclassified from AOCI	140	—	(32) ⁽²⁾	108
Net current-period other comprehensive income (loss)	1,750	(4)	(395)	1,351
Balance at December 31, 2022	\$ (2,974)	\$ (6)	\$ (1,710)	\$ (4,690)

⁽¹⁾ Relates principally to pension, retiree medical and other postretirement benefits obligations that will not be recognized in net income (loss) until the obligations are fully extinguished.

⁽²⁾ Relates to pension, retiree medical and other postretirement benefits obligations and is recognized within the income tax provision (benefit) on American's consolidated statements of operations.

Reclassifications out of AOCI for the years ended December 31, 2022 and 2021 are as follows (in millions):

AOCI Components	Amounts reclassified from AOCI		Affected line items on the consolidated statements of operations	
	Year Ended December 31,			
	2022	2021		
Amortization of pension, retiree medical and other postretirement benefits:				
Prior service cost	\$ 11	\$ 11	Nonoperating other income, net	
Actuarial loss	97	145	Nonoperating other income, net	
Total reclassifications for the period, net of tax	\$ 108	\$ 156		

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Amounts allocated to other comprehensive income (loss) for income taxes will remain in AOCI until American ceases all related activities, such as termination of the pension plan.

10. Commitments, Contingencies and Guarantees

(a) Aircraft, Engine and Other Purchase Commitments

Under all of American's aircraft and engine purchase agreements, its total future commitments as of December 31, 2022 are expected to be as follows (approximately, in millions):

	2023	2024	2025	2026	2027	2028 and Thereafter	Total
Payments for aircraft and engine commitments ⁽¹⁾	\$ 1,485	\$ 2,678	\$ 3,896	\$ 3,214	\$ 988	\$ 65	\$ 12,326

⁽¹⁾ These amounts are net of purchase deposits currently held by the manufacturers. American's purchase deposits held by all manufacturers totaled \$613 million and \$517 million as of December 31, 2022 and 2021, respectively.

Due to the uncertainty surrounding the timing of delivery of certain aircraft, the amounts in the table represent American's most current estimate based on contractual delivery schedules adjusted for updates and revisions to such schedules communicated to management by the applicable equipment manufacturer. However, the actual delivery schedule may differ, potentially materially, based on various potential factors including production delays by the manufacturer and regulatory concerns.

Additionally, the amounts in the table exclude four Boeing 787-8 aircraft scheduled to be delivered in 2023 and five Boeing 787-9 aircraft scheduled to be delivered in 2024, for which American has obtained committed lease financing. See Note 4 for information regarding this operating lease commitment.

Additionally, American has purchase commitments related to aircraft fuel, flight equipment maintenance, information technology support and construction projects as follows (approximately): \$5.7 billion in 2023, \$3.0 billion in 2024, \$1.7 billion in 2025, \$231 million in 2026, \$126 million in 2027 and \$941 million in 2028 and thereafter. These amounts exclude obligations under certain fuel offtake agreements or other agreements for which the timing of the related expenditure is uncertain, or which are subject to material contingencies, such as the construction of a production facility.

(b) Capacity Purchase Agreements with Third-Party Regional Carriers

American has capacity purchase agreements with third-party regional carriers. The capacity purchase agreements provide that all revenues, including passenger, in-flight, ancillary, mail and freight revenues, go to American. American controls marketing, scheduling, ticketing, pricing and seat inventories. In return, American agrees to pay predetermined fees to these airlines for operating an agreed-upon number of aircraft, without regard to the number of passengers on board. In addition, these agreements provide that American either reimburses or pays 100% of certain variable costs, such as airport landing fees, fuel and passenger liability insurance.

As of December 31, 2022, American's capacity purchase agreements with third-party regional carriers had expiration dates ranging from 2023 to 2033, with rights of American to extend the respective terms of certain agreements.

As of December 31, 2022, American's minimum obligations under its capacity purchase agreements with third-party regional carriers are as follows (approximately, in millions):

	2023	2024	2025	2026	2027	2028 and Thereafter	Total
Minimum obligations under capacity purchase agreements with third-party regional carriers ⁽¹⁾	\$ 1,791	\$ 1,950	\$ 1,866	\$ 1,298	\$ 944	\$ 1,399	\$ 9,248

⁽¹⁾ Represents minimum payments under capacity purchase agreements with third-party regional carriers. These commitments are estimates of costs based on assumed minimum levels of flying under the capacity purchase agreements and American's actual payments could differ materially. Excludes rental payments under operating leases for certain aircraft flown under these capacity purchase agreements, which are reflected in the operating lease obligations in Note 4.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

(c) Airport Redevelopment

Los Angeles International Airport (LAX)

From time to time, airports where American has operations engage in construction projects, often substantial, that result in new or improved facilities that are ultimately funded through increases in the rent and other occupancy costs payable by airlines using the airport. Unlike this construction and funding model, American is managing a project at LAX where it has legal title to the assets during construction. In 2018, American executed a lease agreement with Los Angeles World Airports (LAWA), which owns and operates LAX, in connection with a \$1.6 billion modernization project related to LAX Terminals 4 and 5. Construction, which started in October 2018 and is expected to be completed in 2028, will occur in a phased approach. The modernization project will include a unified departure hall to the entranceway of Terminals 4 and 5, reconfigured ticket counter and check-in areas with seamless access to security screening areas, 10 new security screening lanes with automated technology in addition to the existing Terminal 5 lanes, and a new Terminal 4 South concourse with more open and upgraded amenities at gate areas. The project will also include renovated break rooms, multi-use meeting rooms and team gathering spaces throughout the terminals to support American's team members at LAX. In 2022, American completed construction of the Terminal 4 and 5 core, which provides a central location between the terminals and allows direct access to the check-in lobby and baggage claim in Terminal 5.

As each phase is completed and ready for use, the assets will be sold and transferred to LAWA, including the site improvements and non-proprietary improvements. As American controls the assets during construction, they are recognized on its balance sheet until the assets are sold and transferred to LAWA. As of December 31, 2022, American has incurred approximately \$579 million in costs relating to the LAX modernization project, of which \$241 million were incurred in 2022 and have been included within operating property and equipment on its consolidated balance sheets and included within airport construction projects, net of reimbursements on its consolidated statements of cash flows. As of December 31, 2022, American has sold and transferred \$176 million of non-proprietary improvements to LAWA, of which \$44 million occurred during 2022. For non-proprietary improvements which are not yet ready for use, any cash payments received from LAWA will be reflected as a financial liability. As of December 31, 2022, American has received \$141 million in cash proceeds for non-proprietary improvements which are not yet ready for use, and therefore have not been sold and transferred back to LAWA. These proceeds are currently included in other accrued liabilities and noncurrent other liabilities on American's consolidated balance sheet and are reflected as financing activities on its consolidated statement of cash flows.

JFK

In January 2020, American and British Airways announced the start of construction projects to upgrade New York's JFK Terminal 8. The renovation projects at Terminal 8 include: (i) the reconfiguration or elimination of certain existing gates and the construction of widebody gates, (ii) the construction of approximately 51,000 square feet of new terminal building space and the refurbishment of 73,300 square feet of existing terminal space, (iii) the expansion of the baggage system capacity of Terminal 8, (iv) improvements to the premium passenger lounges, check-in and, potentially, security access areas, and (v) bathroom refreshment, new signage, and other upgrades. The construction project is substantially complete and remaining construction on the baggage handling system expansion and bathroom refurbishments are expected to be fully completed in early 2023. As of December 31, 2022, American has incurred \$348 million in construction costs to upgrade Terminal 8, of which \$172 million was incurred in 2022. These costs have been included in airport construction projects, net of reimbursements on American's consolidated statements of cash flows.

(d) Off-Balance Sheet Arrangements

Pass-Through Trusts

American currently has 352 owned aircraft and 60 owned spare aircraft engines, which in each case were financed with EETCs issued by pass-through trusts. These trusts are off-balance sheet entities, the primary purpose of which is to finance the acquisition of flight equipment or to permit issuance of debt backed by existing flight equipment. In the case of aircraft EETCs, rather than finance each aircraft separately when such aircraft is purchased, delivered or refinanced, these trusts allow American to raise the financing for a number of aircraft at one time and, if applicable, place such funds in escrow pending a future purchase, delivery or refinancing of the relevant aircraft. Similarly, in the case of the spare engine EETCs, the trusts allow American to use its existing pool of spare engines to raise financing under a single facility. The trusts have also been structured to provide for certain credit enhancements, such as liquidity facilities to cover certain

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

interest payments, that reduce the risks to the purchasers of the trust certificates and, as a result, reduce the cost of aircraft financing to American.

Each trust covers a set number of aircraft or spare engines scheduled to be delivered, financed or refinanced upon the issuance of the EETC or within a specific period of time thereafter. At the time of each covered aircraft or spare engine financing, the relevant trust used the proceeds of the issuance of the EETC (which may have been available at the time of issuance thereof or held in escrow until financing of the applicable aircraft following its delivery) to purchase equipment notes relating to the financed aircraft or engines. The equipment notes are issued, at American's election, in connection with a mortgage financing of the aircraft or spare engines. The equipment notes are secured by a security interest in the aircraft or engines, as applicable. The pass-through trust certificates are not direct obligations of, nor are they guaranteed by, AAG or American. However, the equipment notes issued to the trusts are direct obligations of American and, in certain instances, have been guaranteed by AAG. As of December 31, 2022, \$9.2 billion associated with these mortgage financings is reflected as debt in the accompanying consolidated balance sheet.

Letters of Credit and Other

American provides financial assurance, such as letters of credit and surety bonds, primarily to support airport commitments. As of December 31, 2022, American had \$218 million of letters of credit and surety bonds securing various obligations, of which \$100 million is collateralized with American's restricted cash. The letters of credit and surety bonds that are subject to expiration will expire on various dates through 2026.

(e) Legal Proceedings

Private Party Antitrust Action Related to Passenger Capacity. American, along with Delta Air Lines, Inc., Southwest Airlines Co., United Airlines, Inc. and, in the case of litigation filed in Canada, Air Canada, were named as defendants in approximately 100 putative class action lawsuits alleging unlawful agreements with respect to air passenger capacity. The U.S. lawsuits were consolidated in the Federal District Court for the District of Columbia (the DC Court). On June 15, 2018, American reached a settlement agreement with the plaintiffs in the amount of \$45 million to resolve all class claims in the U.S. lawsuits. That settlement was approved by the DC Court on May 13, 2019, however three parties who objected to the settlement have appealed that decision to the United States Court of Appeals for the District of Columbia. American believes these appeals are without merit and intends to vigorously defend against them.

Private Party Antitrust Action Related to the Merger. On August 6, 2013, a lawsuit captioned Carolyn Fjord, et al., v. AMR Corporation, et al., was filed in the United States Bankruptcy Court for the Southern District of New York (Bankruptcy Court). The complaint named as defendants US Airways Group, US Airways, Inc., AMR Corporation and American, alleged that the effect of the merger of US Airways Group and AMR Corporation (the Merger) may be to create a monopoly in violation of Section 7 of the Clayton Antitrust Act, and sought injunctive relief and/or divestiture. On November 27, 2013, the Bankruptcy Court denied plaintiffs' motion to preliminarily enjoin the Merger. On August 29, 2018, the Bankruptcy Court denied in part defendants' motion for summary judgment, and fully denied plaintiffs' cross-motion for summary judgment. The parties' evidentiary cases were presented before the Bankruptcy Court in a bench trial in March 2019 and the parties submitted proposed findings of fact and conclusions of law and made closing arguments in April 2019. On January 29, 2021, the Bankruptcy Court published its decision finding in American's favor. On March 25, 2022, the U.S. District Court for the Southern District of New York entered judgment affirming the Bankruptcy Court's decision. On April 21, 2022, plaintiffs appealed that decision to the United States Court of Appeals for the Second Circuit. The appeal is fully briefed and scheduled for oral argument on March 13, 2023. American believes this lawsuit is without merit and intends to continue to vigorously defend against it, including against any further appeals by the plaintiffs.

Government Antitrust Action Related to the Northeast Alliance. On September 21, 2021, the United States Department of Justice (the DOJ), joined by Attorneys General from six states and the District of Columbia, filed an antitrust complaint against American and JetBlue Airways Corporation (JetBlue) in the District of Massachusetts alleging that American and JetBlue violated U.S. antitrust law in connection with the previously disclosed Northeast Alliance arrangement (NEA). The parties presented their respective cases in a bench trial that commenced on September 27, 2022. Closing arguments from both parties were presented on November 18, 2022. A decision is expected in the first quarter of 2023.

Also on September 21, 2021, the United States Department of Transportation (DOT) published a Clarification Notice relating to the agreement that had been reached between the DOT, American, and JetBlue in January 2021, at the conclusion of the DOT's review of the NEA (DOT Agreement). The DOT Clarification Notice stated, among other things, that the DOT Agreement remains in force during the pendency of the DOJ action against the NEA and, while the DOT retains independent statutory authority to prohibit unfair methods of competition in air transportation, the DOT intends to

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

defer to the DOJ to resolve the antitrust concerns that the DOJ has identified with respect to the NEA. The DOT simultaneously published a Notice Staying Proceeding in relation to a complaint by Spirit Airlines, Inc. regarding the NEA, pending resolution of the DOJ action described above. On September 30, 2022, the DOT issued a further statement referencing the prior Clarification Notice and, among other things, indicating its intention to continue working with the DOJ in its efforts to resolve the ongoing proceedings regarding the NEA.

Private Party Antitrust Actions Related to the Northeast Alliance. On December 5, 2022 and December 7, 2022, two private party plaintiffs filed putative class action antitrust complaints against American and JetBlue in the Eastern District of New York alleging that American and JetBlue violated U.S. antitrust law in connection with the previously disclosed NEA. These actions were consolidated on January 10, 2023. The private party plaintiffs filed an amended consolidated complaint on February 3, 2023. In February 2023, private party plaintiffs filed two additional putative class action antitrust complaints against American and JetBlue in the District of Massachusetts and the Eastern District of New York, respectively. American believes these lawsuits are without merit and is defending against them vigorously.

General. In addition to the specifically identified legal proceedings, American and its subsidiaries are also engaged in other legal proceedings from time to time. Legal proceedings can be complex and take many months, or even years, to reach resolution, with the final outcome depending on a number of variables, some of which are not within American's control. Therefore, although American will vigorously defend itself in each of the actions described above and such other legal proceedings, their ultimate resolution and potential financial and other impacts on American are uncertain but could be material.

(f) Guarantees and Indemnifications

American is a party to many routine contracts in which it provides general indemnities in the normal course of business to third parties for various risks. American is not able to estimate the potential amount of any liability resulting from the indemnities. These indemnities are discussed in the following paragraphs.

In its aircraft financing agreements, American generally indemnifies the financing parties, trustees acting on their behalf and other relevant parties against liabilities (including certain taxes) resulting from the financing, manufacture, design, ownership, operation and maintenance of the aircraft regardless of whether these liabilities (including certain taxes) relate to the negligence of the indemnified parties.

American's loan agreements and certain other financing transactions may obligate American to reimburse the applicable lender for incremental costs due to a change in law that imposes (i) any reserve or special deposit requirement against assets of, deposits with or credit extended by such lender related to the loan, (ii) any tax, duty or other charge with respect to the loan (except standard income tax) or (iii) capital adequacy requirements. In addition, American's loan agreements and other financing arrangements typically contain a withholding tax provision that requires American to pay additional amounts to the applicable lender or other financing party, generally if withholding taxes are imposed on such lender or other financing party as a result of a change in the applicable tax law.

In certain transactions, including certain aircraft financing leases and loans, the lessors, lenders and/or other parties have rights to terminate the transaction based on changes in foreign tax law, illegality or certain other events or circumstances. In such a case, American may be required to make a lump sum payment to terminate the relevant transaction.

American has general indemnity clauses in many of its airport and other real estate leases where American as lessee indemnifies the lessor (and related parties) against liabilities related to American's use of the leased property. Generally, these indemnifications cover liabilities resulting from the negligence of the indemnified parties, but not liabilities resulting from the gross negligence or willful misconduct of the indemnified parties. In addition, American provides environmental indemnities in many of these leases for contamination related to American's use of the leased property.

Under certain contracts with third parties, American indemnifies the third-party against legal liability arising out of an action by the third-party, or certain other parties. The terms of these contracts vary and the potential exposure under these indemnities cannot be determined. American has liability insurance protecting American for some of the obligations it has undertaken under these indemnities.

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

American is required to make principal and interest payments for certain special facility revenue bonds issued by municipalities primarily to build or improve airport facilities and purchase equipment, which are leased to American. The payment of principal and interest of certain special facility revenue bonds is guaranteed by American. As of December 31, 2022, the remaining lease payments through 2035 guaranteeing the principal and interest on these bonds are \$538 million and the current carrying amount of the associated operating lease liability in the accompanying consolidated balance sheet is \$321 million.

As of December 31, 2022, American had issued guarantees covering AAG's \$1.8 billion aggregate principal amount of the PSP1 Promissory Note due April 2030, \$1.0 billion aggregate principal amount of the PSP2 Promissory Note due January 2031, \$959 million aggregate principal amount of the PSP3 Promissory Note due April 2031, \$1.0 billion aggregate principal amount of 6.50% convertible senior notes due July 2025 and \$500 million aggregate principal amount of 3.75% senior notes due March 2025.

(g) Credit Card Processing Agreements

American has agreements with companies that process customer credit card transactions for the sale of air travel and other services. American's agreements allow these credit card processing companies, under certain conditions, to hold an amount of its cash (referred to as a holdback) equal to all or a portion of advance ticket sales that have been processed by that company, but for which American has not yet provided the air transportation. These holdback requirements can be implemented at the discretion of the credit card processing companies upon the occurrence of specific events, including material adverse changes in American's financial condition or the triggering of a liquidity covenant. These credit card processing companies are not currently entitled to maintain any holdbacks. The imposition of holdback requirements would reduce American's liquidity.

(h) Labor Negotiations

As of December 31, 2022, American employed approximately 102,000 active full-time equivalent (FTE) employees. Of the total active FTE employees, 87% are covered by collective bargaining agreements (CBAs) with various labor unions and 53% are covered by CBAs that are currently amendable or that will become amendable within one year. CBAs covering American's mainline pilots, flight attendants and passenger service are now amendable.

11. Supplemental Cash Flow Information

Supplemental disclosure of cash flow information and non-cash investing and financing activities are as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Non-cash investing and financing activities:			
Equity investments	\$ 12	\$ 88	\$ —
Settlement of bankruptcy obligations	—	4	56
Deferred financing costs paid through issuance of debt	—	—	17
Supplemental information:			
Interest paid, net	1,716	1,481	877
Income taxes paid	2	2	6

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

12. Operating Segments and Related Disclosures

American is managed as a single business unit that provides air transportation for passengers and cargo. This allows it to benefit from an integrated revenue pricing and route network that includes American and AAG's wholly-owned and third-party regional carriers that fly under capacity purchase agreements operating as American Eagle. The flight equipment of all these carriers is combined to form one fleet that is deployed through a single route scheduling system. Financial information and annual operational plans and forecasts are prepared and reviewed by the chief operating decision maker at the consolidated level. When making operational decisions, the chief operating decision maker evaluates flight profitability data, which considers aircraft type and route economics, but is indifferent to the results of the individual regional carriers. The objective in making operational decisions is to maximize consolidated financial results, not the individual results of American or American Eagle.

See Note 1(m) for American's passenger revenue by geographic region. American's tangible assets consist primarily of flight equipment, which are mobile across geographic markets and, therefore, have not been allocated.

13. Share-based Compensation

The 2013 AAG Incentive Award Plan (the 2013 Plan) provides that awards may be in the form of an option, restricted stock award, restricted stock unit award, performance award, dividend equivalent award, deferred stock award, deferred stock unit award, stock payment award or stock appreciation right. The 2013 Plan initially authorized the grant of awards for the issuance of up to 40 million shares. Any shares underlying awards granted under the 2013 Plan that are forfeited, terminate or are settled in cash (in whole or in part) without the delivery of shares will again be available for grant.

For the years ended December 31, 2022, 2021 and 2020, American recorded \$75 million, \$95 million and \$91 million, respectively, of share-based compensation costs principally in salaries, wages and benefits expense on its consolidated statements of operations.

During 2022, 2021 and 2020, AAG withheld approximately 1.2 million, 1.0 million and 0.7 million shares of AAG common stock, respectively, and paid approximately \$21 million, \$18 million and \$15 million, respectively, in satisfaction of certain tax withholding obligations associated with employee equity awards.

Restricted Stock Unit Awards (RSUs)

The majority of American's RSUs have service conditions (time vested primarily over three years). The grant-date fair value of these RSUs is equal to the market price of the underlying shares of AAG common stock on the date of grant. The expense for these RSUs is recognized on a straight-line basis over the vesting period for the entire award. RSUs are classified as equity awards as the vesting results in the issuance of shares of AAG common stock.

RSU award activity for all plans for the years ended December 31, 2022, 2021 and 2020 is as follows:

	Number of Shares (In thousands)	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2019	5,187	\$ 37.01
Granted	5,883	22.07
Vested and released	(2,268)	39.46
Forfeited	(920)	29.78
Outstanding at December 31, 2020	7,882	\$ 23.66
Granted	5,525	18.34
Vested and released	(3,314)	25.58
Forfeited	(692)	18.78
Outstanding at December 31, 2021	9,401	\$ 20.17
Granted	5,882	15.93
Vested and released	(4,131)	21.04
Forfeited	(889)	18.04
Outstanding at December 31, 2022	<u>10,263</u>	<u>\$ 17.51</u>

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

As of December 31, 2022, there was \$93 million of unrecognized compensation cost related to RSUs. These costs are expected to be recognized over a weighted average period of one year. The total fair value of RSUs vested during the years ended December 31, 2022, 2021 and 2020 was \$70 million, \$62 million and \$51 million, respectively.

14. Valuation and Qualifying Accounts (in millions)

	Balance at Beginning of Year	Additions Charged to Statement of Operations Accounts	Deductions	Balance at End of Year
Allowance for obsolescence of spare parts				
Year ended December 31, 2022	\$ 588	\$ 82	(104)	\$ 566
Year ended December 31, 2021	442	165	(19)	588
Year ended December 31, 2020	729	81	(368)	442

15. Transactions with Related Parties

The following represents the net receivables (payables) from or to related parties (in millions):

	December 31,	
	2022	2021
AAG ⁽¹⁾	\$ 8,692	\$ 7,613
AAG's wholly-owned subsidiaries ⁽²⁾	(2,104)	(2,066)
Total	\$ 6,588	\$ 5,547

⁽¹⁾ The increase in American's net related party receivable from AAG is primarily due to American providing the cash funding for AAG's financing transactions.

⁽²⁾ The net payable to AAG's wholly-owned subsidiaries consists primarily of amounts due under regional capacity purchase agreements with AAG's wholly-owned regional airlines operating under the brand name of American Eagle.

Pursuant to a capacity purchase agreement between American and AAG's wholly-owned regional airlines operating as American Eagle, American purchases all of the capacity from these carriers and recognizes passenger revenue from flights operated by American Eagle. In 2022, 2021 and 2020, American recognized expense of approximately \$2.5 billion, \$2.1 billion and \$1.8 billion, respectively, related to wholly-owned regional airline capacity purchase agreements.

16. Subsequent Events

2013 Term Loan Facility Refinancing

In February 2023, American and AAG entered into the Seventh Amendment to Amended and Restated Credit and Guaranty Agreement (the Seventh Amendment) to the 2013 Credit Agreement, pursuant to which American extended the maturity date of all remaining term loans outstanding under the 2013 Term Loan Facility to February 2028 from June 2025. The Seventh Amendment also amended certain other terms of the 2013 Credit Agreement, including the interest rate for the 2013 Term Loan Facility, amortization schedule, the requirements for delivery of appraisals and certain covenants relating to dispositions of collateral. Additionally, the Seventh Amendment transitioned the benchmark interest rate from LIBOR to SOFR. As a result, the 2013 Term Loan Facility bears interest at a base rate (subject to a floor of 1.00%) plus an applicable margin of 1.75% or, at American's option, the SOFR rate for a tenor of one, three or six months, depending on the interest period selected by American (subject to a floor of 0.00%), plus the SOFR adjustment applicable to such interest period and an applicable margin of 2.75%. After giving effect to the issuance of the 7.25% Senior Secured Notes (as discussed below) and the application of the proceeds therefrom, there was \$1.0 billion aggregate principal outstanding under the 2013 Term Loan Facility.

7.25% Senior Secured Notes

In February 2023, American issued \$750 million aggregate principal amount of 7.25% senior secured notes due 2028 (the 7.25% Senior Secured Notes). The 7.25% Senior Secured Notes bear interest at a rate of 7.25% per annum (subject to increase if the collateral coverage ratio described below is not met). Interest on the 7.25% Senior Secured Notes is payable semiannually in arrears on February 15 and August 15 of each year, beginning on August 15, 2023. The 7.25%

[Table of Contents](#)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS OF AMERICAN AIRLINES, INC.

Senior Secured Notes will mature on February 15, 2028. The obligations of American under the 7.25% Senior Secured Notes are fully and unconditionally guaranteed on a senior unsecured basis by AAG. American used the proceeds from the offering of the 7.25% Senior Secured Notes, together with cash on hand, to repay a portion of the term loans outstanding under the 2013 Term Loan Facility and to pay related fees and expenses.

The 7.25% Senior Secured Notes were issued pursuant to an indenture, dated as of February 15, 2023 (the 7.25% Senior Secured Notes Indenture), by and among American, AAG and Wilmington Trust, National Association, as trustee and collateral agent (the 7.25% Senior Secured Notes Trustee). The 7.25% Senior Secured Notes are American's senior secured obligations and are secured on a first lien basis by security interests in certain assets, rights and properties that American uses to provide non-stop scheduled air carrier services between certain airports in the United States and airports in countries in South America and New Zealand (the 7.25% Senior Secured Notes Collateral). The 7.25% Senior Secured Notes Collateral presently secures (and will continue to secure), on a first lien, pari passu basis with the 7.25% Senior Secured Notes, the 2013 Credit Facilities under the 2013 Credit Agreement.

American may redeem the 7.25% Senior Secured Notes, in whole at any time or in part from time to time prior to February 15, 2025, at a redemption price equal to 100% of the principal amount of the 7.25% Senior Secured Notes to be redeemed, plus a "make-whole" premium, plus any accrued and unpaid interest thereon to but excluding the date of redemption. At any time on or after February 15, 2025, American may redeem all or any of the 7.25% Senior Secured Notes in whole at any time, or in part from time to time, at the redemption prices described under the 7.25% Senior Secured Notes Indenture, plus any accrued and unpaid interest thereon to but excluding the date of redemption. In addition, at any time prior to February 15, 2025, American may redeem up to 40% of the original aggregate principal amount of the 7.25% Senior Secured Notes (calculated after giving effect to any issuance of additional notes) with the net cash proceeds of certain equity offerings, at a redemption price equal to 107.250% of the aggregate principal amount of the 7.25% Senior Secured Notes to be redeemed, plus any accrued and unpaid interest thereon to but excluding the date of redemption.

Further, if certain change of control transactions occur, each holder of 7.25% Senior Secured Notes may require American to repurchase the 7.25% Senior Secured Notes in whole or in part at a repurchase price of 101% of the aggregate principal amount thereof, plus accrued and unpaid interest, if any, to but not including the repurchase date.

American is required to deliver an appraisal of the 7.25% Senior Secured Notes Collateral and officer's certificate twice a year demonstrating the calculation of a collateral coverage ratio in relation to the 7.25% Senior Secured Notes Collateral (the 7.25% Senior Secured Notes Collateral Coverage Ratio) as of the date of delivery of the appraisal for the applicable period. If the 7.25% Senior Secured Notes Collateral Coverage Ratio is less than 1.6 to 1.0 as of the date of delivery of the appraisal for the applicable period, then, subject to a cure period in which additional collateral can be provided or debt repaid such that American meets the required 7.25% Senior Secured Notes Collateral Coverage Ratio, American will be required to pay special interest in an additional amount equal to 2.0% per annum of the principal amount of the 7.25% Senior Secured Notes until the 7.25% Senior Secured Notes Collateral Coverage Ratio is established to be at least 1.6 to 1.0.

[Table of Contents](#)

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Management's Evaluation of Disclosure Controls and Procedures

The term "disclosure controls and procedures" is defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the Exchange Act). This term refers to the controls and procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified by the SEC's rules and forms, and is accumulated and communicated to the company's management, including the principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. An evaluation of the effectiveness of AAG's and American's disclosure controls and procedures as of December 31, 2022 was performed under the supervision and with the participation of AAG's and American's management, including AAG's and American's principal executive officer, the Chief Executive Officer (CEO), and principal financial officer, the Chief Financial Officer (CFO). Based on that evaluation, AAG's and American's management, including AAG's and American's CEO and CFO, concluded that AAG's and American's disclosure controls and procedures were effective as of December 31, 2022 at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

For the three months ended December 31, 2022, there have been no changes in AAG's or American's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, AAG's and American's internal control over financial reporting.

Limitation on the Effectiveness of Controls

We believe that a controls system, no matter how well designed and operated, cannot provide absolute assurance that the objectives of the controls system are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives, and, as noted above, the CEO and CFO of AAG and American believe that our disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2022.

Management's Annual Report on Internal Control over Financial Reporting

Management of AAG and American is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. AAG's and American's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. AAG's and American's internal control over financial reporting includes policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of AAG or American, respectively;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of AAG or American are being made only in accordance with authorizations of management and directors of AAG or American, respectively; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of AAG's or American'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.

Management assessed the effectiveness of AAG's and American's internal control over financial reporting as of December 31, 2022. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in its Internal Control – Integrated Framework (2013 Framework).

[Table of Contents](#)

Based on our assessment and those criteria, AAG's and American's management concludes that AAG and American, respectively, maintained effective internal control over financial reporting as of December 31, 2022.

AAG's and American's independent registered public accounting firm has issued an attestation report on the effectiveness of AAG's and American's internal control over financial reporting. That report has been included herein.

Table of Contents

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
American Airlines Group Inc.:.

Opinion on Internal Control Over Financial Reporting

We have audited American Airlines Group Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income (loss), cash flows, and stockholders' equity (deficit) for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively, the consolidated financial statements), and our report dated February 22, 2023 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. 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 audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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/ KPMG LLP

Dallas, Texas
February 22, 2023

Table of Contents

Report of Independent Registered Public Accounting Firm

To the Stockholder and Board of Directors
American Airlines, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited American Airlines, Inc. and subsidiaries' (American) internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, American maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of American as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income (loss), cash flows, and stockholder's equity for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively, the consolidated financial statements), and our report dated February 22, 2023 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

American's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on American's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to American in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. 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 audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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/ KPMG LLP

Dallas, Texas
February 22, 2023

[**Table of Contents**](#)

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not Applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Except as stated below, the information required by this Item will be set forth in the Proxy Statement under the captions “Proposal 1 – Election of Directors,” “Executive Officers,” “Board Composition” and “Information About the Board of Directors and Corporate Governance” and is incorporated by reference into this Annual Report on Form 10-K.

AAG and American have adopted Standards of Business Conduct (the Ethics Standards) within the meaning of Item 406(b) of Regulation S-K. The Ethics Standards apply to all officers and employees of AAG and its subsidiaries, including American. The Ethics Standards are available on our website at www.aa.com. If we make substantive amendments to the Ethics Standards or grant any waiver, including any implicit waiver, to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, we will disclose the nature of such amendment or waiver on our website or in a Current Report on Form 8-K in accordance with applicable rules and regulations.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item will be set forth in the Proxy Statement under the captions “Information About the Board of Directors and Corporate Governance - Risk Assessment with Respect to Compensation Practices,” “Director Compensation,” “Compensation Discussion and Analysis,” “Executive Compensation” and “Compensation Committee Report” and is incorporated by reference into this Annual Report on Form 10-K.

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

The information required by this Item will be set forth in the Proxy Statement under the captions “Security Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information” and is incorporated by reference into this Annual Report on Form 10-K.

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

The information required by this Item will be set forth in the Proxy Statement under the captions “Certain Relationships and Related Party Transactions” and “Information About the Board of Directors and Corporate Governance” and is incorporated by reference into this Annual Report on Form 10-K.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item will be set forth in the Proxy Statement under the caption “Proposal 2 – Ratification of Appointment of Independent Registered Public Accounting Firm” and is incorporated by reference into this Annual Report on Form 10-K.

