# **COWEN**

**Equity Research** 

July 5, 2017

Airlines

**Helane Becker** 

646.562.1399 helane.becker@cowen.com

**Conor Cunningham** 

646.562.1373 conor.cunningham@cowen.com

**Industry Update** 

# Pilot Retirements Accelerate Beginning In 2021 & Peak In 2025

# **The Cowen Insight**

We are following up our December 3, 2013 report on how FAR117 affected the pilot pool. Regional airlines are suffering more than major airlines, as the major carriers continue to poach regional carrier pilots to manage growth and retirements. We do not expect this issue to abate in the near term. We continue to anticipate first year, first officer pay rates at the regional airlines will increase.

# Pilot Retirements Become A Major Issue In 2021

Airline pilot retirements at several of the US airlines begin to increase in 2021. Peak pilot retirements for American is 2023, Delta is 2022, United and Southwest are 2026. By the end of 2026, ~42% of the active pilot workforce at the five largest airlines will retire. On average, American leads the industry in pilot retirements with ~790 pilots retiring each year from now through 2026. We continue to expect pilots to be poached from the regional carriers to backfill the retirements at the mainline carriers. The regional carriers will need to aggressively recruit pilots in an attempt to navigate pilot attrition

# **Significant Pilot Pay Increases Behind Us**

During recent labor negotiations, the airlines and pilot unions agreed on significant pay increases. Among the publicly traded airlines, only Spirit Airlines still has an open pilot agreement. Alaska and Virgin America are expected to execute a new agreement by year end as they merge their operations. JetBlue is currently negotiating an initial contract, with no timetable for completion. With major pilot agreements behind us, pilot pay is mostly back to pre-recession / pre-bankruptcy levels. The pilots will continue to receive contractual pay increases, but they should be less profound than what we witnessed in the recent negotiations. The next major negotiation window begins in 2019, when United's pilot agreement becomes amendable.

#### **Regional Pilot Pay Likely to Increase**

The lowest starting salary for first year, first officers (FYFO) is at the regional airlines, where pay at Mesa Air Group (the lowest) starts at \$22 / hour. Most of the other regional airlines have pay rates of \$36 - \$37 / hour (except for Endeavor, at \$30 /hour). We expect pilot pay to increase at that level to attract people to the profession. The senior captains can see their pay go to highs of \$120 / hour, but at current hiring rates at the majors, it is more likely for experienced pilots to move to the majors where pay starts at \$85 or \$86 / hour.

# **Impact on Earnings**

As pilot pay moves up for the regional airlines, they are likely to see a bigger negative impact on earnings than the major airlines. As more pilots retire, the number of captains at the senior most levels should decline, while the number of captains in the middle of their careers increase. The overall impact on operating expenses should actually decrease, as there should be a greater percentage of pilots in years 1 through 10, where average pay at the captain level is closer to \$270 / hour vs. the top pay of \$328 - \$330 / hour in years 12 and later.

# **Pilot Career Will Be More Compelling**

With a limited supply of pilots and overall recovery in the US airline industry, pilot pay should, in theory, continue to move higher. As a result, the pilot career should become more compelling. We expect pilot recruitment to step up from here given the recent increases in pay and the absolute need for pilots.

# **Update on Pilot Retirements**

We have been looking at pilot retirements for the past several years, and are taking this opportunity to update our thoughts (original report <a href="here">here</a>). As Figure 1 shows, pilot retirements accelerate in the middle of the next decade. American is the most impacted by this wave of retirements, as more than half of the current active pilot group will retire in the next decade. That said, American's pilot retirements peak in 2023, then taper off, while Delta, Southwest and United experience later peaks, as indicated in the notes (see Appendix).