Table of Contents

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Consolidated Financial Statements

The following consolidated financial statements of American Airlines Group Inc. and Independent Auditors' Report are filed as part of this report:

	Page
Report of Independent Registered Public Accounting Firm (KPMG LLP, Dallas, TX, Auditor Firm ID: 185)	85
Consolidated Statements of Operations for the Years Ended December 31, 2022, 2021 and 2020	87
Consolidated Statements of Comprehensive Income (Loss) for the Years Ended December 31, 2022, 2021 and 2020	88
Consolidated Balance Sheets at December 31, 2022 and 2021	89
Consolidated Statements of Cash Flows for the Years Ended December 31, 2022, 2021 and 2020	90
Consolidated Statements of Stockholders' Equity (Deficit) for the Years Ended December 31, 2022, 2021 and 2020	91
Notes to Consolidated Financial Statements	92

The following consolidated financial statements of American Airlines, Inc. and Independent Auditors' Report are filed as part of this report:

	Page
Report of Independent Registered Public Accounting Firm (KPMG LLP, Dallas, TX, Auditor Firm ID: 185)	132
Consolidated Statements of Operations for the Years Ended December 31, 2022, 2021 and 2020	134
Consolidated Statements of Comprehensive Income (Loss) for the Years Ended December 31, 2022, 2021 and 2020	135
Consolidated Balance Sheets at December 31, 2022 and 2021	136
Consolidated Statements of Cash Flows for the Years Ended December 31, 2022, 2021 and 2020	137
Consolidated Statements of Stockholder's Equity for the Years Ended December 31, 2022, 2021 and 2020	138
Notes to Consolidated Financial Statements	139

Schedules not included have been omitted because they are not applicable or because the required information is included in the Consolidated Financial Statements or notes thereto.

Table of Contents

Exhibits

Exhibits required to be filed by Item 601 of Regulation S-K: Where the amount of securities authorized to be issued under any of our long-term debt agreements does not exceed 10% of our assets, pursuant to paragraph (b)(4) of Item 601 of Regulation S-K, in lieu of filing such as an exhibit, we hereby agree to furnish to the Commission upon request a copy of any agreement with respect to such long-term debt.

Exhibit Number	Description
2.1	Confirmation Order and Plan (incorporated by reference to Exhibit 2.1 to AMR's Current Report on Form 8-K filed on October 23, 2013 (Commission File No. 1-8400)).
2.2	Agreement and Plan of Merger, dated as of December 28, 2015, between American Airlines, Inc. and US Airways, Inc. (incorporated by reference to Exhibit 2.1 to AAG's Current Report on Form 8-K filed on December 31, 2015 (Commission File No. 1-8400)).
3.1	Restated Certificate of Incorporation of American Airlines Group Inc., including the Certificate of Designations, Powers, Preferences and Rights of the American Airlines Group Inc. Series A Convertible Preferred Stock attached as Annex I thereto (incorporated by reference to Exhibit 3.1 to AAG's Current Report on Form 8-K filed on December 9, 2013 (Commission File No. 1-8400)).
3.2	Certificate of Amendment of Restated Certificate of Incorporation of American Airlines Group Inc. (incorporated by reference to Exhibit 3.1 to AAG's Current Report on Form 8-K filed on June 13, 2018 (Commission File No. 1-8400)).
3.3	Third Amended and Restated Bylaws of American Airlines Group Inc.
3.4	Amended and Restated Certificate of Incorporation of American Airlines, Inc. (incorporated by reference to Exhibit 3.3 to AAG's Annual Report on Form 10-K for the year ended December 31, 2013 (Commission File No. 1-8400)).
3.5	Amended and Restated Bylaws of American Airlines, Inc. (incorporated by reference to Exhibit 3.4 to AAG's Annual Report on Form 10-K for the year ended December 31, 2013 (Commission File No. 1-8400)).
3.6	Certificate of Designations of Series B Junior Participating Preferred Stock of American Airlines Group Inc., filed with the Secretary of State of the State of Delaware on December 21, 2021 (incorporated by reference to Exhibit 3.1 to AAG's Current Report on Form 8-K filed on December 22, 2021 (Commission File No. 1-8400)).
4.1	Description of securities registered under Section 12 of the Exchange Act (incorporated by reference to Exhibit 4.1 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).
4.2	Pass Through Trust Agreement, dated as of September 16, 2014, between American Airlines, Inc. and Wilmington Trust Company, as Trustee (incorporated by reference to Exhibit 4.1 to American's Current Report on Form 8-K filed on September 17, 2014 (Commission File No. 1-2691)).
4.3	Trust Supplement No. 2014-1A, dated as of September 16, 2014, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on September 17, 2014 (Commission File No. 1-2691)).
4.4	Trust Supplement No. 2014-1B, dated as of September 16, 2014, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on September 17, 2014 (Commission File No. 1-2691)).
4.5	Intercreditor Agreement (2014-1), dated as of September 16, 2014, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2014-1A and as Trustee of the American Airlines Pass Through Trust 2014-1B, Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Class A Liquidity Provider and Class B Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.4 to American's Current Report on Form 8-K filed on September 17, 2014 (Commission File No. 1-2691)).
4.6	Amendment No. 1 to Intercreditor Agreement (2014-1), dated as of June 24, 2015, among American Airlines, Inc., Credit Agricole Corporate and Investment Bank, as Class A and Class B liquidity provider and Wilmington Trust Company, as subordination agent and trustee (incorporated by reference to Exhibit 10.6 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015 (Commission File No. 1-8400)).
4.7	Note Purchase Agreement, dated as of September 16, 2014, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (incorporated by reference to Exhibit 4.9 to American's Current Report on Form 8-K filed on September 17, 2014 (Commission File No. 1-2691)).

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
4.8	<u>Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (Exhibit B to Note Purchase Agreement) (incorporated by reference to Exhibit 4.10 to American's Current Report on Form 8-K filed on September 17, 2014 (Commission File No. 1-2691)).</u>
4.9	<u>Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (Exhibit C to Note Purchase Agreement) (incorporated by reference to Exhibit 4.11 to American's Current Report on Form 8-K filed on September 17, 2014 (Commission File No. 1-2691)).</u>
4.10	<u>Revolving Credit Agreement (2014-1A), dated as of September 16, 2014, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2014-1A, as Borrower, and Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Liquidity Provider (incorporated by reference to Exhibit 4.14 to American's Current Report on Form 8-K filed on September 17, 2014 (Commission File No. 1-2691)).</u>
4.11	<u>Revolving Credit Agreement (2014-1B), dated as of September 16, 2014, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2014-1B, as Borrower, and Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Liquidity Provider (incorporated by reference to Exhibit 4.15 to American's Current Report on Form 8-K filed on September 17, 2014 (Commission File No. 1-2691)).</u>
4.12	<u>First Supplemental Indenture, dated as of December 30, 2015, among American Airlines Group Inc., American Airlines, Inc. and Wilmington Trust, National Association, as trustee, to the Indenture dated as of March 5, 2015 (incorporated by reference to Exhibit 4.3 to AAG's Current Report on Form 8-K filed on December 31, 2015 (Commission File No. 1-8400)).</u>
4.13	<u>Trust Supplement No. 2015-1A, dated as of March 16, 2015, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on March 16, 2015 (Commission File No. 1-2691)).</u>
4.14	<u>Trust Supplement No. 2015-1B, dated as of March 16, 2015, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on March 16, 2015 (Commission File No. 1-2691)).</u>
4.15	<u>Intercreditor Agreement (2015-1), dated as of March 16, 2015, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2015-1A and as Trustee of the American Airlines Pass Through Trust 2015-1B, Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Class A Liquidity Provider and Class B Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.4 to American's Current Report on Form 8-K filed on March 16, 2015 (Commission File No. 1-2691)).</u>
4.16	<u>Note Purchase Agreement, dated as of March 16, 2015, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (incorporated by reference to Exhibit 4.9 to American's Current Report on Form 8-K filed on March 16, 2015 (Commission File No. 1-2691)).</u>
4.17	<u>Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit 4.10 to American's Current Report on Form 8-K filed on March 16, 2015 (Commission File No. 1-2691)).</u>
4.18	<u>Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit 4.11 to American's Current Report on Form 8-K filed on March 16, 2015 (Commission File No. 1-2691)).</u>
4.19	<u>Form of Pass Through Trust Certificate, Series 2015-1A (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on March 16, 2015 (Commission File No. 1-2691)).</u>
4.20	<u>Form of Pass Through Trust Certificate, Series 2015-1B (incorporated by reference to Exhibit A to Exhibit 4.3 to American's Current Report on Form 8-K filed on March 16, 2015 (Commission File No. 1-2691)).</u>
4.21	<u>Revolving Credit Agreement (2015-1A), dated as of March 16, 2015, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2015-1A, as Borrower, and Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Liquidity Provider (incorporated by reference to Exhibit 4.14 to American's Current Report on Form 8-K filed on March 16, 2015 (Commission File No. 1-2691)).</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
4.22	<u>Revolving Credit Agreement (2015-1B)</u> , dated as of March 16, 2015, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2015-1B, as Borrower, and Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Liquidity Provider (incorporated by reference to Exhibit 4.15 to American's Current Report on Form 8-K filed on March 16, 2015 (Commission File No. 1-2691)).
4.23	<u>Trust Supplement No. 2015-2AA</u> , dated as of September 24, 2015, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.24	<u>Trust Supplement No. 2015-2A</u> , dated as of September 24, 2015, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.25	<u>Trust Supplement No. 2015-2B</u> , dated as of September 24, 2015, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.4 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.26	<u>Intercreditor Agreement (2015-2)</u> , dated as of September 24, 2015, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2015-2AA, as Trustee of the American Airlines Pass Through Trust 2015-2A and as Trustee of the American Airlines Pass Through Trust 2015-2B, Commonwealth Bank of Australia, New York Branch, as Class AA Liquidity Provider, Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Class A Liquidity Provider and Class B Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.5 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.27	<u>Note Purchase Agreement</u> , dated as of September 24, 2015, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.6 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.28	<u>Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein)</u> (incorporated by reference to Exhibit B to Exhibit 4.6 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.29	<u>Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee)</u> (incorporated by reference to Exhibit C to Exhibit 4.6 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.30	<u>Form of Pass Through Trust Certificate, Series 2015-2AA</u> (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.31	<u>Form of Pass Through Trust Certificate, Series 2015-2A</u> (incorporated by reference to Exhibit A to Exhibit 4.3 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.32	<u>Form of Pass Through Trust Certificate, Series 2015-2B</u> (incorporated by reference to Exhibit A to Exhibit 4.4 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.33	<u>Revolving Credit Agreement (2015-2AA)</u> , dated as of September 24, 2015, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2015-2AA, as Borrower, and Commonwealth Bank of Australia, New York Branch, as Liquidity Provider (incorporated by reference to Exhibit 4.12 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.34	<u>Revolving Credit Agreement (2015-2A)</u> , dated as of September 24, 2015, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2015-2A, as Borrower, and Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Liquidity Provider (incorporated by reference to Exhibit 4.13 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).
4.35	<u>Revolving Credit Agreement (2015-2B)</u> , dated as of September 24, 2015, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2015-2B, as Borrower, and Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Liquidity Provider (incorporated by reference to Exhibit 4.14 to American's Current Report on Form 8-K filed on September 24, 2015 (Commission File No. 1-2691)).

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
4.36	<u>Note Purchase Agreement, dated as of April 24, 2013, among American Airlines, Inc. (as successor in interest to US Airways, Inc.), Wilmington Trust Company, as Pass Through Trustee, Wilmington Trust Company, as Subordination Agent, Wilmington Trust, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (incorporated by reference to Exhibit 4.12 to US Airways Group's Current Report on Form 8-K filed on April 25, 2013 (Commission File No. 1-8444)).</u>
4.37	<u>Assumption Agreement, dated as of December 30, 2015, by American Airlines, Inc. for the benefit of Wilmington Trust Company, as pass through trustee, subordination agent, and paying agent, and Wilmington Trust, National Association, as escrow agent, in each case, under the Note Purchase Agreement, dated as of April 24, 2013, among American Airlines, Inc. (as successor in interest to US Airways, Inc.), Wilmington Trust Company, Wilmington Trust, National Association and Wilmington Trust Company (incorporated by reference to Exhibit 10.2 to AAG's Current Report on Form 8-K filed on December 31, 2015 (Commission File No. 1-8400)).</u>
4.38	<u>Form of Participation Agreement between American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, and Wilmington Trust Company, as Indenture Trustee, Subordination Agent and Pass Through Trustee (incorporated by reference to Exhibit 4.13 to US Airways Group's Current Report on Form 8-K filed on April 25, 2013 (Commission File No. 1-8444)).</u>
4.39	<u>Form of Trust Indenture and Security Agreement among American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, Wilmington Trust, National Association, as Securities Intermediary, and Wilmington Trust Company, as Indenture Trustee (incorporated by reference to Exhibit 4.14 to US Airways Group's Current Report on Form 8-K filed on April 25, 2013 (Commission File No. 1-8444)).</u>
4.40	<u>Form of Amendment No. 1 to Participation Agreement between American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, and Wilmington Trust Company, as Indenture Trustee, Subordination Agent and Pass Through Trustee (Exhibit A to Note Purchase Agreement) (incorporated by reference to Exhibit 4.8 to US Airways Group's Current Report on Form 8-K filed on June 6, 2013 (Commission File No. 1-8444)).</u>
4.41	<u>Form of Amendment No. 1 to Trust Indenture and Security Agreement among American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, Wilmington Trust, National Association, as Securities Intermediary, and Wilmington Trust Company, as Indenture Trustee (Exhibit B to Note Purchase Agreement) (incorporated by reference to Exhibit 4.9 to US Airways Group's Current Report on Form 8-K filed on June 6, 2013 (Commission File No. 1-8444)).</u>
4.42	<u>Amended and Restated Guarantee, dated as of March 31, 2014, from American Airlines Group Inc. (as successor in interest to US Airways Group, Inc.) relating to obligations of US Airways under the equipment notes relating to its Series 2013-1 Pass Through Certificates (incorporated by reference to Exhibit 10.5 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014 (Commission File No. 1-8400)).</u>
4.43	<u>Form of Participation Agreement between American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, and Wilmington Trust Company, as Indenture Trustee, Subordination Agent and Pass Through Trustee (Schedule I to Amendment No. 1 to Note Purchase Agreement (2012-2)) (incorporated by reference to Exhibit 4.10 to US Airways Group's Current Report on Form 8-K filed on June 6, 2013 (Commission File No. 1-8444)).</u>
4.44	<u>Form of Trust Indenture and Security Agreement among American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, Wilmington Trust, National Association, as Securities Intermediary, and Wilmington Trust Company, as Indenture Trustee (Exhibit A to Amendment No. 1 to Note Purchase Agreement (2012-2)) (incorporated by reference to Exhibit 4.11 to US Airways Group's Current Report on Form 8-K filed on June 6, 2013 (Commission File No. 1-8444)).</u>
4.45	<u>Form of Participation Agreement (Participation Agreement between American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, and Wilmington Trust Company, as Indenture Trustee and Subordination Agent) (incorporated by reference to Exhibit 4.14 to US Airways Group's Current Report on Form 8-K filed on December 23, 2010 (Commission File No. 1-8444)).</u>
4.46	<u>Form of Indenture (Trust Indenture and Security Agreement between American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, and Wilmington Trust Company, as Indenture Trustee) (incorporated by reference to Exhibit 4.15 to US Airways Group's Current Report on Form 8-K filed on December 23, 2010 (Commission File No. 1-8444)).</u>
4.47	<u>Amended and Restated Guarantee, dated as of March 31, 2014, from American Airlines Group Inc. (as successor in interest to US Airways Group, Inc.) relating to obligations of US Airways under the equipment notes relating to its Series 2010-1 Pass Through Certificates (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014 (Commission File No. 1-8400)).</u>
4.48	<u>Form of Participation Agreement (Participation Agreement between American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, and Wilmington Trust Company, as Indenture Trustee and Subordination Agent) (incorporated by reference to Exhibit 4.18 to US Airways Group's Current Report on Form 8-K filed on July 1, 2011 (Commission File No. 1-08444)).</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
4.49	<u>Form of Indenture (Trust Indenture and Security Agreement between American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, and Wilmington Trust Company, as Indenture Trustee) (incorporated by reference to Exhibit 4.19 to US Airways Group's Current Report on Form 8-K filed on July 1, 2011 (Commission File No. 1-08444)).</u>
4.50	<u>Guarantee, dated as of June 28, 2011, from American Airlines Group Inc. (as successor in interest to US Airways Group, Inc.) (incorporated by reference to Exhibit 4.23 to US Airways Group's Current Report on Form 8-K filed on July 1, 2011 (Commission File No. 1-08444)).</u>
4.51	<u>Amended and Restated Guarantee, dated as of March 31, 2014, from American Airlines Group Inc. (as successor in interest to US Airways Group, Inc.) relating to obligations of US Airways under the equipment notes relating to its Series 2011-1 Pass Through Certificates (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014 (Commission File No. 1-8400)).</u>
4.52	<u>Form of Participation Agreement (Participation Agreement between American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, and Wilmington Trust Company, as Indenture Trustee and Subordination Agent) (incorporated by reference to Exhibit 4.18 to US Airways Group's Current Report on Form 8-K filed on May 16, 2012 (Commission File No. 1-08444)).</u>
4.53	<u>Form of Indenture (Trust Indenture and Security Agreement between American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, and Wilmington Trust Company, as Indenture Trustee) (incorporated by reference to Exhibit 4.19 to US Airways Group's Current Report on Form 8-K filed on May 16, 2012 (Commission File No. 1-08444)).</u>
4.54	<u>Amended and Restated Guarantee, dated as of March 31, 2014, from American Airlines Group Inc. (as successor in interest to US Airways Group, Inc.) relating to obligations of US Airways under the equipment notes relating to its Series 2012-1 Pass Through Certificates (incorporated by reference to Exhibit 10.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014 (Commission File No. 1-8400)).</u>
4.55	<u>Form of Participation Agreement (Participation Agreement between American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, and Wilmington Trust Company, as Indenture Trustee and Subordination Agent) (incorporated by reference to Exhibit B to Exhibit 4.12 to US Airways Group's Current Report on Form 8-K filed on December 13, 2012 (Commission File No. 1-08444)).</u>
4.56	<u>Form of Indenture (Trust Indenture and Security Agreement between American Airlines, Inc. (as successor in interest to US Airways, Inc.), as Owner, and Wilmington Trust Company, as Indenture Trustee) (incorporated by reference to Exhibit C to Exhibit 4.12 to US Airways Group's Current Report on Form 8-K filed on December 13, 2012 (Commission File No. 1-08444)).</u>
4.57	<u>Amended and Restated Guarantee, dated as of March 31, 2014, from American Airlines Group Inc. (as successor in interest to US Airways Group, Inc.) relating to obligations of US Airways under the equipment notes relating to its Series 2012-2 Pass Through Certificates (incorporated by reference to Exhibit 10.4 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014 (Commission File No. 1-8400)).</u>
4.58	<u>Form of Assumption Agreement, dated as of December 30, 2015, by American Airlines, Inc. for the benefit of Wilmington Trust Company, as Indenture Trustee, to (i) each Participation Agreement between, among others, American Airlines, Inc. (as successor in interest to US Airways, Inc.) and Wilmington Trust Company, as Indenture Trustee, entered into pursuant to the 2010-1, 2011-1, 2012-1, 2012-2 and 2013-1 EETC note purchase agreements and (ii) each Trust Indenture and Security Agreement, between, among others, American Airlines, Inc. (as successor in interest to US Airways, Inc.), and Wilmington Trust Company, as Indenture Trustee entered into pursuant to the 2010-1, 2011-1, 2012-1, 2012-2 and 2013-1 EETC note purchase agreements (incorporated by reference to Exhibit 10.3 to AAG's Current Report on Form 8-K filed on December 31, 2015 (Commission File No. 1-8400)).</u>
4.59	<u>Trust Supplement No. 2016-1AA, dated as of January 19, 2016, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.60	<u>Trust Supplement No. 2016-1A, dated as of January 19, 2016, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.61	<u>Trust Supplement No. 2016-1B, dated as of January 19, 2016, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.4 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
4.62	<u>Intercreditor Agreement (2016-1), dated as of January 19, 2016, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2016-1AA, as Trustee of the American Airlines Pass Through Trust 2016-1A and as Trustee of the American Airlines Pass Through Trust 2016-1B, KfW IPEX-Bank GmbH, as Class AA Liquidity Provider, Class A Liquidity Provider and Class B Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to exhibit 4.5 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.63	<u>Note Purchase Agreement, dated as of January 19, 2016, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.6 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.64	<u>Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit B to Exhibit 4.6 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.65	<u>Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit C to Exhibit 4.6 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.66	<u>Form of Pass Through Trust Certificate, Series 2016-1AA (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.67	<u>Form of Pass Through Trust Certificate, Series 2016-1A (incorporated by reference to Exhibit A to Exhibit 4.3 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.68	<u>Form of Pass Through Trust Certificate, Series 2016-1B (incorporated by reference to Exhibit A to Exhibit 4.4 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.69	<u>Revolving Credit Agreement (2016-1AA), dated as of January 19, 2016, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2016-1AA, as Borrower, and KfW IPEX-Bank GmbH, as Liquidity Provider (incorporated by reference to Exhibit 4.12 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.70	<u>Revolving Credit Agreement (2016-1A), dated as of January 19, 2016, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2016-1A, as Borrower, and KfW IPEX-Bank GmbH, as Liquidity Provider (incorporated by reference to Exhibit 4.13 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.71	<u>Revolving Credit Agreement (2016-1B), dated as of January 19, 2016, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2016-1B, as Borrower, and KfW IPEX-Bank GmbH, as Liquidity Provider (incorporated by reference to Exhibit 4.14 to American's Current Report on Form 8-K filed on January 21, 2016 (Commission File No. 1-2691)).</u>
4.72	<u>Trust Supplement No. 2016-2AA, dated as of May 16, 2016, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on May 17, 2016 (Commission File No. 1-2691)).</u>
4.73	<u>Trust Supplement No. 2016-2A, dated as of May 16, 2016, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on May 17, 2016 (Commission File No. 1-2691)).</u>
4.74	<u>Intercreditor Agreement (2016-2), dated as of May 16, 2016, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2016-2AA and as Trustee of the American Airlines Pass Through Trust 2016-2A, KfW IPEX-Bank GmbH, as Class AA Liquidity Provider and Class A Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.4 to American's Current Report on Form 8-K filed on May 17, 2016 (Commission File No. 1-2691)).</u>
4.75	<u>Note Purchase Agreement, dated as of May 16, 2016, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (incorporated by reference to Exhibit 4.9 to American's Current Report on Form 8-K filed on May 17, 2016 (Commission File No. 1-2691)).</u>
4.76	<u>Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit B to Exhibit 4.9 to American's Current Report on Form 8-K filed on May 17, 2016 (Commission File No. 1-2691)).</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
4.77	<u>Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit C to Exhibit 4.9 to American's Current Report on Form 8-K filed on May 17, 2016 (Commission File No. 1-2691)).</u>
4.78	<u>Form of Pass Through Trust Certificate, Series 2016-2AA (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on May 17, 2016 (Commission File No. 1-2691)).</u>
4.79	<u>Form of Pass Through Trust Certificate, Series 2016-2A (incorporated by reference to Exhibit A to Exhibit 4.3 to American's Current Report on Form 8-K filed on May 17, 2016 (Commission File No. 1-2691)).</u>
4.80	<u>Revolving Credit Agreement (2016-2AA), dated as of May 16, 2016, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2016-2AA, as Borrower, and KfW IPEX-Bank GmbH, as Liquidity Provider (incorporated by reference to Exhibit 4.14 to American's Current Report on Form 8-K filed on May 17, 2016 (Commission File No. 1-2691)).</u>
4.81	<u>Revolving Credit Agreement (2016-2A), dated as of May 16, 2016, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2016-2A, as Borrower, and KfW IPEX-Bank GmbH, as Liquidity Provider (incorporated by reference to Exhibit 4.15 to American's Current Report on Form 8-K filed on May 17, 2016 (Commission File No. 1-2691)).</u>
4.82	<u>Trust Supplement No. 2016-2B, dated as of July 8, 2016, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on July 12, 2016 (Commission File No. 1-2691)).</u>
4.83	<u>Amended and Restated Intercreditor Agreement (2016-2), dated as of July 8, 2016, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2016-2AA, as Trustee of the American Airlines Pass Through Trust 2016-2A and as Trustee of the American Airlines Pass Through Trust 2016-2B, KfW IPEX-Bank GmbH, as Class AA Liquidity Provider, Class A Liquidity Provider and Class B Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on July 12, 2016 (Commission File No. 1-2691)).</u>
4.84	<u>Amended and Restated Note Purchase Agreement, dated as of July 8, 2016, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit B to Exhibit 4.6 to American's Current Report on Form 8-K filed on July 12, 2016 (Commission File No. 1-2691)).</u>
4.85	<u>Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit B to Exhibit 4.6 to American's Current Report on Form 8-K filed on July 12, 2016 (Commission File No. 1-2691)).</u>
4.86	<u>Form of First Amendment to Participation Agreement (First Amendment to Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit D to Exhibit 4.6 to American's Current Report on Form 8-K filed on July 12, 2016 (Commission File No. 1-2691)).</u>
4.87	<u>Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit C to Exhibit 4.6 to American's Current Report on Form 8-K filed on July 12, 2016 (Commission File No. 1-2691)).</u>
4.88	<u>Form of First Amendment to Indenture and Security Agreement (First Amendment to Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit E to Exhibit 4.6 to American's Current Report on Form 8-K filed on July 12, 2016 (Commission File No. 1-2691)).</u>
4.89	<u>Form of Pass Through Trust Certificate, Series 2016-2B (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on July 12, 2016 (Commission File No. 1-2691)).</u>
4.90	<u>Revolving Credit Agreement (2016-2B), dated as of July 8, 2016, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2016-2B, as Borrower, and KfW IPEX Bank GmbH, as Liquidity Provider (incorporated by reference to Exhibit 4.12 to American's Current Report on Form 8-K filed on July 12, 2016 (Commission File No. 1-2691)).</u>
4.91	<u>Trust Supplement No. 2016-3AA, dated as of October 3, 2016, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on October 4, 2016 (Commission File No. 1-2691)).</u>

Table of Contents

Exhibit Number	Description
4.92	<u>Trust Supplement No. 2016-3A, dated as of October 3, 2016, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on October 4, 2016 (Commission File No. 1-2691)).</u>
4.93	<u>Intercreditor Agreement (2016-3), dated as of October 3, 2016, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2016-3AA and as Trustee of the American Airlines Pass Through Trust 2016-3A, KfW IPEX-Bank GmbH, as Class AA Liquidity Provider and Class A Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.4 to American's Current Report on Form 8-K filed on October 4, 2016 (Commission File No. 1-2691)).</u>
4.94	<u>Amended and Restated Intercreditor Agreement (2016-3), dated as of October 4, 2017, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2016-3AA, as Trustee of the American Airlines Pass Through Trust 2016-3A and as Trustee of the American Airlines Pass Through Trust 2016-3B, KfW IPEX-Bank GmbH, as Class AA Liquidity Provider, Class A Liquidity Provider and Class B Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on October 5, 2017 (Commission File No. 1-2691)).</u>
4.95	<u>Note Purchase Agreement, dated as of October 3, 2016, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (incorporated by reference to Exhibit 4.9 to American's Current Report on Form 8-K filed on October 4, 2016 (Commission File No. 1-2691)).</u>
4.96	<u>Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit B to Exhibit 4.9 to American's Current Report on Form 8-K filed on October 4, 2016 (Commission File No. 1-2691)).</u>
4.97	<u>Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit C to Exhibit 4.9 to American's Current Report on Form 8-K filed on October 4, 2016 (Commission File No. 1-2691)).</u>
4.98	<u>Form of Pass Through Trust Certificate, Series 2016-3AA (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on October 4, 2016 (Commission File No. 1-2691)).</u>
4.99	<u>Form of Pass Through Trust Certificate, Series 2016-3A (incorporated by reference to Exhibit A to Exhibit 4.3 to American's Current Report on Form 8-K filed on October 4, 2016 (Commission File No. 1-2691)).</u>
4.100	<u>Revolving Credit Agreement (2016-3AA), dated as of October 3, 2016, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2016-3AA, as Borrower, and KfW IPEX-Bank GmbH, as Liquidity Provider (incorporated by reference to Exhibit 4.14 to American's Current Report on Form 8-K filed on October 4, 2016 (Commission File No. 1-2691)).</u>
4.101	<u>Revolving Credit Agreement (2016-3A), dated as of October 3, 2016, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2016-3A, as Borrower, and KfW IPEX-Bank GmbH, as Liquidity Provider (incorporated by reference to Exhibit 4.15 to American's Current Report on Form 8-K filed on October 4, 2016 (Commission File No. 1-2691)).</u>
4.102	<u>Trust Supplement No. 2017-1AA, dated as of January 13, 2017, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).</u>
4.103	<u>Trust Supplement No. 2017-1A, dated as of January 13, 2017, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014, (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).</u>
4.104	<u>Trust Supplement No. 2017-1B, dated as of January 13, 2017, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.4 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).</u>
4.105	<u>Intercreditor Agreement (2017-1), dated as of January 13, 2017, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2017-1AA, as Trustee of the American Airlines Pass Through Trust 2017-1A and as Trustee of the American Airlines Pass Through Trust 2017-1B, Citibank N.A., as Class AA Liquidity Provider, Class A Liquidity Provider and Class B Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.5 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).</u>

Table of Contents

Exhibit Number	Description
4.106	Note Purchase Agreement, dated as of January 13, 2017, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (incorporated by reference to Exhibit 4.12 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).
4.107	Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit B to Exhibit 4.12 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).
4.108	Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit C to Exhibit 4.12 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).
4.109	Form of Pass Through Trust Certificate, Series 2017-1AA (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).
4.110	Form of Pass Through Trust Certificate, Series 2017-1A (incorporated by reference to Exhibit A to Exhibit 4.3 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).
4.111	Form of Pass Through Trust Certificate, Series 2017-1B (incorporated by reference to Exhibit A to Exhibit 4.4 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).
4.112	Revolving Credit Agreement (2017-1AA), dated as of January 13, 2017, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2017-1AA, as Borrower, and Citibank N.A., as Liquidity Provider (incorporated by reference to Exhibit 4.18 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).
4.113	Revolving Credit Agreement (2017-1A), dated as of January 13, 2017, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2017-1A, as Borrower, and Citibank N.A., as Liquidity Provider (incorporated by reference to Exhibit 4.19 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).
4.114	Revolving Credit Agreement (2017-1B), dated as of January 13, 2017, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2017-1B, as Borrower, and Citibank N.A., as Liquidity Provider (incorporated by reference to Exhibit 4.20 to American's Current Report on Form 8-K filed on January 17, 2017 (Commission File No. 1-02691)).
4.115	Acknowledgment and Agreement (2017-1), dated as of March 31, 2017, by and among American Airlines Inc., Citibank, N.A., as initial Liquidity Provider, National Australia Bank Limited, as Replacement Liquidity Provider, and Wilmington Trust Company, as Subordination Agent and trustee (incorporated by reference to Exhibit 4.20 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 (Commission File No. 1-8400)).
4.116	Revolving Credit Agreement (2017-1AA), dated as of March 31, 2017, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2017-1AA, as Borrower, and National Australia Bank Limited, as Liquidity Provider (incorporated by reference to Exhibit 4.21 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 (Commission File No. 1-8400)).
4.117	Revolving Credit Agreement (2017-1A), dated as of March 31, 2017, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2017-1A, as Borrower, and National Australia Bank Limited, as Liquidity Provider (incorporated by reference to Exhibit 4.22 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 (Commission File No. 1-8400)).
4.118	Revolving Credit Agreement (2017-1B), dated as of March 31, 2017, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2017-1B, as Borrower, and National Australia Bank Limited, as Liquidity Provider (incorporated by reference to Exhibit 4.23 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 (Commission File No. 1-8400)).
4.119	Form of American Airlines Group Inc. Indenture for Debt Securities (incorporated by reference to Exhibit 4.1 to AAG's Registration Statement on Form S-3ASR filed on February 22, 2017 (Commission File No. 333-216167)).
4.120	Form of American Airlines, Inc. Indenture for Debt Securities (incorporated by reference to Exhibit 4.2 to AAG's Registration Statement on Form S-3ASR filed on February 22, 2017 (Commission File No. 333-216167)).
4.121	Trust Supplement No. 2017-2AA, dated as of August 14, 2017, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on August 14, 2017 (Commission File No. 1-2691)).

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
4.122	<u>Trust Supplement No. 2017-2A, dated as of August 14, 2017, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on August 14, 2017 (Commission File No. 1-2691)).</u>
4.123	<u>Intercreditor Agreement (2017-2), dated as of August 14, 2017, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2017-2AA and as Trustee of the American Airlines Pass Through Trust 2017-2A, National Australia Bank Limited, as Class AA Liquidity Provider and Class A Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.4 to American's Current Report on Form 8-K filed on August 14, 2017 (Commission File No. 1-2691)).</u>
4.124	<u>Note Purchase Agreement, dated as of August 14, 2017, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (incorporated by reference to Exhibit 4.9 to American's Current Report on Form 8-K filed on August 14, 2017 (Commission File No. 1-2691)).</u>
4.125	<u>Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit B to Exhibit 4.9 to American's Current Report on Form 8-K filed on August 14, 2017 (Commission File No. 1-2691)).</u>
4.126	<u>Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit C to Exhibit 4.9 to American's Current Report on Form 8-K filed on August 14, 2017 (Commission File No. 1-2691)).</u>
4.127	<u>Form of Pass Through Trust Certificate, Series 2017-2AA (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on August 14, 2017 (Commission File No. 1-2691)).</u>
4.128	<u>Form of Pass Through Trust Certificate, Series 2017-2A (incorporated by reference to Exhibit A to Exhibit 4.3 to American's Current Report on Form 8-K filed on August 14, 2017 (Commission File No. 1-2691)).</u>
4.129	<u>Revolving Credit Agreement (2017-2AA), dated as of August 14, 2017, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2017-2AA, as Borrower, and National Australia Bank Limited, as Liquidity Provider (incorporated by reference to Exhibit 4.14 to American's Current Report on Form 8-K filed on August 14, 2017 (Commission File No. 1-2691)).</u>
4.130	<u>Revolving Credit Agreement (2017-2A), dated as of August 14, 2017, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2017-2A, as Borrower, and National Australia Bank Limited, as Liquidity Provider (incorporated by reference to Exhibit 4.15 to American's Current Report on Form 8-K filed on August 14, 2017 (Commission File No. 1-2691)).</u>
4.131	<u>Trust Supplement No. 2016-3B, dated as of October 4, 2017, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on October 5, 2017 (Commission File No. 1-2691)).</u>
4.132	<u>Amended and Restated Note Purchase Agreement, dated as of October 4, 2017, amending the Note Purchase Agreement, dated as of October 3, 2016, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.4 to American's Current Report on Form 8-K filed on October 5, 2017 (Commission File No. 1-2691)).</u>
4.133	<u>Form of First Amendment to Participation Agreement (First Amendment to Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit A to Exhibit 4.4 to American's Current Report on Form 8-K filed on October 5, 2017 (Commission File No. 1-2691)).</u>
4.134	<u>Form of First Amendment to Indenture and Security Agreement (First Amendment to Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit E to Exhibit 4.6 to American's Current Report on Form 8-K filed on October 6, 2017 (Commission File No. 1-2691)).</u>
4.135	<u>Form of First Amendment to Indenture and Security Agreement (First Amendment to Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit B to Exhibit 4.4 to American's Current Report on Form 8-K filed on October 5, 2017 (Commission File No. 1-2691)).</u>
4.136	<u>Form of Pass Through Trust Certificate, Series 2016-3B (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on October 5, 2017 (Commission File No. 1-2691)).</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
4.137	Revolving Credit Agreement (2016-3B), dated as of October 4, 2017, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2016-3B, as Borrower, and KfW IPEX-Bank GmbH, as Liquidity Provider 3B (incorporated by reference to Exhibit 4.8 to American's Current Report on Form 8-K filed on October 5, 2017 (Commission File No. 1-2691)).
4.138	Trust Supplement No. 2017-2B, dated as of October 5, 2017, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on October 6, 2017 (Commission File No. 1-2691)).
4.139	Amended and Restated Intercreditor Agreement (2017-2), dated as of October 5, 2017, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2017-2AA, as Trustee of the American Airlines Pass Through Trust 2017-2A and as Trustee of the American Airlines Pass Through Trust 2017-2B, National Australia Bank Limited, as Class AA Liquidity Provider, Class A Liquidity Provider and Class B Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on October 6, 2017 (Commission File No. 1-2691)).
4.140	Amended and Restated Note Purchase Agreement, dated as of October 5, 2017, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (incorporated by reference to Exhibit 4.6 to American's Current Report on Form 8-K filed on October 6, 2017 (Commission File No. 1-2691)).
4.141	Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit B to Exhibit 4.6 to American's Current Report on Form 8-K filed on October 6, 2017 (Commission File No. 1-2691)).
4.142	Form of First Amendment to Participation Agreement (First Amendment to Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit D to Exhibit 4.6 to American's Current Report on Form 8-K filed on October 6, 2017 (Commission File No. 1-2691)).
4.143	Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit C to Exhibit 4.6 to American's Current Report on Form 8-K filed on October 6, 2017 (Commission File No. 1-2691)).
4.144	Form of Pass Through Trust Certificate, Series 2017-2B (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on October 6, 2017 (Commission File No. 1-2691)).
4.145	Revolving Credit Agreement (2017-2B), dated as of October 5, 2017, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2017-2B, as Borrower, and National Australia Bank Limited, as Liquidity Provider (incorporated by reference to Exhibit 4.12 to American's Current Report on Form 8-K filed on October 6, 2017 (Commission File No. 1-2691)).
4.146	Trust Supplement No. 2012-2C(R), dated as of May 15, 2018, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on May 16, 2018 (Commission File No. 1-2691)).
4.147	Form of Amendment No. 2 to Intercreditor Agreement (2012-2C(R)) among Wilmington Trust Company, not in its individual capacity but solely as Trustee of the American Airlines, Inc. Pass Through Trust 2012-2C(R), American Airlines, Inc. and Wilmington Trust Company, not in its individual capacity but solely as Subordination Agent and Trustee (incorporated by reference to Exhibit C to Exhibit 4.6 to American's Current Report on Form 8-K filed on May 16, 2018 (Commission File No. 1-2691)).
4.148	Note Purchase Agreement, dated as of May 15, 2018, among American Airlines, Inc., Wilmington Trust Company, not in its individual capacity, but solely as Pass Through Trustee under the Class C(R) Pass Through Trust Agreement, as Subordination Agent and as Indenture Trustee, Wilmington Trust, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (incorporated by reference to Exhibit 4.6 to American's Current Report on Form 8-K filed on May 16, 2018 (Commission File No. 1-2691)).
4.149	Form of Amendment to Participation Agreement (Amendment to Participation Agreement among American Airlines, Inc., Wilmington Trust Company, not in its individual capacity, but solely as Subordination Agent and as Indenture Trustee, and Wilmington Trust Company, not in its individual capacity, but solely as Pass Through Trustee under each of the Pass Through Trust Agreements) (incorporated by reference to Exhibit A to Exhibit 4.6 to American's Current Report on Form 8-K filed on May 16, 2018 (Commission File No. 1-2691)).
4.150	Form of Pass Through Trust Certificate, Series 2021-1A (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on November 12, 2021 (Commission File No. 1-02691)).

Table of Contents

Exhibit Number	Description
4.151	Form of Pass Through Trust Certificate, Series 2021-1B (incorporated by reference to Exhibit A to Exhibit 4.3 to American's Current Report on Form 8-K filed on November 12, 2021 (Commission File No. 1-02691)).
4.152	Revolving Credit Agreement (2021-1A), dated as of November 8, 2021, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2021-1A, as Borrower, and Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Liquidity Provider (incorporated by reference to Exhibit 4.14 to American's Current Report on Form 8-K filed on November 12, 2021 (Commission File No. 1-02691)).
4.153	Revolving Credit Agreement (2021-1B), dated as of November 8, 2021, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2021-1B, as Borrower, and Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Liquidity Provider (incorporated by reference to Exhibit 4.15 to American's Current Report on Form 8-K filed on November 12, 2021 (Commission File No. 1-02691)).
4.154	Tax Benefit Preservation Plan, dated as of December 21, 2021, between American Airlines Group Inc. and American Stock Transfer & Trust Company, LLC, which includes the Form of Certificate of Designations of Series B Junior Participating Preferred Stock as Exhibit A, the Form of Right Certificate as Exhibit B and the Summary of Rights to Purchase Preferred Shares as Exhibit C (incorporated by reference to Exhibit 4.1 to AAG's Current Report on Form 8-K filed on December 22, 2021 (Commission File No. 1-8400)).
4.155	Form of Amendment to Trust Indenture and Security Agreement (Amendment to Trust Indenture and Security Agreement between American Airlines, Inc., Wilmington Trust Company, not in its individual capacity, but solely as Indenture Trustee, and Wilmington Trust, National Association, as Securities Intermediary) (incorporated by reference to Exhibit B to Exhibit 4.6 to American's Current Report on Form 8-K filed on May 16, 2018 (Commission File No. 1-2691)).
4.156	Form of Pass Through Trust Certificate, Series 2012-2C(R) (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on May 16, 2018 (Commission File No. 1-2691)).
4.157	Trust Supplement No. 2019-1AA (Aircraft EETC), dated as of August 15, 2019, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).
4.158	Trust Supplement No. 2019-1A (Aircraft EETC), dated as of August 15, 2019, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).
4.159	Trust Supplement No. 2019-1B (Aircraft EETC), dated as of August 15, 2019, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.4 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).
4.160	Intercreditor Agreement (2019-1), dated as of August 15, 2019, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2019-1AA (Aircraft EETC), as Trustee of the American Airlines Pass Through Trust 2019-1A (Aircraft EETC) and as Trustee of the American Airlines Pass Through Trust 2019-1B (Aircraft EETC), National Australia Bank Limited, as Class AA Liquidity Provider, Class A Liquidity Provider and Class B Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.5 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).
4.161	Note Purchase Agreement, dated as of August 15, 2019, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (incorporated by reference to Exhibit 4.12 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).
4.162	Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit B to Exhibit 4.12 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).
4.163	Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit C to Exhibit 4.12 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).
4.164	Form of Pass Through Trust Certificate, Series 2019-1AA (Aircraft EETC) (incorporated by reference to Exhibit A to Exhibit 4.2 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
4.165	<u>Form of Pass Through Trust Certificate, Series 2019-1A (Aircraft EETC) (incorporated by reference to Exhibit A to Exhibit 4.3 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).</u>
4.166	<u>Form of Pass Through Trust Certificate, Series 2019-1B (Aircraft EETC) (incorporated by reference to Exhibit A to Exhibit 4.4 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).</u>
4.167	<u>Revolving Credit Agreement (2019-1AA), dated as of August 15, 2019, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2019-1AA (Aircraft EETC), as Borrower, and National Australia Bank Limited, as Liquidity Provider (incorporated by reference to Exhibit 4.18 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).</u>
4.168	<u>Revolving Credit Agreement (2019-1A), dated as of August 15, 2019, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2019-1A (Aircraft EETC), as Borrower, and National Australia Bank Limited, as Liquidity Provider (incorporated by reference to Exhibit 4.19 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).</u>
4.169	<u>Trust Supplement No. 2021-1A, dated as of November 8, 2021, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.2 to American's Current Report on Form 8-K filed on November 12, 2021 (Commission File No. 1-02691)).</u>
4.170	<u>Trust Supplement No. 2021-1B, dated as of November 8, 2021, between American Airlines, Inc. and Wilmington Trust Company, as Trustee, to the Pass Through Trust Agreement, dated as of September 16, 2014 (incorporated by reference to Exhibit 4.3 to American's Current Report on Form 8-K filed on November 12, 2021 (Commission File No. 1-02691)).</u>
4.171	<u>Intercreditor Agreement (2021-1), dated as of November 8, 2021, among Wilmington Trust Company, as Trustee of the American Airlines Pass Through Trust 2021-1A and as Trustee of the American Airlines Pass Through Trust 2021-1B, Crédit Agricole Corporate and Investment Bank, acting through its New York Branch, as Class A Liquidity Provider and Class B Liquidity Provider, and Wilmington Trust Company, as Subordination Agent (incorporated by reference to Exhibit 4.4 to American's Current Report on Form 8-K filed on November 12, 2021 (Commission File No. 1-02691)).</u>
4.172	<u>Note Purchase Agreement, dated as of November 8, 2021, among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust, National Association, as Escrow Agent, and Wilmington Trust Company, as Paying Agent (incorporated by reference to Exhibit 4.9 to American's Current Report on Form 8-K filed on November 12, 2021 (Commission File No. 1-02691)).</u>
4.173	<u>Form of Participation Agreement (Participation Agreement among American Airlines, Inc., Wilmington Trust Company, as Pass Through Trustee under each of the Pass Through Trust Agreements, Wilmington Trust Company, as Subordination Agent, Wilmington Trust Company, as Loan Trustee, and Wilmington Trust Company, in its individual capacity as set forth therein) (incorporated by reference to Exhibit B to Exhibit 4.9 to American's Current Report on Form 8-K filed on November 12, 2021 (Commission File No. 1-02691)).</u>
4.174	<u>Form of Indenture and Security Agreement (Indenture and Security Agreement between American Airlines, Inc., and Wilmington Trust Company, as Loan Trustee) (incorporated by reference to Exhibit C to Exhibit 4.9 to American's Current Report on Form 8-K filed on November 12, 2021 (Commission File No. 1-02691)).</u>
4.175	<u>Revolving Credit Agreement (2019-1B), dated as of August 15, 2019, between Wilmington Trust Company, as Subordination Agent, as agent and trustee for the trustee of the American Airlines Pass Through Trust 2019-1B (Aircraft EETC), as Borrower, and National Australia Bank Limited, as Liquidity Provider (incorporated by reference to Exhibit 4.20 to American's Current Report on Form 8-K filed on August 15, 2019 (Commission File No. 1-02691)).</u>
4.176	<u>Indenture, dated as of May 20, 2019, by and among American Airlines Group Inc., the Guarantor (as defined therein) and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.1 to AAG's Current Report on Form 8-K filed on May 21, 2019 (Commission File No. 1-8400)).</u>
4.177	<u>Form of 5.00% Senior Notes due 2022 (incorporated by reference to Exhibit A to Exhibit 4.1 to AAG's Current Report on Form 8-K filed on May 21, 2019 (Commission File No. 1-8400)).</u>
4.178	<u>Indenture, dated as of February 25, 2020, by and among American Airlines Group Inc., the Guarantor (as defined therein) and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.1 to AAG's Current Report on Form 8-K filed on February 26, 2020 (Commission File No. 1-8400)).</u>
4.179	<u>Form of 3.75% Senior Notes due 2025 (incorporated by reference to Exhibit A to Exhibit 4.1 to AAG's Current Report on Form 8-K filed on February 26, 2020 (Commission File No. 1-8400)).</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
4.180	<u>Indenture, dated as of June 25, 2020, by and between American Airlines Group Inc. and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.1 to AAG's Current Report on Form 8-K filed on June 25, 2020 (Commission File No. 1-8400)).</u>
4.181	<u>First Supplemental Indenture, dated as of June 25, 2020, by and among American Airlines Group Inc., American Airlines, Inc. and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.2 to AAG's Current Report on Form 8-K filed on June 25, 2020 (Commission File No. 1-8400)).</u>
4.182	<u>Form of 6.50% Convertible Senior Notes due 2025 (incorporated by reference to Exhibit A to Exhibit 4.2 to AAG's Current Report on Form 8-K filed on June 25, 2020 (Commission File No. 1-8400)).</u>
4.183	<u>Indenture, dated as of June 30, 2020, by and among American Airlines, Inc., American Airlines Group, Inc. and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.1 to AAG's Current Report on Form 8-K filed on July 2, 2020 (Commission File No. 1-8400)).</u>
4.184	<u>Form of 11.75% Senior Notes due 2025 (incorporated by reference to Exhibit A to Exhibit 4.1 to AAG's Current Report on Form 8-K filed on July 2, 2020 (Commission File Number 1-8400)).</u>
4.185	<u>Indenture (IP Notes), dated as of September 25, 2020, by and among American Airlines, Inc., American Airlines Group Inc. and Wilmington Trust, National Association, as trustee and as collateral trustee (incorporated by reference to Exhibit 4.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 (Commission File No. 1-8400)).#</u>
4.186	<u>Form of 10.75%/12.00% PIK Senior Secured IP Notes due 2026 (incorporated by reference to Exhibit A to Exhibit 4.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 (Commission File No. 1-8400)).</u>
4.187	<u>Indenture (LGA/DCA Notes), dated as of September 25, 2020, by and among American Airlines, Inc., American Airlines Group Inc. and Wilmington Trust, National Association, as trustee and as collateral trustee (incorporated by reference to Exhibit 4.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 (Commission File No. 1-8400)).#</u>
4.188	<u>Form of 10.75%/12.00% PIK Senior Secured Notes due 2026 (incorporated by reference to Exhibit A to Exhibit 4.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 (Commission File No. 1-8400)).</u>
4.189	<u>Warrant Agreement, dated as of April 20, 2020, between American Airlines Group, Inc. and the United States Department of the Treasury (incorporated by reference to Exhibit 4.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 (Commission File No. 1-8400)).</u>
4.190	<u>Form of PSP1 Warrant (incorporated by reference to Annex B to Exhibit 4.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 (Commission File No. 1-8400)).</u>
4.191	<u>Warrant Agreement, dated as of September 25, 2020, between American Airlines Group, Inc. and the United States Department of the Treasury (incorporated by reference to Exhibit 4.5 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 (Commission File No. 1-8400)).</u>
4.192	<u>Form of Treasury Loan Warrant (incorporated by reference to Annex B to Exhibit 4.5 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 (Commission File No. 1-8400)).</u>
4.193	<u>Warrant Agreement, dated as of January 15, 2021, between American Airlines Group, Inc. and the United States Department of the Treasury (incorporated by reference to Exhibit 4.182 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).</u>
4.194	<u>Form of PSP2 Warrant (incorporated by reference to Annex B to Exhibit 4.182).</u>
4.195	<u>Warrant Agreement, dated as of April 23, 2021, between American Airlines Group Inc. and the United States Department of the Treasury (incorporated by reference to Exhibit 4.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 (Commission File No. 1-8400)).</u>
4.196	<u>Form of PSP3 Warrant (incorporated by reference to Annex B to Exhibit 4.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 (Commission File No. 1-8400)).</u>
4.197	<u>Indenture, dated as of March 24, 2021, by and among American Airlines, Inc., AAdvantage Loyalty IP Ltd., American Airlines Group Inc., AAdvantage Holdings 1, Ltd. and AAdvantage Holdings 2, Ltd. and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 (Commission File No. 1-8400)).</u>
4.198	<u>Form of 5.50% Senior Secured Notes due 2026 (incorporated by reference as Exhibit A-1 to Exhibit 4.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 (Commission File No. 1-8400)).</u>
4.199	<u>Form of 5.75% Senior Secured Notes due 2029 (incorporated by reference as Exhibit A-2 to Exhibit 4.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 (Commission File No. 1-8400)).</u>
10.1	<u>Payroll Support Program Agreement, dated as of April 20, 2020, between American Airlines, Inc. and the United States Department of the Treasury (incorporated by reference to Exhibit 10.5 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 (Commission File No. 1-8400)).</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
10.2	Promissory Note, dated as of April 20, 2020, issued by American Airlines Group Inc. in the name of the United States Department of the Treasury and guaranteed by American Airlines, Inc., Envoy Air Inc., Piedmont Airlines, Inc. and PSA Airlines, Inc. (incorporated by reference to Exhibit 10.6 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 (Commission File No. 1-8400)).
10.3	Payroll Support Program Extension Agreement, dated as of January 15, 2021, between American Airlines, Inc. and the United States Department of the Treasury (incorporated by reference to Exhibit 10.3 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).
10.4	Promissory Note, dated as of January 15, 2021, issued by American Airlines Group Inc. in the name of the United States Department of the Treasury and guaranteed by American Airlines, Inc., Envoy Air Inc., Piedmont Airlines, Inc. and PSA Airlines, Inc. (incorporated by reference to Exhibit 10.4 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).
10.5	Amendment, dated as of June 30, 2022, to the Promissory Notes and the Warrants issued by American Airlines Group Inc. to the United States Department of the Treasury (incorporated by reference to Exhibit 10.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2022 (Commission File No. 1-8400)).
10.6	Loan and Guarantee Agreement, dated as of September 25, 2020, among American Airlines, Inc., American Airlines Group Inc., the other guarantors party thereto from time to time, the United States Department of the Treasury and the Bank of New York Mellon, as administrative and collateral agent (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 (Commission File No. 1-8400)).
10.7	Restatement Agreement, dated as of October 21, 2020, to Loan and Guarantee Agreement, dated as of September 25, 2020, among American Airlines, Inc., American Airlines Group Inc., the other guarantors party thereto from time to time, the United States Department of the Treasury and the Bank of New York Mellon, as administrative and collateral agent (incorporated by reference to Exhibit 10.6 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**
10.8	Letter Agreement, dated as of January 15, 2021, to Loan and Guarantee Agreement, dated as of September 25, 2020, among American Airlines, Inc., American Airlines Group Inc., the other guarantors party thereto from time to time, the United States Department of the Treasury and the Bank of New York Mellon, as administrative and collateral agent (incorporated by reference to Exhibit 10.7 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).
10.9	Amended and Restated Credit and Guaranty Agreement, dated as of December 15, 2016, amending the Loan Agreement, dated as of May 23, 2013, among American Airlines, Inc. (as successor in interest to US Airways, Inc., as borrower), as the borrower, American Airlines Group Inc., as parent and guarantor (as successor in interest to US Airways Group, Inc., as parent and guarantor), the lenders from time to time party thereto, Citibank N.A., as administrative agent and collateral agent (as successor in interest to Citicorp North America Inc., as administrative agent and collateral agent), and certain other parties thereto. (incorporated by reference to Exhibit 10.1 to AAG's Annual Report on Form 10-K for the year ended December 31, 2016 (Commission File No. 1-8400)).
10.10	First Amendment to Amended and Restated Credit and Guaranty Agreement, dated as of November 14, 2017, amending the Amended and Restated Credit and Guaranty Agreement, dated as of December 15, 2016, amending the Loan Agreement, dated as of May 23, 2013, among American Airlines, Inc. (as successor in interest to US Airways, Inc., as borrower), as the borrower, American Airlines Group Inc., as parent and guarantor (as successor in interest to US Airways Group, Inc., as parent and guarantor), the lenders from time to time party thereto, Citibank N.A., as administrative agent and collateral agent (as successor in interest to Citicorp North America Inc., as administrative agent and collateral agent), and certain other parties thereto (incorporated by reference to Exhibit 10.2 to AAG's Annual Report on Form 10-K for the year ended December 31, 2017 (Commission File No. 1-8400)).
10.11	First Amendment and Restatement Agreement, dated as of April 20, 2015, in relation to the Credit and Guaranty Agreement, dated as of October 10, 2014 (as amended), among American Airlines Group Inc. (as successor in interest to US Airways Group, Inc.), American Airlines, Inc. (as successor in interest to US Airways, Inc.), the Revolving Lenders (as defined therein) party thereto, the 2015 Term Loan Lenders (as defined therein) party thereto and Citibank N.A., as administrative agent and collateral agent (incorporated by reference to Exhibit 10.4 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015 (Commission File No. 1-8400)).
10.12	First Amendment to Amended and Restated Credit and Guaranty Agreement, dated as of October 26, 2015, amending the Amended and Restated Credit and Guaranty Agreement, dated as of April 20, 2015, among American Airlines, Inc. (as successor in interest to US Airways, Inc.), American Airlines Group Inc. (as successor in interest to US Airways Group, Inc.), the lenders from time to time party thereto, Citibank N.A., as administrative agent, and certain other parties thereto (incorporated by reference to Exhibit 10.6 to AAG's Annual Report on Form 10-K for the year ended December 31, 2015 (Commission File No. 1-8400)).

Table of Contents

Exhibit Number	Description
10.13	<u>Second Amendment to Amended and Restated Credit and Guaranty Agreement, dated as of September 22, 2016, amending the Amended and Restated Credit and Guaranty Agreement, dated as of April 20, 2015, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Citibank N.A., as administrative agent, and certain other parties thereto (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2016 (Commission File No. 1-8400)).</u>
10.14	<u>Letter Agreement No. AAL-LA-2100511, dated as of March 9, 2021, to Purchase Agreement No. 3219 by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.8 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 (Commission File No. 1-8400)).**</u>
10.15	<u>Amendment 1, dated as of March 25, 2021, to the Letter Agreement No. AAL-LA-2100511, dated as of March 9, 2021, to Purchase Agreement No. 3219 by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.9 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 (Commission File No. 1-8400)).**</u>
10.16	<u>Amendment 2, dated as of June 28, 2021, to the Letter Agreement No. AAL-LA-2100511, dated as of March 9, 2021, to Purchase Agreement No. 3219 by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 (Commission File No. 1-8400)).**</u>
10.17	<u>Amendment No. 3, dated as of September 24, 2021, to the Letter Agreement No. AAL-LA-2100511, dated as of March 9, 2021, to Purchase Agreement No. 3219 by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2021 (Commission File No. 1-8400)).**</u>
10.18	<u>Letter Agreement No. AAL LA 2100530, dated as of March 9, 2021, to Purchase Agreement No. 3219 by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.10 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 (Commission File No. 1-8400)).**</u>
10.19	<u>Supplemental Agreement No. 16, dated as of May 21, 2021, to Purchase Agreement No. 3219 dated as of October 15, 2008, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.4 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 (Commission File No. 1-8400)).**</u>
10.20	<u>Amendment No. 4, dated as of December 15, 2021, to the Letter Agreement No. AAL-LA-2100511, dated as of March 9, 2021, to Purchase Agreement No. 3219 by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.19 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.21	<u>Supplemental Agreement No. 17, dated as of January 31, 2022, to Purchase Agreement No. 3219 dated as of October 15, 2008, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 (Commission File No. 1-8400)).**</u>
10.22	<u>Third Amendment to the Amended and Restated Credit and Guaranty Agreement, dated as of June 14, 2017, amending the Amended and Restated Credit and Guaranty Agreement, dated as of April 20, 2015, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Citibank N.A., as administrative agent, and certain other parties thereto (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017 (Commission File No. 1-8400)).</u>
10.23	<u>Fourth Amendment to the Amended and Restated Credit and Guaranty Agreement, dated as of August 21, 2017, amending the Amended and Restated Credit and Guaranty Agreement, dated as of April 20, 2015, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Citibank N.A., as administrative agent, and certain other parties thereto (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 (Commission File No. 1-8400)).*</u>
10.24	<u>Fifth Amendment to the Amended and Restated Credit and Guaranty Agreement, dated as of September 17, 2018, amending the Amended and Restated Credit and Guaranty Agreement, dated as of April 20, 2015, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Citibank N.A., as administrative agent, and certain other parties thereto (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018 (Commission File No. 1-8400)).</u>
10.25	<u>Sixth Amendment to the Amended and Restated Credit and Guaranty Agreement, dated as of December 10, 2018, amending the Amended and Restated Credit and Guaranty Agreement, dated as of April 20, 2015, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Citibank N.A., as administrative agent, and certain other parties thereto (incorporated by reference to Exhibit 10.9 to AAG's Annual Report on Form 10-K for the year ended December 31, 2018 (Commission File No. 1-8400)).*</u>

Table of Contents

Exhibit Number	Description
10.26	<u>Seventh Amendment to the Amended and Restated Credit and Guaranty Agreement</u> , dated as of November 8, 2019, amending the <u>Amended and Restated Credit and Guaranty Agreement</u> , dated as of April 20, 2015, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Citibank N.A., as administrative agent, and certain other parties thereto (incorporated by reference to Exhibit 10.10 to AAG's Annual Report on Form 10-K for the year ended December 31, 2019 (Commission File No. 1-8400)).**
10.27	<u>First Amendment and Restatement Agreement</u> , dated as of May 21, 2015, in relation to the <u>Credit and Guaranty Agreement</u> , dated as of June 27, 2013 (as amended), among American Airlines Group Inc. (as successor in interest to US Airways Group, Inc.), American Airlines, Inc. (as successor in interest to US Airways, Inc.), the Revolving Lenders (as defined therein) party thereto, the 2015 Term Loan Lenders (as defined therein) party thereto and Deutsche Bank AG New York Branch, as administrative agent and collateral agent (incorporated by reference to Exhibit 10.5 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015 (Commission File No. 1-8400)).
10.28	<u>First Amendment to Amended and Restated Credit and Guaranty Agreement</u> , dated as of October 26, 2015, amending the <u>Amended and Restated Credit and Guaranty Agreement</u> , dated as of May 21, 2015, among American Airlines, Inc. (as successor in interest to US Airways, Inc.), American Airlines Group Inc., (as successor in interest to US Airways Group, Inc.), the lenders from time to time party thereto, Deutsche Bank AG New York Branch, as administrative agent, and certain other parties thereto (incorporated by reference to Exhibit 10.8 to AAG's Annual Report on Form 10-K for the year ended December 31, 2015 (Commission File No. 1-8400)).
10.29	<u>Second Amendment to Amended and Restated Credit and Guaranty Agreement</u> , dated as of March 14, 2017, amending the <u>Amended and Restated Credit and Guaranty Agreement</u> , dated as of May 21, 2015, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Deutsche Bank AG New York Branch, as administrative agent, and certain other parties thereto (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 (Commission File No. 1-8400)).
10.30	<u>Third Amendment to the Amended and Restated Credit And Guaranty Agreement</u> , dated as of August 21, 2017, amending the <u>Amended and Restated Credit and Guaranty Agreement</u> , dated as of May 21, 2015, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Deutsche Bank AG New York Branch, as administrative agent, and certain other parties thereto (incorporated by reference to Exhibit 10.11 to AAG's Annual Report on Form 10-K for the year ended December 31, 2017 (Commission File No. 1-8400)).*
10.31	<u>Fourth Amendment to Amended and Restated Credit and Guaranty Agreement</u> , dated as of May 15, 2018, amending the <u>Amended and Restated Credit and Guaranty Agreement</u> , dated as of May 21, 2015, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Deutsche Bank AG New York Branch, as administrative agent, and Barclays Bank PLC, as designated replacement term lender (incorporated by reference to Exhibit 10.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 (Commission File No. 1-8400)).
10.32	<u>Fifth Amendment to Amended and Restated Credit and Guaranty Agreement</u> , dated as of December 10, 2018, amending the <u>Amended and Restated Credit and Guaranty Agreement</u> , dated as of May 21, 2015, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Deutsche Bank AG New York Branch, as administrative agent, and Barclays Bank PLC, as designated replacement term lender (incorporated by reference to Exhibit 10.15 to AAG's Annual Report on Form 10-K for the year ended December 31, 2018 (Commission File No. 1-8400)).**
10.33	<u>Sixth Amendment to Amended and Restated Credit and Guaranty Agreement</u> , dated as of November 8, 2019, amending the <u>Amended and Restated Credit and Guaranty Agreement</u> , dated as of May 21, 2015, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Deutsche Bank AG New York Branch, as administrative agent, and Barclays Bank PLC, as designated replacement term lender (incorporated by reference to Exhibit 10.17 to AAG's Annual Report on Form 10-K for the year ended December 31, 2019 (Commission File No. 1-8400)).**
10.34	<u>Credit and Guaranty Agreement</u> , dated as of April 29, 2016, among American Airlines, Inc. as borrower, American Airlines Group Inc., as parent and guarantor, certain other subsidiaries of American Airlines Group Inc., as guarantors, the lenders party thereto, Barclays Bank PLC, as administrative agent and collateral agent, and certain other parties thereto (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q filed on July 22, 2016 (Commission File No. 1-8400)).
10.35	<u>First Amendment to Credit and Guaranty Agreement</u> , dated as of October 31, 2016, amending the <u>Credit and Guaranty Agreement</u> , dated as of April 29, 2016, among American Airlines, Inc. as borrower, American Airlines Group Inc., as parent and guarantor, the lenders party thereto, Barclays Bank PLC, as administrative agent (incorporated by reference to Exhibit 10.81 to AAG's Annual Report on Form 10-K for the year ended December 31, 2016 (Commission File No. 1-8400)).

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
10.36	<u>Second Amendment to the Credit and Guaranty Agreement, dated as of August 21, 2017, amending the Credit and Guaranty Agreement, dated as of April 29, 2016, among American Airlines, Inc., American Airlines Group Inc., the lenders from time to time party thereto, Barclays Bank PLC, as administrative agent, and certain other parties thereto (incorporated by reference to Exhibit 10.15 to AAG's Annual Report on Form 10-K for the year ended December 31, 2017 (Commission File No. 1-8400)).*</u>
10.37	<u>Third Amendment to Credit and Guaranty Agreement, dated as of November 1, 2017, amending the Credit and Guaranty Agreement, dated as of April 29, 2016, among American Airlines, Inc. as borrower, American Airlines Group Inc., as parent and guarantor, the lenders party thereto, Barclays Bank PLC, as administrative agent (incorporated by reference to Exhibit 10.16 to AAG's Annual Report on Form 10-K for the year ended December 31, 2017 (Commission File No. 1-8400)).</u>
10.38	<u>Fourth Amendment to Credit and Guaranty Agreement, dated as of December 10, 2018, amending the Credit and Guaranty Agreement, dated as of April 29, 2016, among American Airlines, Inc. as borrower, American Airlines Group Inc., as parent and guarantor, the lenders party thereto, Barclays Bank PLC, as administrative agent (incorporated by reference to Exhibit 10.20 to AAG's Annual Report on Form 10-K for the year ended December 31, 2018 (Commission File No. 1-8400)).*</u>
10.39	<u>Fifth Amendment to Credit and Guaranty Agreement, dated as of November 8, 2019, amending the Credit and Guaranty Agreement, dated as of April 29, 2016, among American Airlines, Inc. as borrower, American Airlines Group Inc., as parent and guarantor, the lenders party thereto, Barclays Bank PLC, as administrative agent (incorporated by reference to Exhibit 10.32 to AAG's Annual Report on Form 10-K for the year ended December 31, 2019 (Commission File No. 1-8400)).*</u>
10.40	<u>Purchase Agreement No. 3219, dated as of October 15, 2008, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.38 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.41	<u>Supplemental Agreement No. 2, dated as of July 21, 2010, to Purchase Agreement No. 3219 between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.39 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.42	<u>Supplemental Agreement No. 3, dated as of February 1, 2013, to Purchase Agreement No. 3219 between American Airlines, Inc., and The Boeing Company (incorporated by reference to Exhibit 10.40 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.43	<u>Supplemental Agreement No. 4, dated as of June 9, 2014, to Purchase Agreement No. 3219 between The Boeing Company and American Airlines, Inc. dated as of October 15, 2008, relating to Boeing Model 787 Aircraft, as amended, restated, amended and restated, supplemented or otherwise modified (incorporated by reference to Exhibit 10.41 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.44	<u>Supplemental Agreement No. 5, dated as of January 20, 2015, to Purchase Agreement No. 3219 between The Boeing Company and American Airlines, Inc., dated as of October 15, 2008, relating to Boeing Model 787 Aircraft, as amended, restated, amended and restated, supplemented or otherwise modified (incorporated by reference to Exhibit 10.42 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.45	<u>Supplemental Agreement No. 6, dated as of April 21, 2015, to Purchase Agreement No. 3219 between American Airlines, Inc. and The Boeing Company, dated as of October 15, 2008, as amended, restated, amended and restated, supplemented or otherwise modified (incorporated by reference to Exhibit 10.43 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.46	<u>Supplemental Agreement No. 7, dated as of September 12, 2016, to Purchase Agreement No. 3219 dated as of October 15, 2008, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.44 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.47	<u>Supplemental Agreement No. 8, dated as of January 26, 2017, to Purchase Agreement No. 3219 dated as of October 15, 2008, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.45 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.48	<u>Supplemental Agreement No. 9, dated as of April 24, 2017, to Purchase Agreement No. 3219 dated as of October 15, 2008, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.46 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
10.49	<u>Supplemental Agreement No. 10, dated as of May 11, 2017, to Purchase Agreement No. 3219 dated as of October 15, 2008, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.47 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.50	<u>Supplemental Agreement No. 11, dated as of April 6, 2018, to Purchase Agreement No. 3219 dated as of October 15, 2008, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 (Commission File No. 1-8400)).*</u>
10.51	<u>Supplemental Agreement No. 12, dated as of May 29, 2019, to Purchase Agreement No. 3219 dated as of October 15, 2008, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 (Commission File No. 1-8400)).**</u>
10.52	<u>Supplemental Agreement No. 13, dated as of August 20, 2019, to Purchase Agreement No. 3219 dated as of October 15, 2008, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019 (Commission File No. 1-8400)).**</u>
10.53	<u>Supplemental Agreement No. 14, dated as of February 24, 2020, to Purchase Agreement No. 3219 dated as of October 15, 2008, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 (Commission File No. 1-8400)).**</u>
10.54	<u>Supplemental Agreement No. 15, dated as of March 16, 2020, to Purchase Agreement No. 3219 dated as of October 15, 2008, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 (Commission File No. 1-8400)).**</u>
10.55	<u>A320 Family Aircraft Purchase Agreement, dated as of July 20, 2011, between American Airlines, Inc. and Airbus S.A.S (incorporated by reference to Exhibit 10.46 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.56	<u>Amendment No. 1, dated as of January 11, 2013, to A320 Family Aircraft Purchase Agreement between American Airlines, Inc. and Airbus S.A.S., dated as of July 20, 2011 (incorporated by reference to Exhibit 10.47 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.57	<u>Amendment No. 2, dated as of May 30, 2013, to A320 Family Aircraft Purchase Agreement between American Airlines, Inc. and Airbus S.A.S., dated as of July 20, 2011 (incorporated by reference to Exhibit 10.48 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.58	<u>Amendment No. 3, dated as of November 20, 2013, to A320 Family Aircraft Purchase Agreement between American Airlines, Inc. and Airbus S.A.S., dated as of July 20, 2011 (incorporated by reference to Exhibit 10.49 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.59	<u>Amendment No. 4, dated as of June 18, 2014, to the A320 Family Aircraft Purchase Agreement between Airbus S.A.S., as seller, and American Airlines, Inc., as buyer, dated as of July 20, 2011, as amended, restated, amended and restated, supplemented or otherwise modified (incorporated by reference to Exhibit 10.50 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.60	<u>Amendment No. 5, dated as of June 24, 2014, to the A320 Family Aircraft Purchase Agreement between Airbus S.A.S., as seller, and American Airlines, Inc., as buyer, dated as of July 20, 2011, as amended, restated, amended and restated, supplemented or otherwise modified (incorporated by reference to Exhibit 10.51 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.61	<u>Amendment No. 6, dated as of July 1, 2014, to the A320 Family Aircraft Purchase Agreement between Airbus S.A.S., as seller, and American Airlines, Inc., as buyer, dated as of July 20, 2011, as amended, restated, amended and restated, supplemented or otherwise modified (incorporated by reference to Exhibit 10.52 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.62	<u>Amendment No. 7, dated as of November 25, 2014, to the A320 Family Aircraft Purchase Agreement between Airbus S.A.S., as seller, and American Airlines, Inc., as buyer, dated as of July 20, 2011, as amended, restated, amended and restated, supplemented or otherwise (incorporated by reference to Exhibit 10.53 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
10.63	<u>Amendment No. 8, dated as of June 11, 2015, to the A320 Family Aircraft Purchase Agreement between American Airlines, Inc. and Airbus S.A.S., dated as of July 20, 2011, as amended, restated, amended and restated, supplemented or otherwise modified (incorporated by reference to Exhibit 10.54 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.64	<u>Amendment No. 9, dated as of September 23, 2015, to the A320 Family Aircraft Purchase Agreement, dated as of July 20, 2011, between American Airlines, Inc. and Airbus S.A.S. (incorporated by reference to Exhibit 10.55 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.65	<u>Amendment No. 10, dated as of July 16, 2018, to the A320 Family Aircraft Purchase Agreement, dated as of July 20, 2011, between American Airlines, Inc. and Airbus S.A.S. (incorporated by reference to Exhibit 10.56 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.66	<u>Amendment No. 11, dated as of June 19, 2019, to the A320 Family Aircraft Purchase Agreement, dated as of July 20, 2011, between American Airlines, Inc. and Airbus S.A.S. (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 (Commission File No. 1-8400)).**</u>
10.67	<u>Amendment No. 12, dated as of June 26, 2020, to the A320 Family Aircraft Purchase Agreement between Airbus S.A.S., as seller, and American Airlines, Inc. as buyer, dated as of July 20, 2011, as amended, restated, amended and restated, supplemented or otherwise (incorporated by reference to Exhibit 10.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020 (Commission File No. 1-8400)).**</u>
10.68	<u>Amendment No. 13, dated as of July 13, 2020, to the A320 Family Aircraft Purchase Agreement between Airbus S.A.S., as seller, and American Airlines, Inc. as buyer, dated as of July 20, 2011, as amended, restated, amended and restated, supplemented or otherwise (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 (Commission File No. 1-8400)).**</u>
10.69	<u>Amendment No. 15, dated as of June 30, 2021, to the A320 Family Aircraft Purchase Agreement between Airbus S.A.S., as seller, and American Airlines, Inc. as buyer, dated as of July 20, 2011, as amended, restated, amended and restated, supplemented or otherwise (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2021 (Commission File No. 1-8400)).**</u>
10.70	<u>Amendment No. 14, dated as of October 8, 2020, to the A320 Family Aircraft Purchase Agreement between Airbus S.A.S., as seller, and American Airlines, Inc. as buyer, dated as of July 20, 2011, as amended, restated, amended and restated, supplemented or otherwise (incorporated by reference to Exhibit 10.60 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.71	<u>Purchase Agreement No. 03735, dated as of February 1, 2013, between American Airlines, Inc., and The Boeing Company (incorporated by reference to Exhibit 10.69 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.72	<u>Supplemental Agreement No. 1, dated as of April 15, 2013, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.70 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.73	<u>Supplemental Agreement No. 2, dated as of March 6, 2015, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.71 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.74	<u>Supplemental Agreement No. 3, dated as of May 22, 2015, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.72 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.75	<u>Letter Agreement, dated as of January 14, 2016, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.73 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.76	<u>Supplemental Agreement No. 4, dated as of June 6, 2016, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.74 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.77	<u>Supplemental Agreement No. 5, dated as of August 8, 2016, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.75 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
10.78	<u>Supplemental Agreement No. 6, dated as of November 15, 2016, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.76 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.79	<u>Supplemental Agreement No. 7, dated as of March 2, 2017, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.77 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.80	<u>Supplemental Agreement No. 8, dated as of December 7, 2017, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.45 to AAG's Annual Report on Form 10-K for the year ended December 31, 2017 (Commission File No. 1-8400)).*</u>
10.81	<u>Supplemental Agreement No. 9, dated as of April 6, 2018, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 (Commission File No. 1-8400)).*</u>
10.82	<u>Supplemental Agreement No. 10, dated as of March 26, 2019, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 (Commission File No. 1-8400)).**</u>
10.83	<u>Letter Agreement, dated as of September 4, 2020, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 (Commission File No. 1-8400)).**</u>
10.84	<u>Supplemental Agreement No. 11, dated as of October 9, 2020, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.74 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.85	<u>Supplemental Agreement No. 12, dated as of October 22, 2020, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.75 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.86	<u>Supplemental Agreement No. 13, dated as of November 17, 2020, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.76 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.87	<u>Supplemental Agreement No. 14, dated as of November 25, 2020, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.77 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.88	<u>Supplemental Agreement No. 15, dated as of December 15, 2020, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.78 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.89	<u>Amendment 1, dated as of December 31, 2020, to the Letter Agreement, dated as of September 4, 2020, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.79 to AAG's Annual Report on Form 10-K for the year ended December 31, 2020 (Commission File No. 1-8400)).**</u>
10.90	<u>Supplemental Agreement No. 16, dated as of January 14, 2021, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.5 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 (Commission File No. 1-8400)).**</u>
10.91	<u>Supplemental Agreement No. 17, dated as of February 11, 2021, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.6 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 (Commission File No. 1-8400)).**</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
10.92	<u>Supplemental Agreement No. 18, dated as of March 12, 2021, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.7 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 (Commission File No. 1-8400)).**</u>
10.93	<u>Supplemental Agreement No. 19, dated as of April 8, 2021, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.5 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 (Commission File No. 1-8400)).**</u>
10.94	<u>Supplemental Agreement No. 20, dated as of November 12, 2021, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.92 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.95	<u>Supplemental Agreement No. 21, dated as of January 14, 2022, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 (Commission File No. 1-8400)).**</u>
10.96	<u>Supplemental Agreement No. 22, dated as of January 31, 2022, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.3 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 (Commission File No. 1-8400)).**</u>
10.97	<u>Supplemental Agreement No. 23, dated as of May 5, 2022, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2022 (Commission File No. 1-8400)).**</u>
10.98	<u>Supplemental Agreement No. 24, dated as of June 6, 2022, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2022 (Commission File No. 1-8400)).**</u>
10.99	<u>Supplemental Agreement No. 25, dated as of July 1, 2022, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2022 (Commission File No. 1-8400)).**</u>
10.100	<u>Supplemental Agreement No. 26, dated as of August 1, 2022, to Purchase Agreement No. 03735 dated as of February 1, 2013, by and between American Airlines, Inc. and The Boeing Company (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended September 30, 2022 (Commission File No. 1-8400)).**</u>
10.101	<u>Supplemental Agreement No. 27, dated as of October 3, 2022, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and the Boeing Company.**</u>
10.102	<u>Supplemental Agreement No. 28, dated as of November 4, 2022, to Purchase Agreement No. 03735 dated as of February 1, 2013, between American Airlines, Inc. and the Boeing Company.**</u>
10.103	<u>Consent Agreement, dated as of October 5, 2015, between American Airlines, Inc. (as successor in interest to US Airways, Inc.), American Airlines, Inc. and Airbus S.A.S. (incorporated by reference to Exhibit 10.95 to AAG's Annual Report on Form 10-K for the year ended December 31, 2021 (Commission File No. 1-8400)).**</u>
10.104	<u>Supplemental Executive Retirement Program for Officers of American Airlines, Inc., as amended and restated as of January 1, 2005 (incorporated by reference to Exhibit 10.127 to AMR's Annual Report on Form 10-K for the year ended December 31, 2008 (Commission File No. 1-8400)).†</u>
10.105	<u>Trust Agreement Under Supplemental Retirement Program for Officers of American Airlines, Inc., as amended and restated as of June 1, 2007 (incorporated by reference to Exhibit 10.128 to AMR's Annual Report on Form 10-K for the year ended December 31, 2008 (Commission File No. 1-8400)).†</u>
10.106	<u>Trust Agreement Under Supplemental Executive Retirement Program for Officers of American Airlines, Inc. Participating in the Super Saver Plus Plan, as amended and restated as of June 1, 2007 (incorporated by reference to Exhibit 10.129 to AMR's Annual Report on Form 10-K for the year ended December 31, 2008 (Commission File No. 1-8400)).†</u>
10.107	<u>American Airlines Group Inc. 2013 Incentive Award Plan (incorporated by reference to Exhibit 4.1 of AAG's Form S-8 Registration Statement, filed on December 4, 2013 (Registration No. 333-192660)).†</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
10.108	<u>First Amendment to the American Airlines Group Inc. 2013 Incentive Award Plan (incorporated by reference to Exhibit 10.64 to AAG's Annual Report on Form 10-K for the year ended December 31, 2017 (Commission File No. 1-8400)).†</u>
10.109	<u>Form of American Airlines Group Inc. 2013 Incentive Award Plan Restricted Stock Unit (Cash-Settled) Award Grant Notice and Award Agreement (incorporated by reference to Exhibit 10.125 to AAG's Annual Report on Form 10-K for the year ended December 31, 2013 (Commission File No. 1-8400)).†</u>
10.110	<u>Form of American Airlines Group Inc. 2013 Incentive Award Plan Restricted Stock Unit (Stock-Settled) Award Grant Notice and Award Agreement (incorporated by reference to Exhibit 10.127 to AAG's Annual Report on Form 10-K for the year ended December 31, 2013 (Commission File No. 1-8400)).†</u>
10.111	<u>Form of American Airlines Group Inc. 2013 Incentive Award Plan Restricted Stock Unit (Stock-Settled) Award Grant Notice and Award Agreement for Director Grants (incorporated by reference to Exhibit 10.129 to AAG's Annual Report on Form 10-K for the year ended December 31, 2013 (Commission File No. 1-8400)).†</u>
10.112	<u>Form of Indemnification Agreement (incorporated by reference to Exhibit 10.9 to AAG's Current Report on Form 8-K filed on December 9, 2013 (Commission File No. 1-8400)).†</u>
10.113	<u>US Airways Group, Inc. 2011 Incentive Award Plan (incorporated by reference to Exhibit 4.1 to US Airways Group's Registration Statement on Form S-8 filed on July 1, 2011 (Registration No. 333-175323)).†</u>
10.114	<u>2014 Short-Term Incentive Program Under 2013 Incentive Award Plan (incorporated by reference to Exhibit 10.8 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2014 (Commission File No. 1-8400)).†</u>
10.115	<u>Form of Letter Agreement for Directors Travel Program (incorporated by reference to Exhibit 10.106 to US Airways Group's Annual Report on Form 10-K for the year ended December 31, 2007 (Commission File No. 1-8444)).†</u>
10.116	<u>Amended and Restated Employment Agreement, dated as of November 28, 2007, among US Airways Group, US Airways, Inc. and W. Douglas Parker (incorporated by reference to Exhibit 10.1 to US Airways Group's Current Report on Form 8-K filed on November 29, 2007 (Commission File No. 1-8444)).†</u>
10.117	<u>Form of Letter Agreement, dated April 25, 2017, by and between American Airlines Group Inc. and each of Robert D. Isom, Jr., Stephen L. Johnson and Derek J. Kerr (incorporated by reference to Exhibit 10.1 to AAG's Current Report on Form 8-K filed on May 1, 2017 (Commission File No. 1-8400)).†</u>
10.118	<u>Letter Agreement, dated as of April 28, 2016, between American Airlines Group Inc. and W. Douglas Parker (incorporated by reference to Exhibit 10.1 to AAG's Current Report on Form 8-K filed on April 29, 2016 (Commission File No. 1-8400)).†</u>
10.119	<u>Payroll Support Program 3 Agreement, dated as of April 23, 2021, between American Airlines, Inc. and the United States Department of the Treasury (incorporated by reference to Exhibit 10.1 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 (Commission File No. 1-8400)).</u>
10.120	<u>Promissory Note, dated as of April 23, 2021, issued by American Airlines Group Inc. in the name of the United States Department of the Treasury and guaranteed by American Airlines, Inc., Envoy Air Inc., Piedmont Airlines, Inc. and PSA Airlines, Inc. (incorporated by reference to Exhibit 10.2 to AAG's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 (Commission File No. 1-8400)).</u>
10.121	<u>Term Loan Credit and Guaranty Agreement, dated as of March 24, 2021, among American Airlines, Inc., AAdvantage Loyalty IP Ltd., American Airlines Group Inc., AAdvantage Holdings 1, Ltd., AAdvantage Holdings 2, Ltd., Barclays Bank PLC, as administrative agent, Wilmington Trust, National Association, as collateral administrator, and the lenders party thereto (incorporated by reference as Exhibit 10.4 to AAG's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 (Commission File No. 1-8400)).#</u>
14.1	<u>Code of Ethics (incorporated by reference to Exhibit 14.1 to AAG's Current Report on Form 8-K filed on December 9, 2013 (Commission File No. 1-8400)).</u>
21.1	<u>Significant subsidiaries of AAG and American as of December 31, 2022.</u>
23.1	<u>Consent of Independent Registered Public Accounting Firm – KPMG LLP.</u>
24.1	<u>Powers of Attorney (included in signature page of this Annual Report on Form 10-K).</u>
31.1	<u>Certification of AAG Chief Executive Officer pursuant to Rule 13a-14(a).</u>
31.2	<u>Certification of AAG Chief Financial Officer pursuant to Rule 13a-14(a).</u>
31.3	<u>Certification of American Chief Executive Officer pursuant to Rule 13a-14(a).</u>
31.4	<u>Certification of American Chief Financial Officer pursuant to Rule 13a-14(a).</u>
32.1	<u>Certification pursuant to Rule 13a-14(b) and section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code).</u>
32.2	<u>Certification pursuant to Rule 13a-14(b) and section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code).</u>

Table of Contents

<u>Exhibit Number</u>	<u>Description</u>
101.1	Interactive data files pursuant to Rule 405 of Regulation S-T, formatted in Inline XBRL (eXtensible Business Reporting Language).
104.1	Cover page interactive data file (formatted in Inline XBRL and contained in Exhibit 101.1).

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- # Pursuant to Item 601(a)(5) of Regulation S-K promulgated by the Securities and Exchange Commission, certain exhibits and schedules to this agreement have been omitted. Such exhibits and schedules are described in the referenced agreement. AAG and American hereby agree to furnish to the Securities and Exchange Commission, upon its request, any or all of such omitted exhibits or schedules.
 - * Confidential treatment has been granted with respect to certain portions of this agreement.
 - ** Portions of this exhibit have been omitted in accordance with Item 601(b)(10) of Regulation S-K.
 - † Management contract or compensatory plan or arrangement.

[Table of Contents](#)

ITEM 16. FORM 10-K SUMMARY

None.

[Table of Contents](#)

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.

Date: February 22, 2023

American Airlines Group Inc.

By: /s/ Robert D. Isom

Robert D. Isom

Chief Executive Officer and President
(Principal Executive Officer)

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.

Date: February 22, 2023

American Airlines, Inc.

By: /s/ Robert D. Isom

Robert D. Isom

Chief Executive Officer and President
(Principal Executive Officer)

Table of Contents

KNOW ALL PERSONS BY THESE PRESENTS, that each individual whose signature appears below constitutes and appoints Robert D. Isom and Devon E. May and each or any of them, his or her true and lawful attorneys and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to the registrants' Annual Report on Form 10-K for the fiscal year ended December 31, 2022, and to file the same with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys and agents, and each or any of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys and agents, and each of them, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of American Airlines Group Inc. and in the capacities and on the dates noted:

Date: February 22, 2023

/s/ Robert D. Isom

Robert D. Isom
Chief Executive Officer and President
(Principal Executive Officer)

Date: February 22, 2023

/s/ Devon E. May

Devon E. May
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

Date: February 22, 2023

/s/ Angela K. Owens

Angela K. Owens
Vice President and Corporate Controller
(Principal Accounting Officer)

Date: February 22, 2023

/s/ James F. Albaugh

James F. Albaugh, Director

Date: February 22, 2023

/s/ Jeffrey D. Benjamin

Jeffrey D. Benjamin, Director

Date: February 22, 2023

/s/ Adriane M. Brown

Adriane M. Brown, Director

Date: February 22, 2023

/s/ John T. Cahill

John T. Cahill, Director

Date: February 22, 2023

/s/ Michael J. Embler

Michael J. Embler, Director

Date: February 22, 2023

/s/ Matthew J. Hart

Matthew J. Hart, Director

Table of Contents

Date: February 22, 2023	/s/ Susan D. Kronick Susan D. Kronick, Director
Date: February 22, 2023	/s/ Martin H. Nesbitt Martin H. Nesbitt, Director
Date: February 22, 2023	/s/ Denise M. O'Leary Denise M. O'Leary, Director
Date: February 22, 2023	/s/ W. Douglas Parker W. Douglas Parker, Chairman
Date: February 22, 2023	/s/ Vicente Reynal Vicente Reynal, Director
Date: February 22, 2023	/s/ Ray M. Robinson Ray M. Robinson, Director
Date: February 22, 2023	/s/ Gregory D. Smith Gregory D. Smith, Director
Date: February 22, 2023	/s/ Douglas M. Steenland Douglas M. Steenland, Director
Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of American Airlines, Inc. and in the capacities and on the dates noted:	
Date: February 22, 2023	/s/ Robert D. Isom Robert D. Isom Chief Executive Officer and President (Principal Executive Officer)
Date: February 22, 2023	/s/ Devon E. May Devon E. May Executive Vice President and Chief Financial Officer (Principal Financial Officer)
Date: February 22, 2023	/s/ Angela K. Owens Angela K. Owens Vice President and Corporate Controller (Principal Accounting Officer)
Date: February 22, 2023	/s/ Stephen L. Johnson Stephen L. Johnson, Director

**THIRD AMENDED AND RESTATED BYLAWS
OF
AMERICAN AIRLINES GROUP INC.
(hereinafter called the “Corporation”)**

Effective June 13, 2018

As amended January 31, 2023

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ARTICLE I
Offices

The registered office of the Corporation shall be in the City of Wilmington, County of New Castle, Delaware. The Corporation may also have offices at such other places, both within and without the State of Delaware, as the Board of Directors may from time to time determine.

ARTICLE II
Meetings of Stockholders

SECTION 1. Annual Meetings. The annual meeting of stockholders for the election of Directors shall be held on such date and at such time as shall be designated from time to time by the Board of Directors, at which meeting the stockholders shall elect a Board of Directors pursuant to Article III hereof and may transact such other business as may properly come before the meeting in accordance with Section 7 of this Article II.

SECTION 2. Special Meetings of Stockholders.

(a) Unless otherwise required by law or the Restated Certificate of Incorporation, as the same may be amended, restated or supplemented from time to time (the “Certificate of Incorporation”), special meetings of the stockholders for any purpose or purposes may be called only (i) by the Chairman of the Board of Directors, (ii) by the Board of Directors, (iii) by the Chief Executive Officer or (iv) by the Secretary of the Corporation, following his or her receipt of one or more written demands to call a special meeting of the stockholders in accordance with, and subject to, this Article II, Section 2 from stockholders who hold as of the record date fixed in accordance with Article II, Section 2(d), in the aggregate, at least 20% (the “Requisite Percentage”) of the voting power of the outstanding shares of the Corporation (the “Requesting Group”). The notice of a special meeting shall state the purpose or purposes of the special meeting, and the business to be conducted at the special meeting shall be limited to the purpose or purposes stated in the notice. Except in accordance with this Article II, Section 2, stockholders shall not be permitted to propose business to be brought before a special meeting of the stockholders. Stockholders who nominate persons for election to the board of directors at a special meeting must also comply with the requirements set forth in Article III, Sections 2 and 7.

(b) No stockholder may demand that the Secretary of the Corporation call a special meeting of the stockholders pursuant to Article II, Section 2(a) unless a stockholder has first submitted a request in writing that the Board of Directors fix a record date (a “Demand Record Date”) for the purpose of determining the stockholders entitled to demand that the Secretary of the Corporation call such special meeting, which request shall be in proper form and delivered to, or mailed and received by, the Secretary of the Corporation at the principal executive offices of the Corporation.

(c) To be in proper form for purposes of this Article II, Section 2, a request by a stockholder for the Board of Directors to fix a Demand Record Date shall set forth:

- (i) As to each Requesting Person (as defined below), the Stockholder Information (as defined in Article II, Section 7(c)(i), except that for purposes of this Article II, Section 2 the term “Requesting Person” shall be substituted for the term “Proposing Person” in all places it appears in Article II, Section 7(c)(i)); further, any Requesting Person who is the stockholder of any shares of the Corporation that constitute part of the Requisite Percentage as of the Demand Record Date, but is not the stockholder of record of such shares, shall provide information to establish their ownership consistent with the requirements set forth in Rule 14a-8 of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (as so amended and inclusive of such rules and regulations, the “Exchange Act”);
- (ii) As to each Requesting Person, any Disclosable Interests (as defined in Article II and set forth in Section 7(c)(ii) clauses (A) and (I), except that for purposes of this Article II, Section 2 the term “Requesting Person” shall be substituted for the term “Proposing Person” in all places it appears in Article II, Section 7(c)(ii) clauses (A) and (I) and the disclosure in clause (I) of Article II, Section 7(c)(ii) shall be made with respect to the business proposed to be conducted at the special meeting or the proposed election of directors at the special meeting, as the case may be);
- (iii) As to each item of business that the Requesting Person proposes to bring before the special meeting, (A) a brief description of the business desired to be brought before the special meeting, the reasons for conducting such business at the special meeting and any material interest in such business of each Requesting Person, (B) the text of the proposal or business (including the text of any resolutions proposed for consideration), and (C) a reasonably detailed description of all agreements, arrangements, discussions and understandings (x) between or among any of the Requesting Persons or (y) between or among any Requesting Person and any other record or beneficial holder(s) or persons(s) who have a right to acquire beneficial ownership at any time in the future of the shares of any class or series of the Corporation (including their names) in connection with the proposal of such business by such stockholder, and (D) any other information relating to such item of business that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies in support of the business proposed to be brought before the meeting pursuant to Section 14(a) of the Exchange Act; provided, however, that the disclosures required by this paragraph (iii) shall not include any disclosures with respect to any broker, dealer, commercial bank, trust company or other nominee who is a Requesting Person solely as a result of being the stockholder directed to prepare and submit the notice required by these Bylaws on behalf of a beneficial owner; and
- (iv) If directors are proposed to be elected at the special meeting, the Nominee Information for each person whom a Requesting Person expects to nominate for election as a director at the special meeting.

For purposes of this Article II, Section 2(c), the term “Requesting Person” (x) shall mean (i) the stockholder making the request to fix a Demand Record Date for the purpose of determining the stockholders entitled to demand that the Secretary call a special meeting, (ii) each member of the Requesting Group, (iii) the beneficial owner or beneficial owners, if different, on whose behalf such request is made, (iv) any affiliate of such stockholder or beneficial owner and (v) any other person with whom such stockholder or beneficial owner (or any of their respective affiliates) is Acting in Concert (as defined in Article II, Section 7(c)), and (y) shall exclude with respect to Section (2)(c)(ii), (iii) and (iv), any stockholder that has provided such demand solely in response to a solicitation made pursuant to, and in accordance with, Section 14(a) of the

Exchange Act by way of a solicitation statement filed on Schedule 14A (a “Solicited Stockholder”).

(d) Within ten days after receipt of a request to fix a Demand Record Date in proper form and otherwise in compliance with this Article II, Section 2 from any stockholder, the Board of Directors may adopt a resolution fixing a Demand Record Date for the purpose of determining the stockholders entitled to demand that the Secretary of the Corporation call a special meeting, which date shall not precede the date upon which the resolution fixing the Demand Record Date is adopted by the Board of Directors. If no resolution fixing a Demand Record Date has been adopted by the Board of Directors within the ten day period after the date on which such a request to fix a Demand Record Date was received by the Secretary of the Corporation in proper form, the Demand Record Date in respect thereof shall be deemed to be the 20th day after the date on which such a request is received.

Notwithstanding anything in this Article II, Section 2 to the contrary, no Demand Record Date shall be fixed if the Board of Directors determines that the demand or demands that would otherwise be submitted following such Demand Record Date could not comply with the requirements set forth in clauses (ii), (iv), (v) or (vi) of Article II, Section 2(f).

(e) Without qualification, a special meeting of the stockholders shall not be called pursuant to Article II, Section 2(a) unless stockholders who hold the Requisite Percentage as of the Demand Record Date timely provide one or more demands to call such special meeting in writing and in proper form to the Secretary of the Corporation at the principal executive offices of the Corporation. To be timely, a stockholder’s demand to call a special meeting must be delivered to, or mailed and received at, the principal executive offices of the Corporation not later than the 60th day following the Demand Record Date. To be in proper form for purposes of this Article II, Section 2, a demand to call a special meeting shall set forth (i) the business proposed to be conducted at the special meeting or the proposed election of directors at the special meeting, as the case may be, (ii) the text of the proposal or business (including the text of any resolutions proposed for consideration), if applicable, (iii) with respect to any stockholder or stockholders submitting a demand to call a special meeting the information required to be provided pursuant to this Article II, Section 2 of a Requesting Person (which shall exclude with respect to Section (2)(c)(ii), (iii) and (iv), any Solicited Stockholder), and (iv) a representation that each Requesting Stockholder intends to hold their shares of the Corporation that constitute part of the Requisite Percentage as of the Demand Record Date through the date of the special stockholder meeting. A stockholder may revoke a demand to call a special meeting by written revocation delivered to the Secretary at any time prior to the special meeting. If any such revocation(s) are received by the Secretary after the Secretary’s receipt of written demands from the holders of the Requisite Percentage of stockholders, and as a result of such revocation(s), at any time there no longer are unrevoked demands from the Requisite Percentage of stockholders to call a special meeting, the Board of Directors shall have the discretion to determine whether or not to proceed with the special meeting.

(f) The Secretary shall not accept, and shall consider ineffective, a written demand from a stockholder to call a special meeting (i) that does not comply with this Article II, Section 2, (ii) that relates to an item of business to be transacted at such meeting that is not a proper subject for stockholder action under applicable law, (iii) that includes an item of business to be transacted at such meeting that did not appear on the written request that resulted in the determination of the Demand Record Date, (iv) that relates to an item of business that is identical or substantially similar to an item of business (a “Similar Item”) for which a record date for notice of a stockholder meeting (other than the Demand Record Date) was previously fixed and such demand is delivered between the time beginning on the 61st day after such previous record date and ending on the one-year anniversary of such previous record date, (v) if the Board of Directors calls an annual or special meeting of stockholders (in lieu of calling the special meeting to which the written demand relates) in accordance with Article II, Section 2(g), or (vi) if a

Similar Item has been presented at the most recent annual meeting or at any special meeting held within one year prior to receipt by the Secretary of such demand to call a special meeting; it being understood that with respect to subsections (iv) and (vi), the election of directors at the preceding annual meeting of stockholders shall be deemed not to constitute a Similar Item in respect of a proposal to remove one or more directors or the entire Board of Directors at a stockholder requested special meeting.

(g) After receipt of demands in proper form and in accordance with this Article II, Section 2 from a stockholder or stockholders holding the Requisite Percentage, the Board of Directors shall duly call, and determine the place, date and time of, a special meeting of stockholders for the purpose or purposes and to conduct the business specified in the demands received by the Corporation. The record date for notice and voting for such a special meeting shall be fixed in accordance with Article II, Section 8 of these Bylaws. The Board of Directors shall provide written notice of such special meeting to the stockholders in accordance with Article II, Section 8. Notwithstanding anything in these Bylaws to the contrary, the Board of Directors may (i) submit its own proposal or proposals for consideration at such a special meeting or (ii) in lieu of calling the special meeting demanded by a stockholder or stockholders holding the Requisite Percentage, present a Similar Item for stockholder approval at any other meeting of stockholders that is held within 90 days after the date on which the Corporation receives written demands for a special meeting from a stockholder or stockholders holding the Requisite Percentage.

(h) In connection with a special meeting called in accordance with this Article II, Section 2, the stockholder or stockholders (except for any Solicited Stockholder) who requested that the Board of Directors fix a record date for notice and voting for the special meeting in accordance with this Article II, Section 2 or who delivered a demand to call a special meeting to the Secretary shall further update and supplement the information previously provided to the Corporation in connection with such request or demand, if necessary, so that the information provided or required to be provided in such request or demand pursuant to this Article II, Section 2 shall be true and correct as of the record date for notice of the special meeting, and such update and supplement shall be delivered to, or mailed and received by, the Secretary at the principal executive offices of the Corporation not later than eight business days after the record date for notice of the special meeting.

(i) Notwithstanding anything in these Bylaws to the contrary, the Secretary shall not be required to call a special meeting pursuant to this Article II, Section 2 except in accordance with this Article II, Section 2. If the Board of Directors shall determine that any request to fix a record date for notice and voting for the special meeting or demand to call and hold a special meeting was not properly made in accordance with this Article II, Section 2, or shall determine that the stockholder or stockholders requesting that the Board of Directors fix such record date or submitting a demand to call the special meeting have not otherwise complied with this Article II, Section 2, then the Board of Directors shall not be required to fix such record date or to call and hold the special meeting. In addition to the requirements of this Article II, Section 2, each Requesting Person shall comply with all requirements of applicable law, including all requirements of the Exchange Act, with respect to any request to fix a record date for notice and voting for the special meeting or demand to call a special meeting.

SECTION 3. Location of Meetings. All meetings of the stockholders for any purpose may be held, within or without the State of Delaware, at such time and place as shall be designated from time to time by the Board of Directors. The Board of Directors may, in its sole discretion, determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication as authorized by Section 211(a)(2) of the General Corporation Law of the State of Delaware (the “DGCL”).

SECTION 4. *List of Stockholders.* The Secretary shall cause to be prepared a complete list of stockholders entitled to vote at any meeting of the stockholders, arranged in alphabetical order and showing the address of each stockholder and number of shares registered in the name of each stockholder. The Corporation shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting for a period of at least ten days prior to the meeting, at the election of the Corporation, either: (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the Corporation's principal executive office. In the event that the Corporation determines to make the list available on an electronic network, the Corporation may take reasonable steps to ensure that such information is available only to stockholders of the Corporation. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting.

SECTION 5. *Voting.* Unless otherwise required by applicable law, the Certificate of Incorporation, these Bylaws, or the rules or regulations of any stock exchange applicable to the Corporation, any question brought before any meeting of the stockholders, other than the election of Directors, shall be decided by the affirmative vote of the holders of a majority of the total number of votes of the Corporation's capital stock present in person or represented by proxy at the meeting and entitled to vote on the subject matter, voting as a single class. Except as otherwise required by applicable law, by the Certificate of Incorporation, or by these Bylaws, each stockholder entitled to vote shall, at every meeting of the stockholders, be entitled to one vote in person or by proxy (as described below) for each share of voting stock held by him. Such right to vote shall be subject to the right of the Board of Directors to fix a record date for voting stockholders as hereinafter provided. The Board of Directors, in its discretion, or the Officer of the Corporation presiding at a meeting of the stockholders, in such Officer's discretion, may require that any votes cast at such meeting shall be cast by written ballot. Any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly called annual or special meeting of stockholders of the Corporation.

SECTION 6. *Proxies.* Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for him or her by proxy, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A proxy may be made irrevocable regardless of whether the interest with which it is coupled is an interest in the stock itself or an interest in the Corporation generally. Any proxy is suspended when the person executing the proxy is present at a meeting of stockholders and elects to vote, except that when such proxy is coupled with an interest and the fact of the interest appears on the face of the proxy, the agent named in the proxy shall have all voting and other rights referred to in the proxy, notwithstanding the presence of the person executing the proxy. At each meeting of the stockholders, and before any voting commences, all proxies filed at or before the meeting shall be submitted to and examined by the Secretary or a person designated by the Secretary, and no shares may be represented or voted under a proxy that has been found to be invalid or irregular.

Without limiting the manner in which a stockholder may authorize another person or persons to act for such stockholder as proxy, the following shall constitute a valid means by which a stockholder may grant such authority:

(a) A stockholder may execute a writing authorizing another person or persons to act for such stockholder as proxy. Execution may be accomplished by the stockholder or such stockholder's authorized officer, director, employee or agent signing such writing or causing such person's signature to be affixed to such writing by any reasonable means, including, but not limited to, by facsimile signature.

(b) A stockholder may authorize another person or persons to act for such stockholder as proxy by transmitting or authorizing the transmission of a telegram, cablegram or other means of electronic transmission to the person who will be the holder of the proxy or to a proxy solicitation firm, proxy support service organization or like agent duly authorized by the person who will be the holder of the proxy to receive such transmission, provided that any such telegram, cablegram or other means of electronic transmission must either set forth or be submitted with information from which it can be determined that the telegram, cablegram or other electronic transmission was authorized by the stockholder. If it is determined that such telegrams, cablegrams or other electronic transmissions are valid, the inspectors or, if there are no inspectors, such other persons making that determination shall specify the information, on which they relied.

Any copy, facsimile telecommunication or other reliable reproduction of the writing or transmission authorizing another person or persons to act as proxy for a stockholder may be substituted or used in lieu of the original writing or transmission for any and all purposes for which the original writing or transmission could be used; provided, however, that such copy, facsimile telecommunication or other reproduction shall be a complete reproduction of the entire original writing or transmission.

Any stockholder directly or indirectly soliciting proxies from other stockholders must use a proxy card color other than white, which shall be reserved for the exclusive use by the Board of Directors.

SECTION 7. *Nature of Business at Annual Meetings of Stockholders.*

(a) At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be (i) brought before the meeting by the Board of Directors and specified in a notice of meeting given by or at the direction of the Board of Directors or (ii) otherwise properly brought before the meeting by a stockholder present in person who (A) (1) was a beneficial owner of shares of the Corporation both at the time of giving the notice provided for in this Article II, Section 7 and at the time of the meeting, (2) is entitled to vote at the meeting, and (3) has complied with this Article II, Section 7 in all applicable respects, (B) properly made such proposal in accordance with Rule 14a-8 under the Exchange Act or (C) by any Eligible Stockholder (as defined in Article III, Section 8) in accordance with the procedures set forth in Article III, Section 8. The foregoing clause (ii) shall be the exclusive means for a stockholder to propose business to be brought before an annual meeting of the stockholders. The only matters that may be brought before a special meeting are the matters specified in Article II, Section 2. For purposes of this Article II, Section 7, "present in person" shall mean that the stockholder proposing that the business be brought before the annual meeting of the Corporation, or, if the proposing stockholder is not an individual, a qualified representative of such proposing stockholder, appear at such annual meeting. A "qualified representative" of such proposing stockholder shall be, if such proposing stockholder is (i) a general or limited partnership, any general partner or person who functions as a general partner of the general or limited partnership or who controls the general or limited partnership, (ii) a trust, any trustee of the trust, or (iii) a corporation, limited liability company or other entity, any officer or person who functions as an officer of the corporation, limited liability company or other entity or any officer, director, general partner or person who functions as an officer, director or general partner of any entity

ultimately in control of the corporation, limited liability company or other entity. Stockholders seeking to nominate persons for election to the Board of Directors must comply with Article III, Sections 2 and 7 or Article III, Section 8, as applicable, and this Article II, Section 7 shall not be applicable to nominations except as expressly provided in Article III, Sections 2 and 7.

(b) In addition to any other applicable requirements, for business to be properly brought before an annual meeting by a stockholder, the stockholder must (i) (x) provide Timely Notice (as defined below) thereof in writing and in proper form to the Secretary of the Corporation and (y) provide any updates or supplements to such notice at the times and in the forms required by this Article II, Section 7; or (ii) comply with Article III, Section 8. To be timely, a stockholder's notice must be delivered to, or mailed and received at, the principal executive offices of the Corporation not less than 90 days nor more than 120 days prior to the one-year anniversary of the preceding year's annual meeting; provided, however, that if the date of the annual meeting is more than 30 days before or after such anniversary date, notice by the stockholder to be timely must be so delivered, or mailed and received, not later than the 90th day prior to such annual meeting or, if later, the tenth day following the day on which public disclosure of the date of such annual meeting was first made (such notice within such time periods, "Timely Notice"). In no event shall any adjournment or postponement of an annual meeting or the announcement thereof commence a new time period for the giving of Timely Notice as described above.

(c) To be in proper form for purposes of this Article II, Section 7, a stockholder's notice to the Secretary shall set forth:

(i) As to each Proposing Person (as defined below), (A) the name and address of such Proposing Person (including, if applicable, the name and address that appear on the Corporation's books and records); and (B) the class or series and number of shares of the Corporation that are, directly or indirectly, owned of record or beneficially owned (within the meaning of Rule 13d-3 under the Exchange Act) by such Proposing Persons, except that such Proposing Person shall in all events be deemed to beneficially own any shares of any class or series of the Corporation as to which such Proposing Person has a right to acquire beneficial ownership at any time in the future (the disclosures to be made pursuant to the foregoing clauses (A) and (B) are referred to as "Stockholder Information");

(ii) As to each Proposing Person, (A) the full notional amount of any securities that, directly or indirectly, underlie any "derivative security" (as such term is defined in Rule 16a-1(c) under the Exchange Act) that constitutes a "call equivalent position" (as such term is defined in Rule 16a-1(b) under the Exchange Act) ("Synthetic Equity Position") and that is, directly or indirectly, held or maintained by such Proposing Person with respect to any shares of any class or series of shares of the Corporation; provided that, for the purposes of the definition of "Synthetic Equity Position," the term "derivative security" shall also include any security or instrument that would not otherwise constitute a "derivative security" as a result of any feature that would make any conversion, exercise or similar right or privilege of such security or instrument becoming determinable only at some future date or upon the happening of a future occurrence, in which case the determination of the amount of securities into which such security or instrument would be convertible or exercisable shall be made assuming that such security or instrument is immediately convertible or exercisable at the time of such determination; and, provided, further, that any Proposing Person satisfying the requirements of Rule 13d-1(b)(1) under the Exchange Act (other than a Proposing Person that so satisfies Rule 13d-1(b)(1) under the Exchange Act solely by reason of Rule 13d-1(b)(1)(ii)(E)) shall not be deemed to hold or maintain the notional amount of any securities that underlie a Synthetic Equity Position held by such Proposing Person as a hedge with respect to a bona fide derivatives trade or position of such Proposing Person arising in the ordinary course of such Proposing Person's business as a derivatives dealer, (B) any rights to dividends on the shares of any class or series of shares of the Corporation owned beneficially by such Proposing Person that are separated or separable from the underlying shares

of the Corporation, (C)(x) if such Proposing Person is (i) a general or limited partnership, syndicate or other group, the identity of each general partner and each person who functions as a general partner of the general or limited partnership, each member of the syndicate or group and each person controlling the general partner or member, a trust, any trustee of the trust, or (iii) a corporation, limited liability company or other entity, the identity of each officer and each person who functions as an officer of the corporation, limited liability company or other entity, each person controlling the corporation, limited liability company or other entity, and each officer, director, general partner and person who functions as an officer, director or general partner of any entity ultimately in control of the corporation, limited liability company or other entity (each such person or persons set forth in the preceding clauses (i), (ii) and (iii), a “Responsible Person”), any fiduciary duties owed by such Responsible Person to the equity holders or other beneficiaries of such Proposing Person and any material interests or relationships of such Responsible Person that are not shared generally by other record or beneficial holders of the shares of any class or series of the Corporation and that reasonably could have influenced the decision of such Proposing Person to propose such business to be brought before the meeting, and (y) if such Proposing Person is a natural person, any material interests or relationships of such natural person that are not shared generally by other record or beneficial holders of the shares of any class or series of the Corporation and that reasonably could have influenced the decision of such Proposing Person to propose such business to be brought before the meeting, (D) any material shares or any Synthetic Equity Position in any principal competitor of the Corporation held by such Proposing Persons, (E) a summary of any material discussions regarding the business proposed to be brought before the meeting (1) between or among any of the Proposing Persons or (2) between or among any Proposing Person and any other record or beneficial holder of the shares of any class or series of the Corporation (including their names), (F) any material pending or threatened legal proceeding in which such Proposing Person is a party or material participant involving the Corporation or any of its Officers or Directors, or any affiliate of the Corporation, (G) any other material relationship between such Proposing Person, on the one hand, and the Corporation, any affiliate of the Corporation or any principal competitor of the Corporation, on the other hand, (H) any direct or indirect material interest in any material contract or agreement of such Proposing Person with the Corporation, any affiliate of the Corporation or any principal competitor of the Corporation (including, in any such case, any employment agreement, collective bargaining agreement or consulting agreement) and (I) any other information relating to such Proposing Person that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies or consents by such Proposing Person in support of the business proposed to be brought before the meeting pursuant to Section 14(a) of the Exchange Act (the disclosures to be made pursuant to the foregoing clauses (A) through (I) are referred to as “Disclosable Interests”); provided, however, that Disclosable Interests shall not include any such disclosures with respect to the ordinary course business activities of any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these Bylaws on behalf of a beneficial owner; and

(iii) As to each item of business that the stockholder proposes to bring before the annual meeting, (A) a brief description of the business desired to be brought before the annual meeting, the reasons for conducting such business at the annual meeting and any material interest in such business of each Proposing Person, (B) the text of the proposal or business (including the text of any resolutions proposed for consideration), (C) a reasonably detailed description of all agreements, arrangements and understandings (x) between or among any of the Proposing Persons or (y) between or among any Proposing Person and any other person or entity (including their names) in connection with the proposal of such business by such stockholder; and (D) any other information relating to such item of business that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies in support of the business proposed to be brought before the meeting pursuant to Section 14(a) of the Exchange Act; provided, however, that the disclosures required by this paragraph (iii) shall

not include any disclosures with respect to any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these Bylaws on behalf of a beneficial owner.

For purposes of this Article II, Section 7, the term “Proposing Person” shall mean (i) the stockholder providing the notice of business proposed to be brought before an annual meeting, (ii) the beneficial owner or beneficial owners, if different, on whose behalf the notice of the business proposed to be brought before the annual meeting is made, (iii) any participant (as defined in paragraphs (a) (ii)-(vi) of Instruction 3 to Item 4 of Schedule 14A) with such stockholder in such solicitation or associate (each within the meaning of Rule 12b-2 under the Exchange Act for purposes of these Bylaws) of such stockholder or beneficial owner and (iv) any other person with whom such stockholder or such beneficial owner (or any of their respective associates or other participants in such solicitation) is Acting in Concert (as defined below).

A person shall be deemed to be “Acting in Concert” with another person for purposes of these Bylaws if such person knowingly acts (whether or not pursuant to an express agreement, arrangement or understanding) in concert or in parallel with, or towards a common goal with such other person, relating to changing or influencing the control of the Corporation or in connection with or as a participant in any transaction having that purpose or effect, where (A) each person is conscious of the other person’s conduct and this awareness is an element in their decision-making processes and (B) at least one additional factor suggests that such persons intend to act in concert or in parallel, which such additional factors may include, without limitation, exchanging information (whether publicly or privately), attending meetings, conducting discussions, or making or soliciting invitations to act in concert or in parallel; provided, that a person shall not be deemed to be Acting in Concert with any other person solely as a result of the solicitation or receipt of (1) revocable proxies or consents from such other person in response to a solicitation made pursuant to, and in accordance with, Section 14(a) of the Exchange Act by way of a proxy or consent solicitation statement filed on Schedule 14A or (2) tenders of securities from such other person in a public tender or exchange offer made pursuant to, and in accordance with, Section 14(d) of the Exchange Act by means of a tender offer statement filed on Schedule TO. A person Acting in Concert with another person shall be deemed to be Acting in Concert with any third party who is also Acting in Concert with such other person.

(d) A Proposing Person shall update and supplement its notice to the Corporation of its intent to propose business at an annual meeting, if necessary, so that the information provided or required to be provided in such notice pursuant to this Article II, Section 7 shall be true and correct as of the record date for the meeting and as of the date that is ten business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the Secretary at the principal executive offices of the Corporation not later than five business days after the record date for the meeting (in the case of the update and supplement required to be made as of the record date), and not later than eight business days prior to the date for the meeting or, if practicable, any adjournment or postponement thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed) (in the case of the update and supplement required to be made as of ten business days prior to the meeting or any adjournment or postponement thereof).

(e) Notwithstanding anything in these Bylaws to the contrary, no business shall be conducted at an annual meeting except in accordance with this Article II, Section 7 or Article III, Section 8. If the chairman of the meeting determines that the business was not properly brought before the meeting in accordance with this Article II, Section 7 or Article III, Section 8, he or she shall so declare to the meeting and any such business shall not be considered or transacted.

(f) This Article II, Section 7 is expressly intended to apply to any business proposed to be brought before an annual meeting of stockholders other than any proposal made pursuant to Rule 14a-8 under the Exchange Act and any Proxy Access Notice (as defined below) submitted pursuant to Article III, Section 8. In addition to the requirements of this Article II, Section 7 with respect to any business proposed to be brought before an annual meeting, each Proposing Person shall comply with all applicable requirements of the Exchange Act with respect to any such business. Nothing in this Article II, Section 7 shall be deemed to affect the rights of stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act or the ability of any Eligible Stockholder (as defined in Article III, Section 8) to request inclusion of a Nominee in the Corporation's proxy statement pursuant to Article III, Section 8.

(g) For purposes of these Bylaws, "public disclosure" shall mean disclosure in a press release reported by a national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission (the "Commission") pursuant to Sections 13, 14 or 15(d) of the Exchange Act.

SECTION 8. *Notice to Stockholders.* Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given, which shall state the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting, the record date for determining the stockholders entitled to vote at the meeting, if such date is different from the record date for determining stockholders entitled to notice of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Unless otherwise required by law, written notice of any meeting shall be given not less than ten nor more than 60 days before the date of the meeting to each stockholder entitled to notice of and to vote at such meeting.

SECTION 9. *Quorum.* Unless otherwise required by applicable law or the Certificate of Incorporation, the holders of a majority in voting power of the Corporation's capital stock issued and outstanding and entitled to vote at a meeting of stockholders, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business. A quorum, once established, shall not be broken by the withdrawal of enough votes to leave less than a quorum. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the chairman of the meeting or the stockholders entitled to vote at the meeting, present in person or represented by proxy, shall have the power to adjourn the meeting from time to time without further notice until a quorum shall be present or represented.

SECTION 10. *Adjournment.* The chairman of the meeting may adjourn any meeting of the stockholders from time to time to reconvene at the same or some other place. Notice need not be given of any adjourned meeting if the time and place, if any, thereof and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting in accordance with the requirements of Section 8 of this Article II shall be given to each stockholder of record entitled to notice of and to vote at the meeting.

SECTION 11. *Record Date.* In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of the stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which

record date shall not be more than 60 nor less than ten days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of the stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of the stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

SECTION 12. *Stock Ledger*. The stock ledger of the Corporation shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by Section 4 of this Article II or the books of the Corporation, or to vote in person or by proxy at any meeting of the stockholders. For these purposes, the stock ledger shall include the Foreign Stock Record described in Article XIII of these Bylaws and all the provisions of Article XIII governing the maintenance and use of the Foreign Stock Record.

SECTION 13. *Conduct of Meetings*. The Board of Directors may adopt by resolution such rules and regulations for the conduct of any meeting of the stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the chairman of any meeting of the stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, the following: (a) the establishment of an agenda or order of business for the meeting; (b) the determination of when the polls shall open and close for any given matter to be voted on at the meeting; (c) rules and procedures for maintaining order at the meeting and the safety of those present; (d) limitations on attendance at or participation in the meeting to stockholders of record of the Corporation, their duly authorized and constituted proxies or such other persons as the chairman of the meeting shall determine; (e) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (f) limitations on the time allotted to questions or comments by participants.

SECTION 14. *Inspectors of Meeting*. In advance of any meeting of the stockholders, the Board of Directors, by resolution, the Chairman of the Board or the Chief Executive Officer shall appoint one or more inspectors to act at the meeting and make a written report thereof. One or more other persons may be designated as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at a meeting of the stockholders, the chairman of the meeting shall appoint one or more inspectors to act at the meeting. Unless otherwise required by applicable law, inspectors may be Officers, employees or agents of the Corporation. Each inspector, before entering upon the discharge of the duties of inspector, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of such inspector's ability. The inspector shall have the duties prescribed by law and shall take charge of the polls and, when the vote is completed, shall make a certificate of the result of the vote taken and of such other facts as may be required by applicable law.

ARTICLE III **Directors**

SECTION 1. *Number of Directors*. The Board of Directors shall consist of not less than one nor more than 15 members, the exact number of which shall be fixed from time to time by resolution adopted by the affirmative vote of a majority of the Board of Directors then in office, except as otherwise set forth in the Certificate of Incorporation or these Bylaws. Directors need not be stockholders.

SECTION 2. Nomination of Directors.

(a) Nominations of any person for election to the Board of Directors at an annual meeting or at a special meeting (but only if the election of Directors is a matter specified in the notice of meeting given by or at the direction of the person calling such special meeting) may be made at such meeting only (i) by or at the direction of the Board of Directors, including by any committee or persons authorized to do so by the Board of Directors or these Bylaws, (ii) by a stockholder present in person (A) who was a beneficial owner of shares of the Corporation both at the time of giving the notice provided for in this Article III, Section 2 and at the time of the meeting, (B) is entitled to vote at the meeting, and (C) has complied with this Article III, Section 8 in accordance with the procedures set forth in Article III, Section 8. For purposes of this Article III, Section 2, "present in person" shall mean that the stockholder proposing that the business be brought before the meeting of the Corporation, or, if the proposing stockholder is not an individual, a qualified representative of such proposing stockholder, appear at such meeting. A "qualified representative" of such proposing stockholder shall be, if such proposing stockholder is (i) a general or limited partnership, any general partner or person who functions as a general partner of the general or limited partnership or who controls the general or limited partnership, (ii) a trust, any trustee of the trust or (iii) a corporation, limited liability company or other entity, any officer or person who functions as an officer of the corporation, limited liability company or other entity or any officer, director, general partner or person who functions as an officer, director or general partner of any entity ultimately in control of the corporation, limited liability company or other entity. The foregoing clauses (ii) and (iii) shall be the exclusive means for a stockholder to make any nomination of a person or persons for election to the Board of Directors at an annual meeting or special meeting.

(b) (i) In addition to any other applicable requirements, for a stockholder to make any nomination of a person or persons for election to the Board of Directors at an annual meeting pursuant to this Article III, Section 2, the stockholder must (A) provide notice thereof in writing and in proper form to the Secretary of the Corporation delivered to, or mailed and received at, the principal executive offices of the Corporation not less than 90 days nor more than 120 days prior to the one-year anniversary of the preceding year's annual meeting; provided, however, that if the date of the annual meeting is more than 30 days before or after such anniversary date, notice by the stockholder to be timely must be so delivered, or mailed and received, not later than the 90th day prior to such annual meeting or, if later, the tenth day following the day on which public disclosure of the date of such annual meeting was first made, (B) provide the information, agreements and questionnaires with respect to such stockholder and its candidate for nomination as required to be set forth by this Article III, Sections 2 and 7 and (C) provide any updates or supplements to such notice at the times and in the forms required by this Article III, Section 2.

(ii) Without qualification, if the election of Directors is a matter specified in the notice of meeting given by or at the direction of the person calling a special meeting, then for a stockholder to make any nomination of a person or persons for election to the Board of Directors at such special meeting, the stockholder must (A) provide timely notice thereof in writing and in proper form to the Secretary of the Corporation at the principal executive offices of the Corporation, (B) provide the information with respect to such stockholder and its candidate for nomination as required by this Article III, Sections 2 and 7 and (C) provide any updates or supplements to such notice at the times and in the forms required by this Article III, Section 2. To be timely, a stockholder's notice for nominations to be made at a special meeting must be delivered to, or mailed and received at, the principal executive offices of the Corporation not earlier than the 120th day prior to such special meeting and not later than the 90th day prior to such special meeting or, if later, the tenth day following the day on which public disclosure (as defined in Article II, Section 7) of the date of such special meeting was first made.

(iii) In no event shall any adjournment or postponement of an annual meeting or special meeting or the announcement thereof commence a new time period for the giving of a stockholder's notice as described above.

(c) To be in proper form for purposes of this Article III, Section 2, a stockholder's notice to the Secretary shall set forth:

(i) As to each Nominating Person (as defined below), the Stockholder Information (as defined in Article II, Section 7(c)(i), except that for purposes of this Article III, Section 2 the term "Nominating Person" shall be substituted for the term "Proposing Person" in all places it appears in Article II, Section 7(c)(i));

(ii) As to each Nominating Person, any Disclosable Interests (as defined in Article II, Section 7(c)(ii)), except that for purposes of this Article III, Section 2 the term "Nominating Person" shall be substituted for the term "Proposing Person" in all places it appears in Article II, Section 7(c)(ii) and the disclosure with respect to the business to be brought before the meeting in Article II, Section 7(c)(ii) shall be made with respect to the election of Directors at the meeting;

(iii) As to each candidate whom a Nominating Person proposes to nominate for election as a Director, (A) all information with respect to such candidate for nomination that would be required to be set forth in a stockholder's notice pursuant to this Article III, Sections 2 and 7 if such candidate for nomination were a Nominating Person, (B) all information relating to such candidate for nomination that is required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for election of directors in a contested election pursuant to Section 14(a) under the Exchange Act (including such candidate's written consent to being named in the proxy statement as a nominee and to serving as a Director if elected), (C) a description of any direct or indirect material interest in any material contract or agreement between or among any Nominating Person, on the one hand, and each candidate for nomination or his or her respective associates or any other participants in such solicitation, on the other hand, including, without limitation, all information that would be required to be disclosed pursuant to Item 404 under Regulation S-K if such Nominating Person were the "registrant" for purposes of such rule and the candidate for nomination were a director or executive officer of such registrant (the disclosures to be made pursuant to the foregoing clauses (A) through (C) are referred to as "Nominee Information"), and (D) a completed and signed questionnaire, representation and agreement as provided in Article III, Section 7(a).

For purposes of this Article III, Section 2, the term "Nominating Person" shall mean (i) the stockholder providing the notice of the nomination proposed to be made at the meeting, (ii) the beneficial owner or beneficial owners, if different, on whose behalf the notice of the nomination proposed to be made at the meeting is made, (iii) any associate of such stockholder or beneficial owner or any other participant in such solicitation, and (iv) any other person with whom such stockholder or such beneficial owner (or any of their respective associates or other participants in such solicitation) is Acting in Concert.

(d) A stockholder providing notice of any nomination proposed to be made at a meeting shall further update and supplement such notice, if necessary, so that the information provided or required to be provided in such notice pursuant to this Article III, Section 2 shall be true and correct as of the record date for the meeting and as of the date that is ten business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the Secretary at the principal executive offices of the Corporation not later than five business days after the record date for the meeting (in the case of the update and supplement required to be made as of the record date), and not later than eight business days prior to the date for the meeting or, if practicable, any adjournment or

postponement thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed) (in the case of the update and supplement required to be made as of ten business days prior to the meeting or any adjournment or postponement thereof).

(e) In addition to the requirements of this Article III, Section 2 with respect to any nomination proposed to be made at a meeting, each Nominating Person shall comply with all applicable requirements of the Exchange Act with respect to any such nominations. Notwithstanding the foregoing provisions of this Article III, Section 2, unless otherwise required by law, (i) no Nominating Person shall solicit proxies in support of director nominees other than the Corporation's nominees unless such Nominating Person has complied with Rule 14a-19 promulgated under the Exchange Act in connection with the solicitation of such proxies, including the provision to the Corporation of notices required thereunder in a timely manner and (ii) if any Nominating Person (1) provides notice pursuant to Rule 14a-19(b) promulgated under the Exchange Act and (2) subsequently fails to comply with the requirements of Rule 14a-19(a)(2) and Rule 14a-19(a)(3) promulgated under the Exchange Act, including the provision to the Corporation of notices required thereunder in a timely manner, or fails to timely provide reasonable evidence sufficient to satisfy the Corporation that such Nominating Person has met the requirements of Rule 14a-19(a)(3) promulgated under the Exchange Act in accordance with the following sentence, then the Corporation shall disregard any proxies or votes solicited for the Nominating Person's candidates. If any Nominating Person provides notice pursuant to Rule 14a-19(b) promulgated under the Exchange Act, such Nominating Person shall deliver to the Corporation, no later than seven (7) business days prior to the applicable meeting, reasonable evidence that it has met the requirements of Rule 14a-19(a)(3) promulgated under the Exchange Act.

SECTION 3. Term; Vacancies; Election. Each Director shall hold office until the next annual election and until his or her successor is duly elected and qualified, or until his or her earlier death, resignation or removal. The Directors shall be elected at the annual meeting of the stockholders in the manner specified by these Bylaws. Any vacancy on the Board of Directors that results from an increase in the number of Directors may be filled by a majority of the Board of Directors then in office, provided that a quorum is present, and any other vacancy occurring on the Board of Directors may be filled by a majority of the Board of Directors then in office, even if less than a quorum, or by a sole remaining Director. Each Director to be elected by the stockholders of the Corporation shall be elected by the affirmative vote of a majority of the votes cast with respect to such Director by the shares represented and entitled to vote therefor at a meeting of the stockholders for the election of Directors at which a quorum is present (an "Election Meeting"); provided, however, that if the Board of Directors determines that the number of nominees exceeds the number of Directors to be elected at such meeting (a "Contested Election"), and the Board of Directors has not rescinded such determination by the record date of the Election Meeting as initially announced, each of the Directors to be elected at the Election Meeting shall be elected by the affirmative vote of a plurality of the votes cast by the shares represented and entitled to vote at such meeting with respect to the election of such Director. For purposes of this Article III, Section 3, a "majority of votes cast" means that the number of votes cast "for" a candidate for Director exceeds the number of votes cast "against" that Director (with "abstentions" and "broker nonvotes" not counted as votes cast as either "for" or "against" such Director's election). In an election other than a Contested Election, stockholders will be given the choice to cast votes "for" or "against" the election of Directors or to "abstain" from such vote and shall not have the ability to cast any other vote with respect to such election of Directors. In a Contested Election, stockholders will be given the choice to cast "for" or "withhold" votes for the election of Directors and shall not have the ability to cast any other vote with respect to such election of Directors.

In the event an Election Meeting involves the election of Directors by separate votes by class or classes or series, the determination as to whether an election constitutes a Contested Election shall be made on a class by class or series basis, as applicable.

SECTION 4. *Powers of Directors*. The business, property and affairs of the Corporation shall be managed by or under the direction of its Board of Directors, which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or by the Certificate of Incorporation or by these Bylaws directed or required to be exercised or done by the stockholders.

SECTION 5. *Compensation*. The Board of Directors shall have the authority to fix the compensation of Directors.

SECTION 6. *Resignations of Directors*. Any Director of the Corporation may resign at any time, by giving notice in writing or by electronic transmission to the Chairman of the Board, the Chief Executive Officer or the Secretary of the Corporation. Such resignation shall take effect when delivered unless the resignation specifies a later effective date determined upon the happening of an event or events. Unless otherwise specified in such notice, the acceptance of such resignation shall not be necessary to make it effective.

SECTION 7. *Additional Requirements For Valid Nomination of Candidates to Serve as Director and, If Elected, to Be Seated as Directors*.

(a) To be eligible to be a candidate for election as a Director of the Corporation at an annual or special meeting, a candidate must be nominated in the manner prescribed in Article III, Section 2 or 8 and the candidate for nomination, whether nominated by the Board of Directors or by a stockholder of record:

(i) must have previously delivered (in accordance with the time period prescribed for delivery in a notice to such candidate given by or on behalf of the Board of Directors), to the Secretary at the principal executive offices of the Corporation, (i) a completed written questionnaire (in a form provided by the Corporation) with respect to the background, qualifications, stock ownership and independence of such proposed nominee and (ii) a written representation and agreement (in form provided by the Corporation) that such candidate for nomination (A) is not a party to any agreement, arrangement or understanding with, and has not given and will not give any commitment or assurance to, any person or entity as to how such proposed nominee, if elected as a Director of the Corporation, will act or vote on any issue or question and (B) if elected as a Director of the Corporation, will comply with all applicable corporate governance, conflict of interest, confidentiality, stock ownership and trading and other policies and guidelines of the Corporation applicable to Directors and in effect during such person's term in office as a Director (and, if requested by any candidate for nomination, the Secretary of the Corporation shall provide to such candidate for nomination all such policies and guidelines then in effect);

(ii) must not serve on the boards of more than five other public companies, and any candidate who is a chief executive officer of a public company must not serve on more than two other public company boards, unless in each case the Board of Directors of the Corporation has determined in advance that such simultaneous service will not impair the ability of such candidate to effectively serve on the Board of Directors; and

(iii) must be under age 75.

(b) The Board of Directors may also require any proposed candidate for nomination as a Director to furnish such other information as may reasonably be requested by the Board of

Directors in writing prior to the meeting of stockholders at which such candidate's nomination is to be acted upon in order for the Board of Directors to determine the eligibility of such candidate for nomination to be an independent Director of the Corporation in accordance with the Corporation's Corporate Governance Guidelines.

(c) No candidate shall be eligible for nomination as a Director of the Corporation by a stockholder of record unless such candidate for nomination and the Nominating Person seeking to place such candidate's name in nomination has complied with Article III, Sections 2 and 7 or Article III, Section 8, as applicable. No candidate for nomination nominated by the Board of Directors shall be eligible for nomination as a Director of the Corporation unless such candidate for nomination has provided all information with respect to such candidate for nomination that would be required to be set forth in a stockholder's notice pursuant to Article III, Sections 2 and 7 or Article III, Section 8, as applicable, as if such candidate for nomination were a Nominating Person. The chairman of the meeting shall, if the facts warrant, determine that a nomination was not properly made in accordance with Article III, Section 2 and this Section 7, or Article III, Section 8, as applicable, and if he or she should so determine, he or she shall so declare such determination to the meeting, the defective nomination shall be disregarded and any ballots cast for the candidate in question (but in the case of any form of ballot listing other qualified nominees, only the ballots cast for the nominee in question) shall be void and of no force or effect.

(d) Notwithstanding anything in these Bylaws to the contrary, no candidate for nomination shall be eligible to be seated as a Director of the Corporation unless nominated and elected in accordance with this Article III, Section 7 or Article III, Section 8, as applicable, as determined by a majority of the Board of Directors then in office.

SECTION 8. Proxy Access.

(a) Subject to the provisions of this Article III, Section 8, if any Eligible Stockholder or group of up to 20 Eligible Stockholders submits to the Corporation a Proxy Access Notice that complies with this Article III, Section 8 and such Eligible Stockholder or group of Eligible Stockholders otherwise satisfies all the terms and conditions of this Article III, Section 8 (such Eligible Stockholder or group of Eligible Stockholders, a "Nominating Stockholder"), the Corporation shall include in its proxy statement or on its form of proxy and ballot, as applicable (collectively, "proxy materials"), for any annual meeting of stockholders, in addition to any persons nominated for election by the Board of Directors or any committee thereof:

- (i) the name of any person or persons nominated by such Nominating Stockholder for election to the Board of Directors at such annual meeting of stockholders who meets the requirements of this Article III, Section 8 (a "Nominee");
- (ii) disclosure about the Nominee and the Nominating Stockholder required under the rules of the Commission or other applicable law to be included in the proxy materials;
- (iii) subject to the other applicable provisions of this Article III, Section 8, a written statement, not to exceed 500 words, that is not contrary to any of the Commission's proxy rules, including Rule 14a-9 under the Exchange Act (a "Supporting Statement"), included by the Nominating Stockholder in the Proxy Access Notice intended for inclusion in the proxy materials in support of the Nominee's election to the Board of Directors; and
- (iv) any other information that the Corporation or the Board of Directors determines, in its discretion, to include in the proxy materials relating to the nomination of the Nominee, including, without limitation, any statement in opposition to the nomination and any of the information provided pursuant to this Article III, Section 8.

(b) Maximum Number of Nominees.

(i) The Corporation shall not be required to include in the proxy materials for an annual meeting of stockholders more Nominees than that number of directors constituting 20% of the total number of directors of the Corporation on the last day on which a Proxy Access Notice may be submitted pursuant to this Article III, Section 8 (rounded down to the nearest whole number, but not less than two) (the “Maximum Number”). The Maximum Number for a particular annual meeting shall be reduced by: (A) the number of Nominees who are subsequently withdrawn or that the Board of Directors itself decides to nominate for election at such annual meeting of stockholders (including, without limitation, any person who is or will be nominated by the Board of Directors pursuant to any agreement or understanding with one or more stockholders to avoid such person being formally proposed as a Nominee), and (B) the number of incumbent directors who had been Nominees with respect to any of the preceding three annual meetings of stockholders and whose reelection at the upcoming annual meeting of stockholders is being recommended by the Board of Directors (including, without limitation, any person who was nominated by the Board of Directors pursuant to any agreement or understanding with one or more stockholders to avoid such person being formally proposed as a Nominee). In the event that one or more vacancies for any reason occurs on the Board of Directors after the deadline set forth in Article III, Section 8(d) but before the date of the annual meeting of stockholders, and the Board of Directors resolves to reduce the size of the Board of Directors in connection therewith, the Maximum Number shall be calculated based on the number of directors as so reduced.

(ii) Any Nominating Stockholder submitting more than one Nominee for inclusion in the Corporation’s proxy materials shall rank such Nominees based on the order that the Nominating Stockholder desires such Nominees to be selected for inclusion in the Corporation’s proxy materials in the event that the total number of Nominees submitted by Nominating Stockholders exceeds the Maximum Number. In the event that the number of Nominees submitted by Nominating Stockholders exceeds the Maximum Number, the highest ranking Nominee from each Nominating Stockholder will be included in the Corporation’s proxy materials until the Maximum Number is reached, going in order from largest to smallest of the number of shares of common stock of the Corporation owned by each Nominating Stockholder as disclosed in each Nominating Stockholder’s Proxy Access Notice. If the Maximum Number is not reached after the highest ranking Nominee of each Nominating Stockholder has been selected, this process will be repeated as many times as necessary until the Maximum Number is reached. If, after the deadline for submitting a Proxy Access Notice as set forth in Article III, Section 8(d), a Nominating Stockholder ceases to satisfy the requirements of this Article III, Section 8 or withdraws its nomination or a Nominee ceases to satisfy the requirements of this Article III, Section 8 or becomes unwilling or unable to serve on the Board of Directors, whether before or after the mailing of definitive proxy materials, then the nomination shall be disregarded, and the Corporation: (A) shall not be required to include in its proxy materials the disregarded Nominee; and (B) may otherwise communicate to its stockholders, including without limitation by amending or supplementing its proxy materials, that the Nominee will not be included as a Nominee in the proxy materials and the election of such Nominee will not be voted on at the annual meeting of stockholders.

(c) Eligibility of Nominating Stockholder.

(i) An “Eligible Stockholder” is a person who has either (A) been a record holder of the shares of common stock used to satisfy the eligibility requirements in this Article III, Section 8(c) continuously for the three-year period specified in Subsection (ii) below or (B) provides to the Secretary of the Corporation, within the time period referred to in Article III, Section 8(d), evidence of continuous ownership of such shares for such three-year period from one or more securities intermediaries in a form that satisfies the requirements as established by

the Commission for a stockholder proposal under Rule 14a-8 under the Exchange Act (or any successor rule).

(ii) An Eligible Stockholder or group of up to 20 Eligible Stockholders may submit a nomination in accordance with this Article III, Section 8 only if the person or each member of the group, as applicable, has continuously owned at least the Minimum Number (as defined below) of shares of the Corporation's outstanding common stock throughout the three-year period preceding and including the date of submission of the Proxy Access Notice, and continues to own at least the Minimum Number through the date of the annual meeting of stockholders. Two or more funds that are (i) under common management and investment control, (ii) under common management and funded primarily by a single employer or (iii) a "group of investment companies," as such term is defined in Section 12(d)(1)(G)(ii) of the Investment Company Act of 1940, as amended, (two or more funds referred to under any of clause (i), (ii) or (iii), collectively a "Qualifying Fund") shall be treated as one Eligible Stockholder. For the avoidance of doubt, in the event of a nomination by a group of Eligible Stockholders, any and all requirements and obligations for an individual Eligible Stockholder that are set forth in this Article III, Section 8, including the minimum holding period, shall apply to each member of such group; provided, however, that the Minimum Number shall apply to the ownership of the group in the aggregate. Should any stockholder withdraw from a group of Eligible Stockholders at any time prior to the annual meeting of stockholders, the group of Eligible Stockholders shall only be deemed to own the shares held by the remaining members of the group.

(iii) The "Minimum Number" of shares of the Corporation's common stock means three percent (3%) of the number of outstanding shares of common stock as of the most recent date for which such amount is given in any filing by the Corporation with the Commission prior to the submission of the Proxy Access Notice.

(iv) For purposes of this Article III, Section 8, an Eligible Stockholder "owns" only those outstanding shares of the common stock of the Corporation as to which the Eligible Stockholder possesses both:

- (A) the full voting and investment rights pertaining to the shares; and
- (B) the full economic interest in (including the opportunity for profit and risk of loss on) such shares;

provided, that the number of shares calculated in accordance with clauses (A) and (B) shall not include any shares: (1) sold by such Eligible Stockholder or any of its affiliates in any transaction that has not been settled or closed, (2) borrowed by such Eligible Stockholder or any of its affiliates for any purpose or purchased by such Eligible Stockholder or any of its affiliates pursuant to an agreement to resell, or (3) subject to any option, warrant, forward contract, swap, contract of sale, other derivative or similar agreement entered into by such Eligible Stockholder or any of its affiliates, whether any such instrument or agreement is to be settled with shares, cash or other property based on the notional amount or value of outstanding shares of the Corporation, in any such case which instrument or agreement has, or is intended to have, the purpose or effect of: (w) reducing in any manner, to any extent or at any time in the future, such Eligible Stockholder's or any of its affiliates' full right to vote or direct the voting of any such shares, and/or (x) hedging, offsetting, or altering to any degree, gain or loss arising from the full economic ownership of such shares by such Eligible Stockholder or any of its affiliates. An Eligible Stockholder "owns" shares held in the name of a nominee or other intermediary so long as the Eligible Stockholder retains the right to instruct how the shares are voted with respect to the election of directors and possesses the full economic interest in the shares. An Eligible Stockholder's ownership of shares shall be deemed to continue during any period in which the Eligible Stockholder has delegated any voting power by means of a proxy, power of attorney, or

other similar instrument or arrangement that is revocable at any time by the Eligible Stockholder. An Eligible Stockholder's ownership of shares shall be deemed to continue during any period in which the Eligible Stockholder has loaned such shares; provided that the Eligible Stockholder has the power to recall such loaned shares on no more than five business days' notice and includes in the Proxy Access Notice an agreement that it will (y) promptly recall such loaned shares upon being notified that any of its Nominees will be included in the Corporation's proxy materials pursuant to this Article III, Section 8 and (z) continue to hold such recalled shares (including the right to vote such shares) through the date of the annual meeting of stockholders. The terms "owned," "owning" and other variations of the word "own" shall have correlative meanings. Each Nominating Stockholder shall furnish any other information that may reasonably be required by the Board of Directors to verify such stockholder's continuous ownership of at least the Minimum Number during the three-year period referred to above.

(v) No person may be in more than one group constituting a Nominating Stockholder, and if any person appears as a member of more than one group, it shall be deemed to be a member of the group that owns the greatest aggregate number of shares of the Corporation's common stock as reflected in the Proxy Access Notice, and no shares may be attributed as owned by more than one person constituting a Nominating Stockholder under this Article III, Section 8.

(d) To nominate a Nominee, the Nominating Stockholder must, no earlier than 150 calendar days and no later than 120 calendar days before the date of the Corporation's proxy materials released to stockholders in connection with the previous year's annual meeting of stockholders, submit to the Secretary of the Corporation at the principal executive office of the Corporation all of the following information and documents (collectively, the "Proxy Access Notice"):

(i) A Schedule 14N (or any successor form) relating to the Nominee, completed and filed with the Commission by the Nominating Stockholder as applicable, in accordance with the Commission's rules;

(ii) A written notice of the nomination of such Nominee that includes the following additional information, agreements, representations and warranties by the Nominating Stockholder (including each group member):

(A) the information, representations and agreements required with respect to the nomination of directors pursuant to Sections 2(c) and 7 of Article III of these Bylaws;

(B) the details of any relationship that existed within the past three years and that would have been described pursuant to Item 6(e) of Schedule 14N (or any successor item) if it existed on the date of submission of the Schedule 14N;

(C) a representation and warranty that the Nominating Stockholder did not acquire, and is not holding, securities of the Corporation for the purpose or with the effect of influencing or changing control of the Corporation;

(D) a representation and warranty that the Nominee's candidacy or, if elected, Board of Directors membership, would not violate the Certificate of Incorporation, these Bylaws, or any applicable state or federal law or the rules of any stock exchange on which the Corporation's securities are traded;

(E) a representation and warranty that the Nominee:

(1) does not have any direct or indirect material relationship with the Corporation and otherwise would qualify as an "independent director" under the rules of the primary stock

exchange on which the Corporation's securities are traded and any applicable rules of the Commission;

- (2) would meet the audit committee independence requirements under the rules of the principal stock exchange on which the Corporation's common stock is traded;
 - (3) would qualify as a "non-employee director" for the purposes of Rule 16b-3 under the Exchange Act (or any successor rule);
 - (4) would qualify as an "outside director" for the purposes of Section 162(m) of the Internal Revenue Code (or any successor provision);
 - (5) is or is not (as the case may be) a "Non-Citizen" as defined in Article XIII of these Bylaws;
 - (6) is not and has not been, within the past three years, an officer or director of a competitor, as defined under Section 8 of the Clayton Antitrust Act of 1914, as amended, and if the Nominee has held any such position during this period, details thereof; and
 - (7) is not and has not been subject to any event specified in Rule 506(d)(1) of Regulation D (or any successor rule) under the Securities Act of 1933, as amended, or Item 401(f) of Regulation S-K (or any successor rule) under the Exchange Act, without reference to whether the event is material to an evaluation of the ability or integrity of the Nominee;
- (F) a representation and warranty that the Nominating Stockholder satisfies the eligibility requirements set forth in Article III, Section 8(c), has provided evidence of ownership to the extent required by Article III, Section 8(c), and such evidence of ownership is true, complete and correct;
- (G) a (i) representation and warranty that the Nominating Stockholder intends to continue to satisfy the eligibility requirements described in Article III, Section 8(c) through the date of the annual meeting of stockholders and (ii) a statement as to whether or not the Nominating Stockholder intends to continue to hold the Minimum Number of shares for at least one year following the annual meeting of stockholders, which statement may also include a description as to why such Nominating Stockholder is unable to make the foregoing statement;
- (H) a representation and warranty that the Nominating Stockholder will not engage in or support, directly or indirectly, a "solicitation" within the meaning of Rule 14a-1(l) (without reference to the exception in Section 14a- 1(l)(2)(iv)) (or any successor rules) with respect to the annual meeting of stockholders, other than a solicitation in support of the Nominee or any nominee of the Board of Directors;
- (I) a representation and warranty that the Nominating Stockholder will not use any proxy card other than the Corporation's proxy card in soliciting stockholders in connection with the election of a Nominee at the annual meeting of stockholders;
- (J) if desired by the Nominating Stockholder, a Supporting Statement;
- (K) in the case of a nomination by a group, the designation by all group members of one group member that is authorized to act on behalf of all group members with respect to matters relating to the nomination, including withdrawal of the nomination;
- (L) in the case of any Eligible Stockholder that is a Qualifying Fund consisting of two or more funds, documentation demonstrating that the funds are eligible to be treated as a Qualifying

Fund and that each such fund comprising the Qualifying Fund otherwise meets the requirements set forth in this Article III, Section 8; and

- (M) a representation and warranty that the Nominating Stockholder has not nominated and will not nominate for election any individual as director at the annual meeting of stockholders other than its Nominee(s).
- (iii) An executed agreement pursuant to which the Nominating Stockholder (including each group member) agrees:
- (A) to comply with all applicable laws, rules and regulations in connection with the nomination, solicitation and election;
- (B) to file with the Commission any solicitation or other communication with the Corporation's stockholders relating to any Nominee or one or more of the Corporation's directors or director nominees, regardless of whether any such filing is required under any law, rule or regulation or whether any exemption from filing is available for such materials under any law, rule or regulation;
- (C) to assume all liability stemming from an action, suit or proceeding concerning any actual or alleged legal or regulatory violation arising out of any communication by the Nominating Stockholder with the Corporation, its stockholders or any other person in connection with the nomination or election of directors, including, without limitation, the Proxy Access Notice;
- (D) to indemnify and hold harmless (jointly and severally with all other group members, in the case of a group member) the Corporation and each of its directors, officers and employees individually against any liability, loss, damages, expenses, demands, claims or other costs (including reasonable attorneys' fees and disbursements of counsel) incurred in connection with any threatened or pending action, suit or proceeding, whether legal, administrative or investigative, against the Corporation or any of its directors, officers or employees arising out of any nomination submitted by the Nominating Stockholder (including, without limitation, relating to any breach or alleged breach of its obligations, agreements, representations or warranties) pursuant to this Article III, Section 8;
- (E) in the event that (i) any information included in the Proxy Access Notice, or any other communication by the Nominating Stockholder (including with respect to any group member), with the Corporation, its stockholders or any other person in connection with the nomination or election of directors ceases to be true and accurate in all material respects (or due to a subsequent development omits a material fact necessary to make the statements made not misleading), or (ii) the Nominating Stockholder (including any group member) fails to continue to satisfy the eligibility requirements described in Article III, Section 8(c), the Nominating Stockholder shall promptly (and in any event within 48 hours of discovering such misstatement, omission or failure) (x) in the case of clause (i) above, notify the Corporation and any other recipient of such communication of the misstatement or omission in such previously provided information and of the information that is required to correct the misstatement or omission, and (y) in the case of clause (ii) above, notify the Corporation why, and in what regard, the Nominating Stockholder fails to comply with the eligibility requirements described in Article III, Section 8(c); and
- (iv) An executed agreement by the Nominee:
- (A) to provide to the Corporation such other information, including a completed copy of the Corporation's director questionnaire, as it may reasonably request;

(B) that the Nominee (i) agrees, if elected, to serve as a member of the Board of Directors, and (ii) has read and agrees to adhere to the Corporation's Corporate Governance Guidelines and any other Corporation policies and guidelines applicable to directors generally; and

(C) that the Nominee is not and will not become a party to (1) any compensatory, payment or other financial agreement, arrangement or understanding with any person or entity in connection with service or action as a director of the Corporation that has not been disclosed to the Corporation in writing, (2) any agreement, arrangement or understanding with any person or entity as to how the Nominee would vote or act on any issue or question as a director (a "Voting Commitment") that has not been disclosed to the Corporation in writing, or (3) any Voting Commitment that could limit or interfere with the Nominee's ability to comply, if elected as a director of the Corporation, with its fiduciary duties under applicable law or with the Corporation's Corporate Governance Guidelines and any other Corporation policies and guidelines applicable to directors generally.

The information and documents required by this Article III, Section 8(d) shall be: (x) provided with respect to and executed by each group member, in the case of information applicable to group members; and (y) provided with respect to the persons specified in Instruction 1 to Items 6(c) and (d) of Schedule 14N (or any successor item) if and to the extent applicable to a Nominating Stockholder or group member. The Proxy Access Notice shall be deemed submitted on the date on which all the information and documents referred to in this Article III, Section 8(d) (other than such information and documents contemplated to be provided after the date the Proxy Access Notice is provided) have been delivered to or, if sent by mail, received by the Secretary of the Corporation. For the avoidance of doubt, in no event shall any adjournment or postponement of an annual meeting of stockholders or the public announcement thereof commence a new time period for the giving of a Proxy Access Notice pursuant to this Article III, Section 8.

(e) Exceptions and Clarifications.

(i) Notwithstanding anything to the contrary contained in this Article III, Section 8, (x) the Corporation may omit from its proxy materials any Nominee and any information concerning such Nominee (including a Nominating Stockholder's Supporting Statement), (y) any nomination shall be disregarded, and (z) no vote on such Nominee will occur (notwithstanding that proxies in respect of such vote may have been received by the Corporation), and the Nominating Stockholder may not, after the last day on which a Proxy Access Notice would be timely, cure in any way any defect preventing the nomination of the Nominee, if:

(A) the Corporation receives a notice pursuant to Article III, Section 2, that a stockholder intends to nominate a candidate for director at the annual meeting of stockholders;

(B) the Nominating Stockholder or the designated lead group member, as applicable, or any qualified representative thereof, does not appear at the annual meeting of stockholders to present the nomination submitted pursuant to this Article III, Section 8 or the Nominating Stockholder withdraws its nomination prior to the annual meeting of stockholders;

(C) the Board of Directors determines that such Nominee's nomination or election to the Board of Directors would result in the Corporation violating or failing to be in compliance with the Certificate of Incorporation, these Bylaws or any applicable law, rule or regulation to which the Corporation is subject, including any rules or regulations of any stock exchange on which the Corporation's securities are traded;

(D) the Nominee was nominated for election to the Board of Directors pursuant to this Article III, Section 8 at one of the Corporation's two preceding annual meetings of stockholders

and (i) its nomination was withdrawn, (ii) such Nominee became ineligible to serve as a Nominee or as a Director or (iii) such Nominee received a vote of less than 25% of the shares of common stock entitled to vote for such Nominee; or

(E) (i) the Nominating Stockholder fails to continue to satisfy the eligibility requirements described in Article III, Section 8(c), (ii) any of the representations and warranties made in the Proxy Access Notice cease to be true, complete and correct (or omits to state a material fact necessary to make the statements made therein not misleading), (iii) the Nominee becomes unwilling or unable to serve on the Board of Directors or (iv) the Nominating Stockholder or the Nominee materially violates or breaches any of its agreements, representations or warranties in this Article III, Section 8;

(ii) Notwithstanding anything to the contrary contained in this Article III, Section 8, the Corporation may omit from its proxy materials, or may supplement or correct, any information, including all or any portion of the Supporting Statement included in the Proxy Access Notice, if: (A) such information is not true and correct in all material respects or omits a material statement necessary to make the statements therein not misleading; (B) such information directly or indirectly impugns the character, integrity or, without factual foundation, personal reputation of, or directly or indirectly makes charges concerning improper, illegal or immoral conduct or associations with respect to, any person; or (C) the inclusion of such information in the proxy materials would otherwise violate the Commission's proxy rules or any other applicable law, rule or regulation. Once submitted with a Proxy Access Notice, a Supporting Statement may not be amended, supplemented or modified by the Nominee or Nominating Stockholder.

(iii) For the avoidance of doubt, the Corporation may solicit against, and include in the proxy materials its own statement relating to, any Nominee.

(iv) (A) As provided in Article III, Section 2(e), Rule 14a-19 promulgated under the Exchange Act, and (B) this Article III, Section 8 provides the exclusive method for a stockholder to include nominees for election to the Board of Directors in the Corporation's proxy materials (including, without limitation, any proxy card or written ballot).

(v) The interpretation of, and compliance with, any provision of this Article III, Section 8, including the representations, warranties and covenants contained herein, shall be determined by the Board of Directors or, in the discretion of the Board of Directors, one or more of its designees, in each case acting in good faith.

ARTICLE IV **Meetings of Directors**

SECTION 1. *Annual Meeting*. After each annual election of Directors, the newly elected Board of Directors may meet for the purpose of organization, the election of Officers, and the transaction of other business, at such place and time as shall be fixed by the newly elected Board of Directors at the annual meeting, and, if a majority of the newly elected Board of Directors be present at such place and time, no prior notice of such meeting shall be required to be given to the newly elected Board of Directors. The place and time of such meeting may also be fixed by written consent of the newly elected Board of Directors.

SECTION 2. *Regular Meetings*. Meetings of the Board of Directors shall be held on such dates and at such times and places as may be determined by the Board of Directors from time to time. No notice need be given of any regular meeting.

SECTION 3. *Special Meetings*. Special meetings of the Directors may be called individually by the Chairman of the Board, the Chief Executive Officer or by the Chairman upon the written

request of two or more Directors. Notice thereof stating the place, date and hour of the special meeting shall be given to each Director either by mail or overnight courier not less than 48 hours before the hour provided for the start of such meeting, by telephone or electronic means not less than 24 hours before the hour provided for the start of such meeting, or on such shorter notice as the person or persons calling such meeting may deem necessary or appropriate in the circumstances.

SECTION 4. *Location*. Meetings of the Directors, both regular and special, may be held within or without the State of Delaware at such place as is indicated in the notice thereof.

SECTION 5. *Quorum*. Except as otherwise required by applicable law, the Certificate of Incorporation or these Bylaws, at all meetings of the Board of Directors, (i) a majority of the entire Board of Directors shall constitute a quorum for the transaction of business and (ii) the act of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board of Directors. If a quorum shall not be present at any meeting of the Board of Directors, the Directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting of the time and place of the adjourned meeting, until a quorum shall be present.

SECTION 6. *Organization*. At each meeting of the Board of Directors, the Chairman of the Board, or, in his or her absence, the Lead Independent Director, shall act as chairman. The Secretary of the Corporation shall act as secretary at each meeting of the Board of Directors. In case the Secretary shall be absent from any meeting of the Board of Directors, the chairman of the meeting may appoint any person to act as secretary of the meeting.

SECTION 7. *Actions of the Board by Written Consent*. Unless otherwise provided in the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any Committee thereof may be taken without a meeting, if all the members of the Board of Directors or Committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or electronic transmissions are filed with the minutes of proceedings of the Board of Directors or Committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

SECTION 8. *Meetings by Means of Conference Telephone*. Unless otherwise provided in the Certificate of Incorporation or these Bylaws, members of the Board of Directors, or any Committee thereof, may participate in a meeting of the Board of Directors or such Committee by means of a conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this Article IV, Section 8 shall constitute presence in person at such meeting.

ARTICLE V **Committees**

SECTION 1. *Creation*. The Board of Directors may, by resolution or resolutions passed by a majority of the Board of Directors then in office, designate one or more committees each to consist of one or more Directors of the Corporation; provided, however, that no executive or other committee of general delegation may be designated by the Board of Directors unless the Chairman and the Chief Executive Officer are each a member thereof. The Board of Directors may designate one or more Directors as alternate members of any Committee, who may replace any absent or disqualified member at any meeting of any such Committee. In the absence or disqualification of a member of a Committee, and in the absence of a designation by the Board of Directors of an alternate member to replace the absent or disqualified member, the member or members thereof present at any meeting and not disqualified from voting, whether or not such

member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any absent or disqualified member. Each Committee, to the extent permitted by applicable law and provided in the resolution establishing the Committee shall have and may exercise such powers, duties and authority in the management of the business and affairs of the Corporation as shall be delegated to it by the Board of Directors except that no such Committee shall have power to (i) approve or adopt, or recommend to the stockholders, any action or matter (other than the election or removal of Directors) expressly required by law to be submitted to stockholders for approval, or (ii) adopt, amend or repeal any Bylaw of the Corporation.

SECTION 2. *Committee Procedure.* Each such Committee established by the Board of Directors shall meet at stated times or on notice to all members by any member of such Committee. Each such Committee shall establish its own rules of procedure. Each such Committee shall keep regular minutes of its proceedings and report the same to the Board of Directors.

ARTICLE VI **Indemnification**

SECTION 1. *Power to Indemnify in Actions, Suits or Proceedings other than Those by or in the Right of the Corporation.* Subject to Section 3 of this Article VI, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that such person is or was a Director or Officer of the Corporation, or is or was a Director or Officer of the Corporation serving at the request of the Corporation as a Director, Officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

SECTION 2. *Power to Indemnify in Actions, Suits or Proceedings by or in the Right of the Corporation.* Subject to Section 3 of this Article VI, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that such person is or was a Director or Officer of the Corporation, or is or was a Director or Officer of the Corporation serving at the request of the Corporation as a Director, Officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly

and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

SECTION 3. *Authorization of Indemnification.* Any indemnification under this Article VI (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the present or former Director or Officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VI, as the case may be. Such determination shall be made, with respect to a person who is a Director or Officer at the time of such determination, (i) by a majority vote of the Directors who are not parties to such action, suit or proceeding, even though less than a quorum, or (ii) by a Committee of such Directors designated by a majority vote of such Directors, even though less than a quorum, or (iii) if there are no such Directors, or if such Directors so direct, by independent legal counsel in a written opinion, or (iv) by the stockholders. Such determination shall be made, with respect to former Directors and Officers, by any person or persons having the authority to act on the matter on behalf of the Corporation. To the extent, however, that a present or former Director or Officer of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding described above, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith, without the necessity of authorization in the specific case.

SECTION 4. *Good Faith Defined.* For purposes of any determination under Section 3 of this Article VI, a person shall be deemed to have acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, or, with respect to any criminal action or proceeding, to have had no reasonable cause to believe such person's conduct was unlawful, if such person's action is based on the records or books of account of the Corporation or another enterprise, or on information supplied to such person by the Officers of the Corporation or officers of another enterprise in the course of their duties, or on the advice of legal counsel for the Corporation or another enterprise or on information or records given or reports made to the Corporation or another enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Corporation or another enterprise. The provisions of this Section 4 shall not be deemed to be exclusive or to limit in any way the circumstances in which a person may be deemed to have met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VI, as the case may be.

SECTION 5. *Indemnification by a Court.* Notwithstanding any contrary determination in the specific case under Section 3 of this Article VI, and notwithstanding the absence of any determination thereunder, any Director or Officer may apply to the Court of Chancery of the State of Delaware or any other court of competent jurisdiction in the State of Delaware for indemnification to the extent otherwise permissible under Section 1 or Section 2 of this Article VI. The basis of such indemnification by a court shall be a determination by such court that indemnification of the Director or Officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VI, as the case may be. Neither a contrary determination in the specific case under Section 3 of this Article VI nor the absence of any determination thereunder shall be a defense to such application or create a presumption that the Director or Officer seeking indemnification has not met any applicable standard of conduct. Notice of any application for indemnification pursuant to this Section 5 shall be given to the Corporation promptly upon the filing of such application. If successful, in whole or in part, the Director or Officer seeking indemnification shall also be entitled to be paid the expense of prosecuting such application.

SECTION 6. *Expenses Payable in Advance.* Subject to applicable law, expenses (including attorneys' fees) incurred by a current or former Director or Officer of the Corporation, or a

current or former Director or Officer serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, in defending any civil, criminal, administrative or investigative action, suit or proceeding shall be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such person to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation as authorized in this Article VI. Subject to applicable law, such expenses (including attorneys' fees) incurred by other employees and agents may be so paid upon such terms and conditions, if any, as the Corporation deems appropriate.

SECTION 7. *Nonexclusivity of Indemnification and Advancement of Expenses.* The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the Certificate of Incorporation, these Bylaws, agreement, vote of stockholders or disinterested Directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office, it being the policy of the Corporation that indemnification of the persons specified in Section 1 and Section 2 of this Article VI shall be made to the fullest extent permitted by law. The provisions of this Article VI shall not be deemed to preclude the indemnification of any person who is not specified in Section 1 or Section 2 of this Article VI but whom the Corporation has the power or obligation to indemnify under the provisions of the DGCL, or otherwise, including pursuant to Section 12 of this Article VI.

SECTION 8. *Insurance.* The Corporation shall purchase and maintain insurance on behalf of any person who is or was a Director or Officer of the Corporation, or is or was a Director or Officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power or the obligation to indemnify such person against such liability under the provisions of this Article VI.

SECTION 9. *Certain Definitions.* For purposes of this Article VI, references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors or officers, so that any person who is or was a director or officer of such constituent corporation, or is or was a director or officer of such constituent corporation serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VI with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued. The term "another enterprise" as used in this Article VI shall mean any other corporation or any partnership, joint venture, trust, employee benefit plan or other enterprise of which such person is or was serving at the request of the Corporation as a director, officer, employee or agent. For purposes of this Article VI, references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the Corporation" shall include any service as a Director, Officer, employee or agent of the Corporation which imposes duties on, or involves services by, such Director or Officer with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Article VI.

SECTION 10. *Survival of Indemnification and Advancement of Expenses.* The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VI shall continue as to a person who has ceased to be a Director or Officer of the Corporation and shall inure to the benefit of the heirs, executors and administrators of such a person.

SECTION 11. *Limitation on Indemnification.* Notwithstanding anything contained in this Article VI to the contrary, except for proceedings to enforce rights to indemnification (which shall be governed by Section 5 of this Article VI), the Corporation shall not be obligated to indemnify any current or former Director or Officer (or his or her heirs, executors or personal or legal representatives) or advance expenses in connection with a proceeding (or part thereof) initiated by such person unless such proceeding (or part thereof) was authorized or consented to by the Board of Directors of the Corporation.

SECTION 12. *Indemnification of Employees and Agents.* The Corporation may, to the extent authorized from time to time by the Board of Directors, provide rights to indemnification and to the advancement of expenses to employees and agents of the Corporation similar to those conferred in this Article VI to Directors and Officers of the Corporation.

SECTION 13. *Amendment or Repeal.* The provisions of this Article VI shall constitute a contract between the Corporation, on the one hand, and, on the other hand, each individual who serves or has served as a Director or Officer of the Corporation (whether before or after the adoption of these Bylaws), in consideration of such person's performance of such services, and pursuant to this Article VI the Corporation intends to be legally bound to each such current or former Director or Officer of the Corporation. With respect to current and former Directors and Officers of the Corporation, the rights conferred under this Article VI are present contractual rights and such rights are fully vested, and shall be deemed to have vested fully, immediately upon adoption of these Bylaws. With respect to any Directors or Officers of the Corporation who commence service following adoption of these Bylaws, the rights conferred under this provision shall be present contractual rights and such rights shall fully vest, and be deemed to have vested fully, immediately upon such Director or Officer commencing service as a Director or Officer of the Corporation. Any repeal or modification of the foregoing provisions of this Article VI shall not adversely affect any right or protection (i) hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification or (ii) under any agreement providing for indemnification or advancement of expenses to an Officer or Director of the Corporation in effect prior to the time of such repeal or modification.

ARTICLE VII Officers

SECTION 1. *General.* The Officers of the Corporation shall be chosen by the Board of Directors and shall be a Chairman of the Board, a Lead Independent Director, a Chief Executive Officer, a President, one or more Vice Presidents, a Secretary, a Treasurer and such other Officers as may from time to time be chosen by the Board of Directors. The Chief Executive Officer shall be empowered to appoint and remove from office, at his or her discretion, Assistant Vice Presidents and Assistant Secretaries. Any number of offices may be held by the same person, unless prohibited by applicable law, the Certificate of Incorporation or these Bylaws. The Officers of the Corporation need not be stockholders of the Corporation nor, except in the case of the Chairman of the Board and the Lead Independent Director, need such Officers be Directors of the Corporation.

SECTION 2. *Election; Term; Vacancies.* The Board of Directors, at its first meeting held after each annual meeting of stockholders, shall elect the Officers of the Corporation who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors; and each Officer of the Corporation

shall hold office until such Officer's successor is elected and qualified, or until such Officer's earlier death, resignation or removal. Any Officer chosen or appointed by the Board of Directors may be removed either with or without cause at any time by the affirmative vote of a majority of the entire Board of Directors. If the office of any Officer other than an assistant Officer becomes vacant for any reason, the vacancy shall be filled by the affirmative vote of a majority of the entire Board of Directors.

SECTION 3. *Chairman of the Board*. A Chairman of the Board shall be chosen from among the Directors. The Chairman of the Board shall preside at all meetings of the stockholders and the Board of Directors at which he or she shall be present. The Chairman of the Board shall also perform such other duties and may exercise such other powers as may from time to time be assigned to such Director by these Bylaws or by the Board of Directors.

SECTION 4. *Lead Independent Director*. One of the Independent Directors shall be designated by the Independent Directors to serve as Lead Independent Director until replaced by the Independent Directors. The Lead Independent Director will, with the Chairman of the Board of Directors, establish the agenda for regular Board meetings and serve as chairman of Board of Directors meetings in the absence of the Chairman of the Board of Directors; establish the agenda for meetings of the Independent Directors; coordinate the activities of the other Independent Directors; and perform such other duties as may be established or delegated by the Board of Directors. An "Independent Director" means a person who satisfies the requirements for independence under the applicable provisions, as then in effect, of the principal stock exchange on which the Corporation's common stock is listed for trading and such additional requirements as may be established by the Board of Directors.

SECTION 5. *Vice Chairman*. The Board of Directors may designate one or more Vice Chairmen who shall, subject to the control of the Board of Directors, perform such duties as may be prescribed by the Board of Directors.

SECTION 6. *Chief Executive Officer*. The Chief Executive Officer shall, subject to the control of the Board of Directors, have responsibility for the general and active management of the business of the Corporation and shall have the general powers and duties of management usually vested in the Chief Executive Officer of a corporation. The Chief Executive Officer shall see that all orders and resolutions of the Board of Directors are carried into effect and shall implement the general directives, plans and policies formulated by the Board of Directors. The Chief Executive Officer may employ and discharge employees and agents of the Corporation, except such as shall be appointed by the Board of Directors, and he or she may delegate these powers. In the absence or disability of the Chairman of the Board, the Chief Executive Officer shall preside at all meetings of the stockholders. Except where by law the signature of the President is required, the Chief Executive Officer shall exercise all the powers and discharge all the duties of the President. The Chief Executive Officer shall also perform such other duties and may exercise such other powers as may from time to time be assigned to such Officer by these Bylaws or by the Board of Directors.

SECTION 7. *President*. The President shall have such responsibilities and authority as determined by these Bylaws or by the Board of Directors of the Corporation.

SECTION 8. *Chief Financial Officer*. The Chief Financial Officer shall, subject to the control of the Board of Directors, have responsibility for the financial management of the Corporation. The Chief Financial Officer shall have such powers and perform such duties as from time to time may be assigned to him or her by the Board of the Directors or by the Chief Executive Officer. The Chief Financial Officer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of the Corporation, using appropriate accounting principles; have supervision over and be responsible for the financial affairs of the Corporation;

cause to be kept at the principal executive office of the Corporation and preserved for review as required by law or regulation all financial records of the Corporation; be responsible for the establishment of adequate internal control over the transactions and books of account of the Corporation; and be responsible for rendering to the proper Officers and the Board of Directors upon request, and to the stockholders and other parties as required by law or regulation, financial statements of the Corporation.

SECTION 9. *Vice President*. The Vice President or Vice Presidents, in the order designated by the Board of Directors, shall be vested with all the powers and required to perform all the duties of the President in his or her absence or disability and shall perform such other duties as may be prescribed by the Board of Directors.

SECTION 10. *Secretary*. The Secretary shall perform all the duties commonly incident to his or her office, and keep accurate minutes of all meetings of the stockholders, the Board of Directors and the Committees of the Board of Directors, recording all the proceedings of such meetings in a book or books to be kept for that purpose. He or she shall give, or cause to be given, proper notice of meetings of stockholders and the Board of Directors. If the Secretary shall be unable or shall refuse to cause to be given notice of all meetings of the stockholders and meetings of the Board of Directors, then either the Board of Directors or the Chief Executive Officer may choose another Officer to cause such notice to be given. The Secretary shall have custody of the seal of the Corporation and the Secretary shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by the signature of the Secretary. The Board of Directors may give general authority to any other Officer to affix the seal of the Corporation and to attest to the affixing by such Officer's signature. The Secretary shall see that all books, reports, statements, certificates and other documents and records required by law to be kept or filed are properly kept or filed, as the case may be, and shall perform such other duties as the Board of Directors shall designate.

SECTION 11. *Treasurer*. The Treasurer may be the Chief Financial Officer of the Corporation. The Treasurer shall have custody of the funds and securities of the Corporation and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all monies and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board of Directors. He or she shall disburse the funds of the Corporation as may be ordered by the Board of Directors, Chief Executive Officer or Chief Financial Officer, taking proper vouchers for such disbursements, and shall render to the Chief Executive Officer or Chief Financial Officer and the Board of Directors, at its regular meetings, or whenever the Board of Directors may require it, an account of all his or her transactions as Treasurer and of the financial condition of the Corporation. Until such time as a controller may be elected by the Board of Directors, the Treasurer shall also maintain adequate records of all assets, liabilities and transactions of the Corporation and shall see that adequate audits thereof are currently and regularly made. The Treasurer shall cause to be prepared, compiled and filed such reports, statements, statistics and other data as may be required by law or prescribed by the Chief Executive Officer or the Chief Financial Officer. If required by the Board of Directors, the Treasurer shall give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of the office of the Treasurer and for the restoration to the Corporation, in case of the Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Treasurer's possession or under the Treasurer's control belonging to the Corporation. The Treasurer shall also perform such other duties and may exercise such other powers as may from time to time be assigned to such Officer by these Bylaws or by the Board of Directors, the Chief Executive Officer or the Chief Financial Officer.

SECTION 12. *Other Officers.* Such other Officers as the Board of Directors may choose shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors. The Board of Directors may delegate to any other Officer of the Corporation the power to choose such other Officers and to prescribe their respective duties and powers.

SECTION 13. *Voting Securities Owned by the Corporation.* Powers of attorney, proxies, waivers of notice of meeting, consents and other instruments relating to securities owned by the Corporation may be executed in the name of and on behalf of the Corporation by the Chairman of the Board, Chief Executive Officer, President, Chief Financial Officer, any Vice President or any other Officer authorized to do so by the Board of Directors and any such Officer may, in the name of and on behalf of the Corporation, take all such action as any such Officer may deem advisable to vote in person or by proxy at any meeting of security holders of any corporation in which the Corporation may own securities and at any such meeting shall possess and may exercise any and all rights and power incident to the ownership of such securities and which, as the owner thereof, the Corporation might have exercised and possessed if present. The Board of Directors may, by resolution, from time to time confer like powers upon any other person or persons.

ARTICLE VIII **Stock**

SECTION 1. *Certificates.* The Board of Directors of the Corporation may provide by resolution or resolutions that some or all of any or all classes or series of its capital stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. To the extent certificates are issued, every holder of certificated shares of stock in the Corporation shall be entitled to have a stock certificate signed by, or in the name of, the Corporation (i) by the Chairman of the Board, the President or a Vice President and (ii) by the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary of the Corporation, certifying the number of shares owned by such stockholder in the Corporation. Any or all of the signatures on a stock certificate may be a facsimile, either engraved or printed. The Board of Directors may from time to time appoint and maintain one or more transfer agents and registrars of transfers, which may be the same agency or agencies, and may require all certificates to bear the signatures of one (1) of such transfer agents and one (1) of such registrars of transfers, or as the Board of Directors may otherwise direct. The stock certificates of the Corporation, if any, shall bear the seal of the Corporation or shall bear a facsimile of such seal engraved or printed.

In case any Officer, transfer agent or registrar who has signed, or whose facsimile signature or signatures have been used on, any certificate or certificates of stock, shall have ceased to be an Officer, transfer agent or registrar, whether because of death, resignation or otherwise, before such certificate or certificates is issued and delivered by the Corporation, such certificate or certificates may nevertheless be issued and delivered by the Corporation with the same effect as if such person were such Officer, transfer agent or registrar at the date of issue.

SECTION 2. *Lost Certificates.* If a certificate of stock is lost, stolen or destroyed, the Board of Directors may, at its discretion, direct a new certificate or uncertificated shares to be issued by the Corporation in its stead upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed and the giving of a satisfactory bond of indemnity, in an amount sufficient to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate or the issuance of such new certificate or uncertificated shares. A certificate or uncertificated shares may be issued without requiring bond when, in the judgment of the Board of Directors, it is proper to do so.

SECTION 3. *Transfers*. Stock of the Corporation shall be transferable in the manner prescribed by applicable law and in these Bylaws. Transfers of stock shall be made on the books of the Corporation only by the person named in the stock records of the Corporation or by such person's attorney lawfully constituted in writing and upon the surrender of any certificate therefor, properly endorsed for transfer (or by delivery of duly executed instructions with respect to uncertificated shares) and payment of all necessary transfer taxes; provided, however, that such surrender and endorsement or payment of taxes shall not be required in any case in which the Officers of the Corporation shall determine to waive such requirement. Every certificate exchanged, returned or surrendered to the Corporation shall be marked "Cancelled," with the date of cancellation, by the Secretary of the Corporation or the transfer agent thereof. No transfer of stock shall be valid as against the Corporation for any purpose until it shall have been entered in the stock records of the Corporation by an entry showing from and to whom transferred.

SECTION 4. *Dividend Record Date*. In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

SECTION 5. *Stockholders of Record*. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise required by law.

ARTICLE IX **Notices**

SECTION 1. *Notices*. Whenever written notice is required by law, the Certificate of Incorporation or these Bylaws, to be given to any stockholder, such notice may be given by mail, addressed to such stockholder, at such person's address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Corporation under applicable law, the Certificate of Incorporation or these Bylaws shall be effective if given by a form of electronic transmission if consented to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice to the Corporation. Any such consent shall be deemed to be revoked if (i) the Corporation is unable to deliver by electronic transmission two consecutive notices by the Corporation in accordance with such consent, and (ii) such inability becomes known to the Secretary of the Corporation or to the transfer agent, or other person responsible for the giving of notice; provided, however, that the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action. Notice given by electronic transmission, as described above, shall be deemed given: (i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice; (ii) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice; (iii) if by a posting on an electronic network, together with separate notice to the stockholder of such specific posting, upon the later of (a) such posting and (b) the giving of such separate notice; and (iv) if by any other form of electronic transmission, when directed to the stockholder. Notice to

Directors or Committee members may be given personally, by mail as described above, or by telegram, telex, cable or by means of electronic transmission.

SECTION 2. *Waivers of Notice*. Whenever any notice is required by applicable law, the Certificate of Incorporation or these Bylaws, to be given to any Director, member of a Committee or stockholder, a waiver thereof in writing, signed by the person or persons entitled to notice, or a waiver by electronic transmission by the person or persons entitled to notice, whether before or after the time stated therein, shall be deemed equivalent thereto. Attendance of a person at a meeting, present in person or represented by proxy, shall constitute a waiver of notice of such meeting, except where the person attends the meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any annual or special meeting of stockholders or any regular or special meeting of the Directors or members of a Committee of Directors need be specified in any written waiver of notice unless so required by law, the Certificate of Incorporation or these Bylaws.

ARTICLE X **General Provisions**

SECTION 1. *Fiscal Year*. The fiscal year of the Corporation shall begin the first day of January and end on the 31st day of December of each year.

SECTION 2. *Dividends*. Dividends upon the capital stock of the Corporation, subject to the requirements of the DGCL and the provisions of the Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting of the Board of Directors (or any action by written consent in lieu thereof in accordance with Section 7 of Article IV hereof) and may be paid in cash, in property or in shares of the Corporation's capital stock. Before payment of any dividend, the Directors may set apart out of any of the funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, deems proper as a reserve or reserves to meet contingencies, or for purchasing any of the shares of capital stock, warrants, rights, options, bonds, debentures, notes, scrip or other securities or evidences of indebtedness of the Corporation, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for any proper purpose, and the Board of Directors may modify or abolish any such reserve or reserves.

SECTION 3. *Disbursements*. All checks, drafts, demands or orders for the payment of money and notes of the Corporation shall be signed by the Chief Financial Officer, Treasurer or by such other Officer, Officers, person or persons as the Board of Directors may from time to time designate.

SECTION 4. *Corporate Seal*. The corporate seal shall be in such form as determined from time to time by resolution of the Board of Directors. The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE XI **Amendment to Bylaws**

Subject to the provisions of the Certificate of Incorporation, these Bylaws may be altered, amended or repealed, in whole or in part, or new Bylaws may be adopted by the stockholders or by the Board of Directors; provided, however, that notice of such alteration, amendment, repeal or adoption of new Bylaws be contained in the notice of such meeting of the stockholders or the Board of Directors, as the case may be. All such amendments must be approved by a majority of the Board of Directors then in office or by the affirmative vote of the holders of at least 80% of

the voting power of the outstanding shares of capital stock entitled to vote for the election of Directors.

ARTICLE XII **Certificate of Incorporation to Govern**

Notwithstanding anything to the contrary herein, in the event any provision contained herein is inconsistent with or conflicts with a provision of the Certificate of Incorporation, such provision herein shall be superseded by the inconsistent provision in the Certificate of Incorporation, to the extent necessary to give effect to such provision in the Certificate of Incorporation.

ARTICLE XIII **Limitations of Ownership by Non-Citizens**

SECTION 1. *Equity Securities*. All (a) capital stock of, or other equity interests in, the Corporation, (b) securities convertible into or exchangeable for shares of capital stock, voting securities or other equity interests in the Corporation, or (c) options, warrants or other rights to acquire the securities described in clauses (a) and (b), whether fixed or contingent, matured or unmatured, contractual, legal, equitable or otherwise (collectively, “*Equity Securities*”) shall be subject to limitations set forth in this Article XIII.

SECTION 2. *Non-Citizen Voting and Ownership Limitations*. It is the policy of the Corporation that, consistent with the requirements of Subtitle VII of Title 49 of the United States Code, as amended, or as the same may be from time to time amended (the “*Aviation Act*”), that persons or entities who are not a “citizen of the United States” (as defined in Section 40102(a)(15) of the Aviation Act, in any similar legislation of the United States enacted in substitution or replacement thereof, and as interpreted by the Department of Transportation, its predecessors and successors, from time to time), including any agent, trustee or representative of such persons or entities (each, a “*Non-Citizen*”), shall not be entitled to own (beneficially or of record) and/or control more than (a) 24.9% of the aggregate votes of all outstanding Equity Securities of the Corporation (the “*Voting Cap Amount*”) or (b) 49.0% of the aggregate number of outstanding shares of Equity Securities of the Corporation (the “*Control Cap Amount*”); provided, however, in no event shall Non-Citizens who are resident of a country that is not party to an “open-skies” agreement with the United States (the “*NOS Non-Citizens*”) be entitled to own (beneficially or of record) and/or control more than 24.9% of the aggregate number of outstanding shares of Equity Securities of the Corporation (the “*NOS Cap Amount*” and, together with the Control Cap Amount, the “*Absolute Cap Amount*”). If Non-Citizens nonetheless at any time own and/or control more than the Voting Cap Amount, the voting rights of the Equity Securities in excess of the Voting Cap Amount shall be automatically suspended in accordance with Section 3 below. Further, if at any time a transfer or issuance (other than an issuance of Emergence Securities (as defined below)) of Equity Securities to a Non-Citizen would result in Non-Citizens owning more than the Absolute Cap Amount, such transfer or issuance shall be void and of no effect, in accordance with Section 3 below.

SECTION 3. *Foreign Stock Record*. (a) The Corporation or any transfer agent shall maintain a separate stock record, designated the “*Foreign Stock Record*,” for the registration of Equity Securities held by Non-Citizens. It is the duty of each stockholder who is a Non-Citizen to register his, her or its Equity Securities on the Foreign Stock Record. The beneficial ownership of Equity Securities by Non-Citizens shall be determined in conformity with regulations prescribed by the Board of Directors. Only Equity Securities that have been issued and are outstanding may be registered in the Foreign Stock Record. The Foreign Stock Record shall include (i) the name and nationality of each Non-Citizen owning Equity Securities, (ii) the number of Equity Securities owned by each such Non-Citizen and (iii) the date of registration of such Equity Securities in the Foreign Stock Record.

(b) In no event shall Equity Securities owned (beneficially or of record) by Non-Citizens representing more than the Voting Cap Amount be voted. In the event that Non-Citizens shall own (beneficially or of record) or have voting control over any Equity Securities, the voting rights of such persons shall be subject to automatic suspension to the extent required to ensure that the Corporation is in compliance with applicable provisions of law and regulations relating to ownership or control of a United States air carrier. Voting rights of Equity Securities owned (beneficially or of record) by Non-Citizens shall be suspended in reverse chronological order based upon the date of registration in the Foreign Stock Record (except as otherwise provided in Section 6 of this Article XIII).

(c) In the event that any transfer or issuance (other than an issuance of Emergence Securities) of Equity Securities to a Non-Citizen would result in Non-Citizens owning (beneficially or of record) more than the Absolute Cap Amount, such transfer or issuance shall be void and of no effect and shall not be recorded in the Foreign Stock Record or the stock records of the Corporation. In the event that the Corporation shall determine that the Equity Securities registered on the Foreign Stock Record or otherwise registered on the stock records of the Corporation and owned (beneficially or of record) by Non-Citizens, taken together (without duplication), exceed the Absolute Cap Amount, such number of shares shall be removed from the Foreign Stock Record and the stock records of the Corporation, as applicable, in reverse chronological order based on the date of registration in the Foreign Stock Record and the stock records of the Corporation, as applicable (except as otherwise provided in Section 6 of this Article XIII), and any transfer or issuance (other than an issuance of Emergence Securities) that resulted in such event shall be deemed void and of no effect, such that the Foreign Stock Record and the stock records of the Corporation, as applicable, reflect the ownership of shares without giving effect to any transfer or issuance that caused the Corporation to exceed the Absolute Cap Amount until the aggregate number of shares registered in the Foreign Stock Record or otherwise registered to Non-Citizens is equal to the Control Cap Amount or NOS Cap Amount, as applicable.

SECTION 4. *Registration of Shares.* Registry of the ownership of Equity Securities by Non-Citizens shall be effected by written notice to, and in the form specified from time to time by, the Secretary of the Corporation. Subject to the limitations set forth in Section 3 and the exceptions set forth in Section 6, the order in which such shares shall be registered on the Foreign Stock Record shall be chronological, based on the date the Corporation received notice to so register such shares; provided, that any Non-Citizen who purchases or otherwise acquires shares that are registered on the Foreign Stock Record and who registers such shares in its own name within 30 days of such acquisition will assume the position of the seller of such shares in the chronological order of shares registered on the Foreign Stock Record.

SECTION 5. *Certification of Shares.* (a) The Corporation may by notice in writing (which may be included in the form of proxy or ballot distributed to stockholders in connection with the annual meeting or any special meeting of the stockholders of the Corporation, or otherwise) require a person that is a holder of record of shares or that the Corporation knows to have, or has reasonable cause to believe has beneficial ownership of shares to certify in such manner as the Corporation shall deem appropriate (including by way of execution of any form of proxy or ballot of such person) that, to the knowledge of such person:

- (1) all shares as to which such person has record ownership or beneficial ownership are owned and controlled only by citizens of the United States; or
- (2) the number of shares of record or beneficially owned by such person that are owned and/or controlled by Non-Citizens is as set forth in such certificate.

- (b) With respect to any shares identified in response to clause (a)(2) above, the Corporation may require such person to provide such further information as the Corporation may reasonably require in order to implement the provisions of this Article XIII.
- (c) For purposes of applying the provisions of this Article XIII with respect to any shares, in the event of the failure of any person to provide the certificate or other information to which the Corporation is entitled pursuant to this Section 5, the Corporation shall presume that the shares in question are owned and/or controlled by Non-Citizens.

SECTION 6. *Special Rules Applicable to Equity Securities Issued Upon Effectiveness of the Plan and Consummation of the Merger.* (a) All Equity Securities that are (i) initially issued under the Debtors' Joint Plan of Reorganization filed in connection with the Corporation's chapter 11 cases (the "Plan") or pursuant to the transactions contemplated by the Merger Agreement (all such Equity Securities, including all Equity Securities issued pursuant to the conversions of any such Equity Securities, the "Emergence Securities") and (ii) registered on the Foreign Stock Record by the Non-Citizen initially receiving such Emergence Securities on or prior to the date that is 15 business days following the issuance of such Emergence Securities (all such Emergence Securities, the "Registered Emergence Securities"), shall be deemed to have been registered on the Foreign Stock Record as of the Closing Date simultaneously with all other Registered Emergence Securities, and, for purposes of the last sentence of Section 3(b) of this Article XIII, shall be deemed to have been registered on the Foreign Stock Record prior to any Equity Securities other than Registered Emergence Securities. For the avoidance of doubt, all Equity Securities issued pursuant to the conversion of any Registered Emergence Securities shall be deemed to have been registered on the Foreign Stock Record as of the Closing Date simultaneously with all other Registered Emergence Securities. Equity Securities shall only constitute Registered Emergence Securities for so long as they (i) remain on the Foreign Stock Record and (ii) continue to be owned (beneficially or of record) by the Non-Citizen initially receiving such Registered Emergence Securities under the Plan or pursuant to the Merger Agreement.

(b) Notwithstanding the last sentence of Section 3(b) of this Article XIII, if the voting rights of all of the Registered Emergence Securities, taken together (and without duplication), exceed the Voting Cap Amount, the voting rights of the owners (whether beneficial or of record) of the Registered Emergence Securities shall be suspended, for the purpose of each vote by the stockholders of the Corporation, on a pro rata basis among all such owners (and not in reverse chronological order) so that the aggregate voting rights afforded to all of the Registered Emergence Securities, taken together (without duplication), are equal to the Voting Cap Amount, until such time as, absent such pro rata suspension, the voting rights of all of the Registered Emergence Securities, taken together (without duplication), would not exceed the Voting Cap Amount.

(c) Notwithstanding Section 3(c) of this Article XIII, in the event the number of Emergence Securities that are owned (beneficially or of record) by Non-Citizens exceeds the Absolute Cap Amount, the Corporation shall be permitted to compel holders of Emergence Securities that are Non-Citizens and own more than 0.1% of the number of outstanding Emergence Securities (such status to be determined 120 days after the Closing Date, each, a "Substantial Holder"), on, subject to the proviso set forth below, a pro rata basis among all Substantial Holders (and not in reverse chronological order), to sell or otherwise transfer to persons or entities who are a "citizen of the United States" a number of Emergence Securities held by such Substantial Holders such that the aggregate number of Emergence Securities held by Non-Citizens, taken together (without duplication), is equal to or lesser than the Absolute Cap Amount, or, if any such Substantial Holder fails to promptly (and in any event within 30 days of receipt of written notice of such obligation to sell or otherwise transfer) sell or otherwise transfer such number of Emergence Securities (or a portion thereof), to cause such number of Emergence Securities of

such Substantial Holder (or such portion thereof) to be sold or otherwise transferred, with the Corporation acting as agent for, and on behalf of, such Substantial Holder, with proceeds thereof, less any costs of administering such sale or transfer, delivered to such Substantial Holder promptly (and in any event within 30 days of such sale or transfer); provided, however, in the event the NOS Cap Amount is exceeded but the Control Cap Amount is not, the Corporation shall only compel Substantial Holders who are NOS Non-Citizens (“NOS Substantial Holders”), on a pro rata basis among all NOS Substantial Holders (and not in reverse chronological order), to sell or otherwise transfer to persons or entities who are a “citizen of the United States”, a number of Emergence Securities held by such NOS Substantial Holders such that the aggregate number of Emergence Securities held by NOS Non-Citizens, taken together (without duplication), is equal to or lesser than the NOS Cap Amount (or the Corporation shall otherwise take the actions set forth in this Section 6(c)).

* * * * *

Certain information contained in this document, marked by brackets, has been omitted because it is both (i) not material and (ii) is the type that the registrant treats as private or confidential.

SUPPLEMENTAL AGREEMENT NO. 27

to

PURCHASE AGREEMENT NO. 03735

between

THE BOEING COMPANY

and

AMERICAN AIRLINES, INC.

Relating to Boeing Model 737 MAX Aircraft

This SUPPLEMENTAL AGREEMENT No. 27 (**SA-27**) To PURCHASE AGREEMENT NO. 03735, entered into as of October 3, 2022 (**Effective Date**), by and between THE BOEING COMPANY, a Delaware corporation with offices in Seattle, Washington (**Boeing**) and AMERICAN AIRLINES, INC. a Delaware corporation with offices in Fort Worth, Texas, together with its successors and permitted assigns (**Customer**);

WHEREAS, Boeing and Customer entered into Purchase Agreement No. 03735 dated February 1, 2013 relating to Boeing Model 737 MAX Aircraft, as amended and supplemented (**Purchase Agreement**) and capitalized terms used herein without definitions shall have the meanings specified therefore in such Purchase Agreement;

WHEREAS, in [****] to the [****] Aircraft that Customer had previously [****] as set forth in Table 1R12, 1-2, 1-3R6, and 1-4R5 to the Purchase Agreement, Customer [****] with the execution of this SA-27, [****] in Attachment A(R9) to Letter Agreement No. AAL-PA-03735-LA-1106651R9 entitled “[****]_(****) Letter Agreement” with [****], pursuant to the terms and conditions of the [****] Letter Agreement.

NOW, THEREFORE, in consideration of the mutual covenants herein contained, the parties agree that the Purchase Agreement is amended and supplemented as set forth below and otherwise agree as follows:

1. Table of Contents.

The “Table Of Contents” to the Purchase Agreement referencing SA-26 in the footer is deleted in its entirety and is replaced with the new “Table Of Contents” (attached hereto) referencing SA-27 in the footer to reflect changes made to the Purchase Agreement by this SA-27. Such new Table of Contents is hereby incorporated into the Purchase Agreement in replacement of its predecessor.

2. Tables.

Table 1-4R5. Table 1-4R5 entitled “737-8 [****] Aircraft Delivery, Description, Price and Advance Payments” is hereby deleted in its entirety and replaced with Table 1-4R6 entitled “737-8 [****] Aircraft Delivery, Description, Price and Advance Payments” (attached hereto) referencing SA-27 in the footer is hereby incorporated into the Purchase Agreement in replacement of Table 1-4R5. For avoidance of doubt, the only difference between Table 1-4R5 and Table 1-4R6 is the [****] in the Purchase Agreement, resulting in Table 1-4R6.

3. Letter Agreements.

3.1 Letter Agreement No. AAL-PA-03735-LA-1106651R9 (including Attachment A(R9) entitled [****]) is hereby deleted in its entirety and replaced with Letter Agreement No. AAL-PA-03735-LA-1106651R10 (including Attachment A(R10) (attached hereto) entitled [****] ([****])) referencing SA-27 in the footer. The [****] is hereby incorporated into the Purchase Agreement.

3.2 In addition to the [****], the parties agree [****] to Letter Agreement No. AAL-PA-03735-LA-1106652 entitled [****] will be [****], or such [****], to [****].

i. [****].

4.1 [****] for the [****], [****] ([****]) ([****]) specified in Table 1-4R6 to the Purchase Agreement for the [****]) are [****] per [****] of the [****] and as specified in the [****] upon execution of this SA-27.

j. Miscellaneous.

5.1 The Purchase Agreement is amended and supplemented as set forth above by the revised Table Of Contents, Table 1-4R6, and the [****]. All other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.

5.2 The following references in the Purchase Agreement and any supplemental agreements and associated letter agreements are deemed to refer to “Table 1R12, Table 1-2, Table 1-3R6, and Table 1-4R6”:

- “Table 1” or “Table 1R2” or “Table 1R3”, or “Table1R4 and Table 1-2”,
- “Table 1R5 and Table 1-2”,
- “Table 1R6, Table 1-2, and Table 1-3”,
- “Table 1R7, Table 1-2, and Table 1-3R1”,
- “Table 1R8, Table 1-2, and Table 1-3R2”,
- “Table 1R9, Table 1-2, and Table 1-3R3”,
- “Table 1R10, Table 1-2, and Table 1-3R4”,
- “Table 1R11, Table 1-2, and Table 1-3R5”,
- “Table 1R12, Table 1-2 and Table 1-3R6”,
- “Table 1R12, Table 1-2, Table 1-3R6, and Table 1-4”,
- “Table 1R12, Table 1-2, Table 1-3R6, and Table 1-4R1”
- “Table 1R12, Table 1-2, Table 1-3R6, and Table 1-4R2”
- “Table 1R12, Table 1-2, Table 1-3R6, and Table 1-4R3”.
- “Table 1R12, Table 1-2, Table 1-3R6, and Table 1-4R4”

- “Table 1R12, Table 1-2, Table 1-3R6, and Table 1-4R5”

References in the Purchase Agreement and any supplemental agreements and associated letter agreements to “Table 1R4” or “Table 1R5” (where no corresponding reference to Table 1-2 is made) are deemed to refer to “Table 1R12 and Table 1-3R6”, (including without limitation, and for the avoidance of doubt, the references to Table 1R4 in Section 3 of Supplemental Agreement No. 9 dated April 6, 2018). However, references in the Purchase Agreement to Table 1R5 in Letter Agreement AAL-PA-LA-1106650R4 entitled “[****]” is deemed to only refer to Table 1R12 and the references to Table 1R5 in the Slide Letter Agreement remain references to Table 1R5.

References in the Purchase Agreement and any supplemental agreements and associated letter agreements to “Table 1R6”, “Table 1R7”, “Table 1R8”, “Table 1R9”, “Table 1R10” or “Table 1R11” (where no corresponding reference to either Table 1-2 or Table 1-3 is made) are deemed to refer to only “Table 1R12”.

Additionally, for the avoidance of doubt, references in the Purchase Agreement and any supplemental agreements and associated letter agreements to “Table 1-2” (where no corresponding reference to Table 1R4 or Table 1R5 is made) remain references to “Table 1-2”.

5.3 References in the Purchase Agreement and any supplemental agreements and associated letter agreements to the tables, exhibits, supplemental exhibits and letter agreements listed in the left column of the below table shall be deemed to refer to the corresponding revised versions of the tables, exhibits, supplemental exhibits and letter agreements listed in the right column of the below table.

<u>Reference</u>	<u>Replacement Reference</u>
Letter Agreement No. AAL-PA-03735-LA-1106651R9	Letter Agreement No. AAL-PA-03735-LA-1106651R10

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AGREED AND ACCEPTED this

October 3, 2022

Date

THE BOEING COMPANY

/s/ The Boeing Company

Signature

The Boeing Company

Printed name

Attorney-in-Fact

Title

AMERICAN AIRLINES, INC.

/s/ American Airlines, Inc.

Signature

American Airlines, Inc.

Printed name

VP, Treasurer

Title

PA 03735
SA-27

BOEING PROPRIETARY

TABLE OF CONTENTS

ARTICLES

SA NUMBER

Article 1.	Quantity, Model and Description
Article 2.	Delivery Schedule
Article 3.	Price
Article 4.	Payment
Article 5.	Additional Terms
Article 6.	Confidentiality

TABLE

1R12	Aircraft Information Table	19
1-2	Revised Delivery Aircraft Information Table	9
1-3R6	[****] Aircraft Delivery, Description, Price, and Advance Payments	19
1-4R6	737-8 [****] Aircraft Delivery, Description, Price, and Advance Payments	27

EXHIBITS

AR1	Aircraft Configuration	6
A2	Revised Delivery Aircraft Configuration	9
B.	Aircraft Delivery Requirements and Responsibilities	
C.	Definitions	

SUPPLEMENTAL EXHIBITS

AE1.	[****]	
BFE1.	BFE Variables	
CS1R1.	Customer Support Variables	4
EE1.	[****]	
SLP1.	[****]	

LETTER AGREEMENTS

LA-1106648R1	Special Matters	6
LA-1106649	[****]	
LA-1106650R6	[****]	22
LA-1106651R10	[****]	27
LA-1106652R1	Aircraft Model Substitution	22
LA-1106654	AGTA Terms Revisions for MAX	

TABLE OF CONTENTS, continued

LA-1106655	Open Matters—737 MAX Withdrawn	6
LA-1106656R1	Most Favored Customer – 737 MAX	1
LA-1106657R1	[****]	2
LA-1106663 R1	[****]	2
LA-1106664 R1	[****]	2
LA-1106658	[****]	
LA-1106659R3	[****]	21
LA-1106660	Spare Parts Initial Provisioning	
 <u>LETTER AGREEMENTS, continued</u>		<u>SA NUMBER</u>
LA-1106661R2	[****]	2
LA-1106667	[****]	
LA-1106668R1	[****]	8
LA-1106669	[****]	
LA-1106670	Confidentiality	
LA-1106671R1	Miscellaneous Commitments	1
LA-1106672	Extended Warranty Option	
LA-1106673R1*	[****]	4
LA-1106677	Optional Features Comfort Letter	
LA-1600073	[****]	4
LA-1600852	[****]	5
LA-1603773	[****]	5
LA-1605402R1	[****]	21
LA-1700919	[****]	7
LA-1801206	[****]	9
LA-2002704	[****]	11
LA-2002743	[****]	11
LA-2003342	[****]	11
LA-2003486	[****]	14

* - This is an intended gap as there are no Letter Agreements LA-1106674 through LA-1106676 incorporated by the Purchase Agreement.

**Table 1-4R6 To
Purchase Agreement No. PA-03735
737-8 [****] Aircraft Delivery, Description, Price and Advance Payments**

Airframe

Model/MTOW:	737-8	[****] pounds	Detail Specification:	[****]
		CFMLEAP-	Airframe Price Base Year/Escalation	
Engine Model/Thrust:	1B25	[****] pounds	Formula:	[****] [****]
			Engine Price Base Year/Escalation	
Airframe Price:		\$[****]	Formula:	
Optional Features:		\$[****]		
Sub-Total of Airframe and Features:		\$[****]	Airframe Escalation Data:	
Engine Price (Per Aircraft):		\$[****]	Base Year Index (ECI):	[****]
Aircraft Basic Price (Excluding BFE/SPE): \$[****] Base Year Index (CPI): [****]				
Buyer Furnished Equipment (BFE) Estimate: \$[****]				
Seller Purchased Equipment (SPE) Estimate: \$[****]				
LIFT Seats Provided by Boeing (Estimate): \$[****]				
Deposit per Aircraft: \$[****]				

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)		Nominal Delivery Month	Escalation Estimate	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						Adv Payment Base	At Signing	[****]	[****]
						[****]	[****]	[****]	[****]
[****]-2023	4	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2023	4	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2023	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2023	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2023	1	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2023	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

		Escalation			Escalation Estimate	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
Delivery	Number of	Factor		Nominal Delivery	Adv Payment Base	At Signing	[****]	[****]	Total
Date	Aircraft	(Airframe)		Month	Price Per A/P	[****]	[****]	[****]	[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Total: 30



The Boeing Company
P.O. Box 3707
Seattle, WA 98124-2207

AAL-PA-03735-LA-1106651R10

American Airlines, Inc.
P.O. Box 619616
Dallas-Fort Worth Airport, Texas 75261-9616

Subject: [****]

Reference: Purchase Agreement No. 03735 (**Purchase Agreement**) between The Boeing Company (**Boeing**) and American Airlines, Inc. (**Customer**) relating to Model 737 MAX aircraft (**Aircraft**)

This letter agreement (**Letter Agreement**) amends and supplements the Purchase Agreement. All terms used but not defined in this Letter Agreement shall have the same meaning as in the Purchase Agreement.

1. Right to Purchase [****].

Subject to the terms and conditions contained in this Letter Agreement, in addition to the Aircraft described in Table 1R12, Table 1-2, Table 1-3R6, and Table 1-4R6 to the Purchase Agreement as of the date of execution of this Letter Agreement, [****] ([****]).

2. [****].

2.1 Reserved.

2.2 [****]. The [****] with [****] ([****]) in [****] for each [****] are listed in Attachment A(R10) to this Letter Agreement. No later than [****] to the [****] in each of calendar years [****], Boeing will provide written notice setting forth [****] with a [****] in such calendar year. Such notice will constitute an amendment to Attachment A(R10) to this Letter Agreement.

3. Configuration.

3.1 Subject to the provisions of Section 3.2 below, the configuration for the [****] will be the Detail Specification for the Aircraft at the revision level in effect at the time of [****] (as defined in Section 8 below). Such Detail Specification will be revised to include:

(i) [****],

(ii) [****], and

(iii) [****].

3.2 Boeing reserves the right to [****] the [****] starting from a [****]; so long as Boeing can achieve the same [****] which would result pursuant to the provisions of Section 3.1 above.

AAL-PA-03735-LA-1106651R10 SA-27

[****] Page 1 of 5

BOEING PROPRIETARY



4. Price.

- 4.1 The [****] Aircraft Basic Price for each of the [****] are identified in Attachment A(R10) to this Letter Agreement.
- 4.2 The [****] Aircraft Basic Price for each of the [****] shall be [****].
- 4.3 The Advance Payment Base Price shall be developed in accordance with the terms of the Purchase Agreement and determined at the time of [****].

5. Payment.

5.1 [****]

5.2 [****]

5.3 [****]

6. Reserved.

7. [____].

7.1 Customer may [****] to Boeing [****] ([****]).

7.2 Reserved.

8. [____].

8.1 [****]

8.2 Reserved.

8.2.1 Reserved.

 8.2.2 Reserved.

8.3 Reserved.

 8.3.1 Reserved.

9. Assignment.

Notwithstanding any other provisions of the Purchase Agreement, the rights and obligations described in this Letter Agreement are provided to Customer in consideration of Customer's becoming the operator of the Aircraft and cannot be assigned in whole or, in part, without the prior written consent of Boeing.

10. Confidential Treatment.

The information contained herein represents confidential business information and has value precisely because it is not available generally or to other parties. This Letter Agreement shall be subject to the terms and conditions of Letter Agreement No. AAL-PA-03735-LA-1106670 entitled "Confidentiality".



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AAL-PA-03735-LA-1106651**R10** SA-27
[****] Page 3 of 5

BOEING PROPRIETARY



Very truly yours,

THE BOEING COMPANY

By: /s/ The Boeing Company

Its: Attorney-In-Fact

ACCEPTED AND AGREED TO this

Date: October 3, 2022

AMERICAN AIRLINES, INC.

By: /s/ American Airlines, Inc.

Its: VP Treasurer

AAL-PA-03735-LA-1106651**R10** SA-27
[****] Page 4 of 5

BOEING PROPRIETARY

**Attachment A(R10) To
Letter Agreement No. AAL-PA-03735-LA-1106651R8
737-8 [****] Aircraft Delivery, Description, Price and Advance Payments**

Airframe Model/MTOW: 737-8 [****] pounds
Engine Model/Thrust: CFMLEAP-1B25 [****] pounds
Airframe Price: \$[****]
Optional Features: \$[****]
Sub-Total of Airframe and Features: \$[****]

Detail Specification: [****]

Airframe Price Base Year/Escalation Formula: [****] [****]

Engine Price Base Year/Escalation Formula:

Engine Price (Per Aircraft): \$[****]
Aircraft Basic Price (Excluding BFE/SPE): \$[****]
Buyer Furnished Equipment (BFE)
Estimate: \$[****]
Seller Purchased Equipment (SPE)
Estimate: \$[****]
LIFT Seats Provided by Boeing (Estimate): \$[****]
Deposit per Aircraft: \$[****]

Airframe Escalation Data:

Base Year Index (ECI): [****]

Base Year Index (CPI): [****]

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)		Nominal Delivery Month	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****]	[****]	Total [****]
[****]-2024	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

		Escalation			Escalation Estimate	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
Delivery	Number of	Factor		Nominal Delivery	Adv Payment Base	At Signing	[****]	[****]	Total
Date	Aircraft	(Airframe)		Month	Price Per A/P	[****]	[****]	[****]	[****]
[****]-2025		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

		Escalation			Escalation Estimate	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
Delivery	Number of	Factor		Nominal Delivery	Adv Payment Base	At Signing	Delivery	Number of	Factor
Date	Aircraft	(Airframe)		Month	Price Per A/P	[****]	Date	Aircraft	(Airframe)
[****]-2026		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2027	1	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2027		[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

		Escalation			Escalation Estimate	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
Delivery	Number of	Factor		Nominal Delivery	Adv Payment Base	At Signing	Delivery	Number of	Factor
Date	Aircraft	(Airframe)		Month	Price Per A/P	[\$****]	Date	Aircraft	(Airframe)
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]		No	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]			\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]		No	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]		Yes	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]		No	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]		Yes	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]		No	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]		No	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]		Yes	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]		No	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]		No	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]
[\$**]-2027		[\$**]		Yes	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]	\$[\$**]

		Escalation			Escalation Estimate	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
Delivery	Number of	Factor		Nominal Delivery	Adv Payment Base	At Signing	Delivery	Number of	Factor
Date	Aircraft	(Airframe)		Month	Price Per A/P	[****]	Date	Aircraft	(Airframe)
[****]-2027		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2027		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2028	1	[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2028		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2028		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2028	1	[****]		Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2028		[****]		No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Total: 32

Certain information contained in this document, marked by brackets, has been omitted because it is both (i) not material and (ii) is the type that the registrant treats as private or confidential.

SUPPLEMENTAL AGREEMENT NO. 28

to

PURCHASE AGREEMENT NO. 03735

between

THE BOEING COMPANY

and

AMERICAN AIRLINES, INC.

Relating to Boeing Model 737 MAX Aircraft

This SUPPLEMENTAL AGREEMENT No. 28 (**SA-28**) To PURCHASE AGREEMENT NO. 03735, entered into as of November 4, 2022 (**Effective Date**), by and between THE BOEING COMPANY, a Delaware corporation with offices in Seattle, Washington (**Boeing**) and AMERICAN AIRLINES, INC. a Delaware corporation with offices in Fort Worth, Texas, together with its successors and permitted assigns (**Customer**);

WHEREAS, Boeing and Customer entered into Purchase Agreement No. 03735 dated February 1, 2013 relating to Boeing Model 737 MAX Aircraft, as amended and supplemented (**Purchase Agreement**) and capitalized terms used herein without definitions shall have the meanings specified therefore in such Purchase Agreement;

WHEREAS, Boeing and Customer agree that Customer may substitute the purchase of Boeing model 737-10 aircraft in place of any Firm Aircraft.

WHEREAS, Boeing and Customer agree to revise Letter Agreement No. AAL-PA-03735-LA-1106652R1 entitled “[****]”, including Attachments A(R1) and B(R1) to reflect [****].

NOW, THEREFORE, in consideration of the mutual covenants herein contained, the parties agree that the Purchase Agreement is amended and supplemented as set forth below and otherwise agree as follows:

PA 03735 SA-28

BOEING PROPRIETARY

1. Table of Contents.

The “Table Of Contents” to the Purchase Agreement referencing SA-27 in the footer is deleted in its entirety and is replaced with the new “Table Of Contents” (attached hereto) referencing SA-28 in the footer to reflect changes made to the Purchase Agreement by this SA-28. Such new Table of Contents is hereby incorporated into the Purchase Agreement in replacement of its predecessor.

2. Letter Agreements.

2.1 New Letter Agreement No. AAL-PA-3735-LA-2204032, (attached hereto) entitled “[****]” inclusive of Attachment A ([****]) and referencing SA-28 in the footer is hereby incorporated into the Purchase Agreement.

2.2 Letter Agreement No. AAL-PA-0375-LA-1106652R1 (including Attachment A(R1) and Attachment B(R1)) entitled “[****]” is hereby deleted in its entirety and replaced with Letter Agreement No. AAL-PA-0375-LA-1106652R2 (including Attachment A(R2) and Attachment B(R2) (attached hereto) entitled “[****]” ([****]) referencing SA-28 in the footer. The [****] is hereby incorporated into the Purchase Agreement.

3. Miscellaneous.

3.1 The Purchase Agreement is amended and supplemented as set forth above by the revised Table Of Contents, [****], and the [****]. All other terms and conditions of the Purchase Agreement remain unchanged and are in full force and effect.

3.2 References in the Purchase Agreement and any supplemental agreements and associated letter agreements to the tables, exhibits, supplemental exhibits and letter agreements listed in the left column of the below table shall be deemed to refer to the corresponding revised versions of the tables, exhibits, supplemental exhibits and letter agreements listed in the right column of the below table.

Reference	Replacement Reference
Letter Agreement No. AAL-PA-03735-LA-1106652R1	Letter Agreement No. AAL-PA-03735-LA-1106652R2

PA 03735 SA-28

BOEING PROPRIETARY

AGREED AND ACCEPTED this

November 4, 2022

Date

THE BOEING COMPANY

/s/ The Boeing Company

Signature

The Boeing Company

Printed name

Attorney-in-Fact

Title

AMERICAN AIRLINES, INC.

/s/ American Airlines, Inc.

Signature

American Airlines

Printed name

VP, Treasurer

Title

PA 03735 SA-28

BOEING PROPRIETARY

TABLE OF CONTENTS

ARTICLES

SA NUMBER

Article 1.	Quantity, Model and Description
Article 2.	Delivery Schedule
Article 3.	Price
Article 4.	Payment
Article 5.	Additional Terms
Article 6.	Confidentiality

TABLE

1R12	Aircraft Information Table	19
1-2	Revised Delivery Aircraft Information Table	9
1-3R6	[****]Delivery, Description, Price, and Advance Payments	19
1-4R6	737-8 [****] Aircraft Delivery, Description, Price, and Advance Payments	27

EXHIBITS

AR1	Aircraft Configuration	6
A2	Revised Delivery Aircraft Configuration	9
B.	Aircraft Delivery Requirements and Responsibilities	
C.	Definitions	

SUPPLEMENTAL EXHIBITS

AE1.	[****]	
BFE1.	BFE Variables	
CS1R1.	[****]	4
EE1.	[****]	
SLP1.	[****]	

LETTER AGREEMENTS

LA-1106648R1	Special Matters	6
LA-1106649	[****]	
LA-1106650R6	[****]	22
LA-1106651R10	[****]	27
LA-1106652R2	[****]	28
LA-1106654	AGTA Terms Revisions for MAX	

TABLE OF CONTENTS, continued

LA-1106655	Open Matters – 737 MAX Withdrawn	6
LA-1106656R1	Most Favored Customer – 737 MAX	1
LA-1106657R1	[****]	2
LA-1106663 R1	[****]	2
LA-1106664 R1	[****]	2
LA-1106658	[****]	
LA-1106659R3	[****]	21
LA-1106660	Spare Parts Initial Provisioning	
 <u>LETTER AGREEMENTS, continued</u>		<u>SA NUMBER</u>
LA-1106661R2	[****]	2
LA-1106667	[****]	
LA-1106668R1	[****]	8
LA-1106669	[****]	
LA-1106670	Confidentiality	
LA-1106671R1	Miscellaneous Commitments	1
LA-1106672	Extended Warranty Option	
LA-1106673R1*		4
LA-1106677	Optional Features Comfort Letter	
LA-1600073	Non-ETOPS Bundled Optional Features Credit Memorandum	4
LA-1600852	[****]	5
LA-1603773	[****]	5
LA-1605402R1	[****]	23
LA-1700919	[****]	7
LA-1801206	[****]	8
LA-2002704	[****]	11
LA-2002743	[****]	11
LA-2003342	[****]	11
LA-2003486	[****]	14
LA-2204032	[****]	28

* - This is an intended gap as there are no Letter Agreements LA-1106674 through LA-1106676 incorporated by the Purchase Agreement.



The Boeing Company
P.O. Box 3707
Seattle, WA 98124-2207

AAL-PA-03735-LA-1106652R2

American Airlines, Inc.
P.O. Box 619616
Dallas-Fort Worth Airport, Texas 75261-9616

Subject: [****]

Reference: Purchase Agreement No. 03735 (**Purchase Agreement**) between The Boeing Company (**Boeing**) and American Airlines, Inc. (**Customer**) relating to Model 737MAX aircraft (**Aircraft**)

This letter agreement (**Letter Agreement**) amends and supplements the Purchase Agreement. All terms used but not defined in this Letter Agreement shall have the same meaning as in the Purchase Agreement.

Customer may [****] the purchase of either [****] (**Eligible Models**) in place of any Firm Aircraft, as defined in article 1 below, subject to the following terms and conditions:

1. Definitions.

[****], for purposes of this Letter Agreement, means the Boeing model 737-8 aircraft identified on Table 1R12, 1-2, 1-3R6, and 1-4R6 to the Purchase Agreement (as may be amended from time to time) [****].

[****] means [****].

[****] means [****].

2. Customer's [****].

Customer shall [****] ([****]) of its [****] ([****]) with the [****]:

- (i) [****] or;
- (ii) [****].

Such [****].

3. Boeing's [****].

- 3.1 Customer's [****].
- 3.2 If Boeing [****].



3.3 All of Boeing's [****].

4. [****].

The [****].

5. [****].

Boeing and Customer will [****] into the Purchase Agreement. Boeing and Customer will [****] in accordance with Section 3.2, above. Upon the [****] pursuant to this Section 5, the [****] for purposes of this Letter Agreement and an "[****]" as defined in the Purchase Agreement and shall be governed by the Purchase Agreement.

6. [****].

6.1 The [****] are set forth in Attachment A(R2) and Attachment B(R2), respectively, hereto. The [****] in accordance with the provisions of Supplemental Exhibit AE1. The [****] in accordance with the provisions of Supplemental Exhibit AE1. Attachment A(R2) and Attachment B(R2) [****], however and for the avoidance of doubt, if [****], Customer [****] pursuant to the terms and conditions of this Letter Agreement, [****] on Attachment A(R2) or Attachment B(R2).

6.2 Any [****] (the [****]) will be [****]. [****]. If [****], then [****].

6.3 At the [****], Boeing will [****] pursuant to and in accordance with Letter Agreement AAL-PA-03735-LA-1106648R1 entitled "[****]", as it may be subsequently amended.

7. Assignment.

Notwithstanding any other provisions of the Purchase Agreement, the rights and obligations described in this Letter Agreement are provided to Customer in consideration of Customer's becoming the operator of the Aircraft and cannot be assigned, in whole or in part.

8. Confidential Treatment.

The information contained herein represents confidential business information and has value precisely because it is not available generally or to other parties. Customer will limit the disclosure of its contents to employees of Customer with a need to know the contents for purposes of helping Customer perform its obligations under the Purchase Agreement and who understand they are not to disclose its contents to any other person or entity without the prior written consent of Boeing.



(Intentionally Left Blank)

AAL-PA-03735-LA-1106652R2 SA-28
[****] Page 3 of 5

BOEING PROPRIETARY



Very truly yours,

THE BOEING COMPANY

By: /s/ The Boeing Company

Its: Attorney-In-Fact

ACCEPTED AND AGREED TO this

Date: November 4, 2022

AMERICAN AIRLINES, INC.

By: /s/ American Airlines, Inc.

Its: VP, Treasurer

AAL-PA-03735-LA-1106652R2 SA-28
[****] Page 4 of 5

BOEING PROPRIETARY

Attachment A(R2) to
Letter Agreement No. AAL-PA-03735-LA-1106652R2
[**] Aircraft Delivery, Description, Price and Advance Payments**

Airframe Model/MTOW:	737-7	[****] pounds	Detail Specification:	[****]
Engine Model/Thrust:	CFM LEAP-1B21	[****]	Airframe Price Base Year/Escalation Formula:	[****] [****]
Airframe Price:		\$[****]	Engine Price Base Year/Escalation Formula:	
Optional Features:		\$[****]		
Sub-Total of Airframe and Features:		\$[****]	<u>Airframe Escalation Data:</u>	
Engine Price (Per Aircraft):		\$[****]	Base Year Index (ECI):	[****]
Aircraft Basic Price (Excluding BFE/SPE):		\$[****]	Base Year Index (CPI):	[****]
Buyer Furnished Equipment (BFE) Estimate:		\$[****]		
//Seller Purchased Equipment (SPE)/In-Flight Ent		\$[****]		
LIFT Seats Provided by Boeing (Estimate):		\$[****]		
Deposit per Aircraft:		\$[****]		

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****] [****]	[****] [****]	Total [****]
[****]-2023	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2023	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Attachment A(R2) to
Letter Agreement No. AAL-PA-03735-LA-1106652R2
[**] Aircraft Delivery, Description, Price and Advance Payments**

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****]	[****]	Total [****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	2	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Attachment A(R2) to
Letter Agreement No. AAL-PA-03735-LA-1106652R2
[**] Aircraft Delivery, Description, Price and Advance Payments**

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****] [****]	[****] [****]	Total [****]
[****]-2025	1	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Attachment A(R2) to
Letter Agreement No. AAL-PA-03735-LA-1106652R2
[**] Aircraft Delivery, Description, Price and Advance Payments**

Delivery Date	Number of Aircraft	Escalation Factor	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****] [****]	[****] [****]	Total [****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

**Attachment A(R2) to
Letter Agreement No. AAL-PA-03735-LA-1106652R2
[****] Aircraft Delivery, Description, Price and Advance Payments**

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****]	[****]	Total [****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2027		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Total: 63

Attachment B(R2) to
Letter Agreement No. AAL-PA-03735-LA-1106652R2
[**] Aircraft Delivery, Description, Price and Advance Payments**

Airframe Model/MTOW:	737-9	[****]	Detail Specification:	[****]
Engine Model/Thrust:	CFMLEAP-1B27	[****]	Airframe Price Base Year/Escalation Formula:	[****] [****]
Airframe Price:		\$[****]	Engine Price Base Year/Escalation Formula:	
Optional Features:		\$[****]		
Sub-Total of Airframe and Features:		\$[****]	<u>Airframe Escalation Data:</u>	
Engine Price (Per Aircraft):		\$[****]	Base Year Index (ECI):	[****]
Aircraft Basic Price (Excluding BFE/SPE):		\$[****]	Base Year Index (CPI):	[****]
Buyer Furnished Equipment (BFE) Estimate:		\$[****]		
//Seller Purchased Equipment (SPE)/In-Flight Ent		\$[****]		
LIFT Seats Provided by Boeing (Estimate):		\$[****]		
Deposit per Aircraft:		\$[****]		

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****]	[****]	Total [****]
[****]-2023	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2023	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Attachment B(R2) to
Letter Agreement No. AAL-PA-03735-LA-1106652R2
[**] Aircraft Delivery, Description, Price and Advance Payments**

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****]	[****]	Total [****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		1	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		1	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		1	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		2	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		1	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		1	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		1	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Attachment B(R2) to
Letter Agreement No. AAL-PA-03735-LA-1106652R2
[**] Aircraft Delivery, Description, Price and Advance Payments**

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****]	[****]	Total [****]
[****]-2025		1	[****]	[****]	Yes \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		1	[****]	[****]	Yes \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		2	[****]	[****]	Yes \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		2	[****]	[****]	Yes \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		1	[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	Yes \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		2	[****]	[****]	Yes \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		1	[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	Yes \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		2	[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025			[****]	[****]	Yes \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026			[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		2	[****]	[****]	No \$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026			[****]	[****]	Yes \$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Attachment B(R2) to
Letter Agreement No. AAL-PA-03735-LA-1106652R2
[**] Aircraft Delivery, Description, Price and Advance Payments**

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P [****]	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****]	[****]	Total [****]
[****]-2026	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Attachment B(R2) to
Letter Agreement No. AAL-PA-03735-LA-1106652R2
[**] Aircraft Delivery, Description, Price and Advance Payments**

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****]	[****]	Total [****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2027		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Total: 63



AAL-PA-03735-LA-2204032

American Airlines, Inc.
P.O. Box 619616
Dallas-Fort Worth Airport, Texas 75261-9616

Subject: [****]

Reference: Purchase Agreement No. 03735 (**Purchase Agreement**) between The Boeing Company (**Boeing**) and American Airlines, Inc. (**Customer**) relating to Model 737 MAX aircraft (**Aircraft**)

This letter agreement (**Letter Agreement**) amends and supplements the Purchase Agreement. All terms used but not defined in this Letter Agreement will have the same meaning as in the Purchase Agreement.

Customer may [****] the purchase of [****] aircraft in place of any Firm Aircraft, as defined in Section 1 below, subject to the following terms and conditions:

1. Definitions.

[****], for purposes of this Letter Agreement, means the Boeing model 737-8 aircraft identified on Table 1R12, 1-2, 1-3R6, and 1-4R5 to the Purchase Agreement (as may be amended from time to time) [****].

[****], for purposes of this Letter Agreement, means [****].

[****], for purposes of this Letter Agreement, means [****].

2. Customer's [****].

Customer shall [****] ([****]) of its [****] ([****]) with the [****],

- (i) [****], or;
- (ii) [****].

Such [****].

3. [____].

- 3.1 Customer's [****].
- 3.2 If Boeing [****].
- 3.3 All of Boeing's [****].

4. [****].

Boeing and Customer will [****] into the Purchase Agreement. Boeing and Customer will [****] in accordance with Section 3.2 above. Upon the [****] pursuant to this Section 4, the [****] for purposes of this Letter Agreement and an “[****]” as defined in the Purchase Agreement and shall be governed by the Purchase Agreement.

5. [****].

5.1 The [****] is set forth in Attachment A of this Letter Agreement. The [****] in accordance with the provisions of Supplemental Exhibit AE1 to the Purchase Agreement. The [****] in accordance with the provisions of Supplemental Exhibit AE1. [****].

5.2 Any [****] (the [****]) will [****]. [****]. If [****], then [****].

5.3 At the [****], Boeing will [****]:

5.3.1 [****].

5.3.1.1 [****].

5.3.1.2 [****].

5.3.1.3 [****].

5.3.2 [****].

5.3.2.1 [****]. [****].

5.3.2.2 [****]. Except as otherwise noted in Section 5.3.1.2 above, [****].

5.3.3 Other Terms.

5.3.3.1 [****].

6. Assignment.

Notwithstanding any other provisions of the Purchase Agreement, the rights and obligations described in this Letter Agreement are provided to Customer in consideration of Customer becoming the operator of the Aircraft and cannot be assigned, in whole or in part, without the prior written consent of Boeing.

7. Confidentiality.

The information contained herein represents confidential business information and has value precisely because it is not available generally or to other parties. This Letter Agreement shall be subject to the terms and conditions of Letter Agreement No. AAL-PA-03735-LA-1106670 entitled "Confidentiality".

ACCEPTED AND AGREED TO this

Date: November 4, 2022

AMERICAN AIRLINES, INC.

THE BOEING COMPANY

By: /s/ American Airlines, Inc.

By: /s/ The Boeing Company

Title: VP, Treasurer

Title: Attorney-In-Fact

AAL-PA-03735-LA-2204032 SA-28
[****] Page 3 of 5

BOEING PROPRIETARY

Attachment A to
Letter Agreement No. AAL-PA-03735-LA-2204032
[**] Delivery, Description, Price and Advance Payments**

Airframe Model/MTOW:	737-10	[****]	Detail Specification:	[****]
Engine Model/Thrust:	CFMLEAP-1B27	[****]	Airframe Price Base Year/Escalation Formula:	[****] [****]
Airframe Price:		\$[****]	Engine Price Base Year/Escalation Formula:	
Optional Features:		\$[****]		
Sub-Total of Airframe and Features:		\$[****]	<u>Airframe Escalation Data:</u>	
Engine Price (Per Aircraft):		\$[****]	Base Year Index (ECI):	[****]
Aircraft Basic Price (Excluding BFE/SPE):		\$[****]	Base Year Index (CPI):	[****]
Buyer Furnished Equipment (BFE) Estimate:		\$[****]		
Seller Purchased Equipment (SPE) Estimate:		\$[****]		
LIFT Seats Provided by Boeing (Estimate):		\$[****]		
Deposit per Aircraft:		\$[****]		

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****]	[****]	Total [****]
[****]-2023	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2023	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]		\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Attachment A to
Letter Agreement No. AAL-PA-03735-LA-2204032
[**] Delivery, Description, Price and Advance Payments**

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						Adv Payment Base	At Signing [****]	[****]	Total [****]
Price Per A/P									
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	2	[****]			\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2024	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Attachment A to
Letter Agreement No. AAL-PA-03735-LA-2204032
[**] Delivery, Description, Price and Advance Payments**

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****] [****]	[****] [****]	Total [****]
[****]-2025	1	[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2025		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

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Letter Agreement No. AAL-PA-03735-LA-2204032
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Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****] [****]	[****] [****]	Total [****]
[****]-2026	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Attachment A to
Letter Agreement No. AAL-PA-03735-LA-2204032
[**] Delivery, Description, Price and Advance Payments**

Delivery Date	Number of Aircraft	Escalation Factor (Airframe)	Orig Scheduled Deliv Date	Nominal Delivery	Escalation Estimate Adv Payment Base Price Per A/P	Advance Payment Per Aircraft (Amts. Due/Mos. Prior to Delivery):			
						At Signing [****]	[****] [****]	[****] [****]	Total [****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	1	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026	2	[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2026		[****]	[****]	Yes	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]
[****]-2027		[****]	[****]	No	\$[****]	\$[****]	\$[****]	\$[****]	\$[****]

Total: 63

**American Airlines Group Inc.
Subsidiaries of the Registrant
As of December 31, 2022**

Subsidiary companies of American Airlines Group Inc. are listed below. With respect to the companies named, all voting securities are owned directly or indirectly by the Registrant, except where otherwise indicated.

Name of Subsidiary	State or Sovereign Power of Incorporation
Subsidiaries included in the Registrant's consolidated financial statements	
AAG Private Placement-1 Parent LLC	Delaware
AAG Private Placement-1 LLC	Delaware
American Airlines, Inc.	Delaware
AAdvantage Holdings 1, Ltd.	Cayman Islands
AAdvantage Holdings 2, Ltd.	Cayman Islands
AAdvantage Loyalty IP, Ltd.	Cayman Islands
Madrid IP Lux GP Sá.r.l	Luxembourg
Madrid IP Lux HoldCo SCS	Luxembourg
Madrid IP Lux HoldCo 2 SCS	Luxembourg
American Airlines Cargo Funding, LLC	Delaware
American Airlines de Mexico, S.A.	Mexico
American Airlines Marketing Services LLC	Virginia
American Aviation Supply LLC	Delaware
American Airlines Travel LLC	Texas
2013-2B, LLC	Delaware
Texas Aero Engine Services, L.L.C.*	Delaware
Americas Ground Services, Inc.	Delaware
Dominicana de Servicios Aeroportuarios (DSA) S.R.L.	Dominican Republic
International Ground Services, S.A. de C.V.	Mexico
Avion Assurance Ltd.	Bermuda
Envoy Aviation Group Inc.	Delaware
Eagle Aviation Services, Inc.	Delaware
Envoy Air Inc. (operates under the trade name "American Eagle")	Delaware
Executive Airlines, Inc.	Delaware
FLAAG 2017-1 OPP LLC	Delaware
FLAAG 2017-1 OP-A LLC	Delaware
FLAAG 2017-1 OP-B LLC	Delaware
FLAAG 2019-1 OPP LLC	Delaware
FLAAG 2019-1 OP-A LLC	Delaware
FLAAG 2019-1 OP-B LLC	Delaware
FLAAG 2019-1 OP-C LLC	Delaware
J-CRJ900 LLC	Delaware
Piedmont Airlines, Inc. (operates under the trade name "American Eagle")	Maryland
PMA Investment Subsidiary, Inc.	Delaware
PSA Airlines, Inc. (operates under the trade name "American Eagle")	Pennsylvania

*Entity with 50% or less ownership.

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statements (No. 333-192719 and No. 333-192660) on Form S-8 and (No.333-236503) on Form S-3 of our reports dated February 22, 2023, with respect to the consolidated financial statements of American Airlines Group Inc. and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

Dallas, Texas

February 22, 2023

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statement (No. 333-236503) on Form S-3 of our reports dated February 22, 2023, with respect to the consolidated financial statements of American Airlines, Inc. and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

Dallas, Texas

February 22, 2023

CEO CERTIFICATION

I, Robert D. Isom, certify that:

1. I have reviewed this Annual Report on Form 10-K of American Airlines Group Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 22, 2023

/s/ Robert D. Isom

Name: Robert D. Isom

Title: Chief Executive Officer and President

CFO CERTIFICATION

I, Devon E. May, certify that:

1. I have reviewed this Annual Report on Form 10-K of American Airlines Group Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 22, 2023

/s/ Devon E. May

Name: Devon E. May
Title: Executive Vice President and
Chief Financial Officer

CEO CERTIFICATION

I, Robert D. Isom, certify that:

1. I have reviewed this Annual Report on Form 10-K of American Airlines, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 22, 2023

/s/ Robert D. Isom

Name: Robert D. Isom

Title: Chief Executive Officer and President

CFO CERTIFICATION

I, Devon E. May, certify that:

1. I have reviewed this Annual Report on Form 10-K of American Airlines, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 22, 2023

/s/ Devon E. May

Name: Devon E. May
Title: Executive Vice President and
Chief Financial Officer

**Certification of CEO and CFO Pursuant to
18 U.S.C. Section 1350,
as Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Annual Report on Form 10-K of American Airlines Group Inc. (the "Company") for the year ended December 31, 2022 (the "Report"), Robert D. Isom, as Chief Executive Officer and President of the Company, and Devon E. May, as Executive Vice President and Chief Financial Officer of the Company, each hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Robert D. Isom

Name: Robert D. Isom

Title: Chief Executive Officer and President

Date: February 22, 2023

/s/ Devon E. May

Name: Devon E. May

Title: Executive Vice President and
Chief Financial Officer

Date: February 22, 2023

This certification is being furnished to accompany the Report pursuant to 18 U.S.C. § 1350 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

**Certification of CEO and CFO Pursuant to
18 U.S.C. Section 1350,
as Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Annual Report on Form 10-K of American Airlines, Inc. (the "Company") for the year ended December 31, 2022 (the "Report"), Robert D. Isom, as Chief Executive Officer and President of the Company, and Devon E. May, as Executive Vice President and Chief Financial Officer of the Company, each hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Robert D. Isom

Name: Robert D. Isom

Title: Chief Executive Officer and President

Date: February 22, 2023

/s/ Devon E. May

Name: Devon E. May

Title: Executive Vice President and
Chief Financial Officer

Date: February 22, 2023

This certification is being furnished to accompany the Report pursuant to 18 U.S.C. § 1350 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.