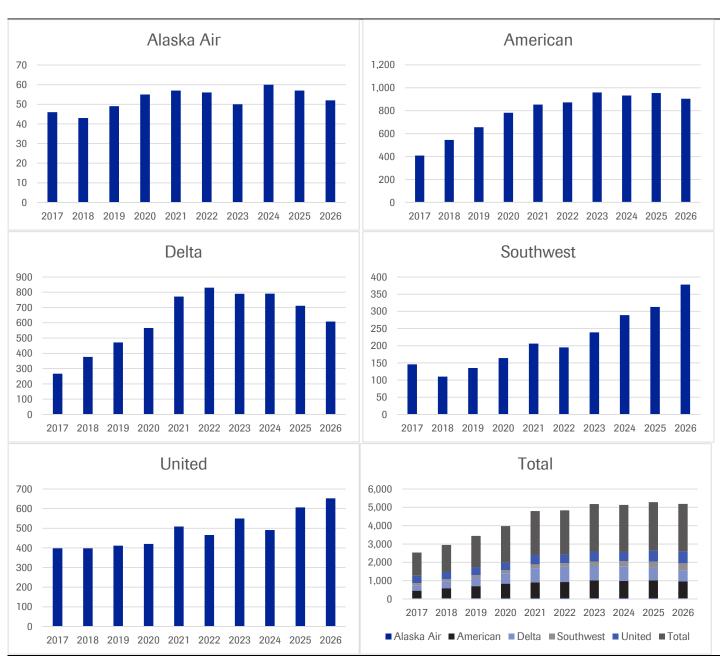
Figure 1 Mandatory Retirements

Mandatory Retirements						
	Alaska Air	American	D e Ita	Southwest	United	Total
2017	46	409	267	1 4 6	398	1,266
2018	43	5 4 5	377	110	398	1,473
2019	49	656	471	135	411	1,722
2020	5 5	782	566	164	420	1,987
2021	57	853	772	206	509	2,397
2022	5 6	873	830	195	466	2,420
2023	5 0	960	790	239	550	2,589
2024	60	933	791	289	491	2,564
2025	57	954	711	313	606	2 ,6 4 1
2026	52	905	608	378	652	2,595
Total Retirements	525	7,870	6,183	2,175	4,901	21,654
Avg. Annual Retirements	53	787	618	218	490	2,165
Active Pilots	1,875	14,503	13,658	8,600	12,712	51,348
Pct of Active	28.0%	54.3%	45.3%	25.3%	38.6%	42.2%
Peak Year	2024	2023	2022	2026	2026	2025

Source: Airline Pilot Central

The saying goes, a picture is worth a thousand words, and the graphs below prove this thesis. Peak industry retirements are in 2025, but the ramp up is quite significant starting in 2021.

**Figure 2 Pilot Retirements** 



Source: Airline Pilot Central

We don't have retirements for every airline, as some have relatively junior workforces, so retirements are further into the future. There is a renewed sense of urgency among the regional airlines to hire qualified pilots as the major carriers accelerate their hiring. The largest pool of applicants is from the regional airlines, then the military. That said, the US Air Force indicated at the end of the 2016 fiscal year that they were short 750 fighter pilots, an increase of almost 50% from the 511 short at the end of the 2015 fiscal year.

The US major carriers also hire from flight training academies and small regional flight clubs and flight schools. In the US, pilots need to have a four-year university degree and 1500 hours of experience or a military background and 1000 hours of experience. As a result of the perceived pilot shortage and the overall recovery in the airline industry, pilot pay has returned to pre-recession, pre-bankruptcy levels.

# First Year, First Officer Pay

Pilot pay starts at a relatively low level in year one, and then escalates in year two, as can be seen in the tables below.

Figure 3 First Officer Pay For Narrowbody Aircraft By Airline

	1st Yr	2nd Yr	
Airline	Rate / Hour*	Rate / Hour*	
Alaska	\$56	\$89	
Virgin America	\$52	\$85	
American	\$86	\$86-\$160	depending on equipment type
Allegiant	\$54	\$96	
Delta	\$86	\$86-\$163	depending on equipment type
Hawaiian	\$36	\$94-\$139	depending on equipment type
JetBlue	\$53	\$85-\$95	depending on equipment type
Southwest	\$77	\$112	
Spirit	\$38	\$72	
Sun Country	\$48	\$69	
United	\$85	\$125-\$163	depending on equipment type

Source: Airline Pilot Central

A twelve-year First Officer at American will see earnings in the area of \$116 / hour for the E190 to \$220 / hour for the B777s and A330s. At Delta, the same FO will earn from \$116 for the E190 to \$163 for a 717, to as high as \$226 / hour for the wide-body aircraft. At United, that FO will earn between \$173 / hour for the B737-700 to \$224 for a wide-body aircraft.

Figure 4 Captain Pay For Aircraft By Airline

	1st Yr	12 Yr
Airline	Rate / Hour*	Rate / Hour*
Alaska Airlines	\$181	\$213
Virgin America	\$160	\$189
merican	\$156	\$323
Allegiant	\$152	\$216
Delta	\$156	\$330
Hawaiian**	\$201.87	\$300
Je t B l u e	\$142	\$219
Southwest	\$221	\$251
Spirit	\$102	\$185
Sun Country	\$103	\$158
United	\$232	\$328

Source: Airline Pilot Central



The source for this information is a compilation of data from a variety of sources, including the pilots at various airlines, as well as Airline Pilot Central Forum.

\*Pilots on paid on an hourly basis. We ignore meal and other per diems. Pilots can work up to 100 hours every 30 days to a maximum of 1000 per year. Pilots will typically be hired as a reserve pilot and may sit reserve for as long as several years before being hired as a full time pilot. Reserve pilots are obviously called upon when needed, so the quality of life may not be the best for this group. Given the number of hours pilots have to rest (10 between shifts) and the maximum they are allowed to fly (16 during the day, 13 overnight), very few pilots fly the maximum 1000 hours per year. In addition, the long haul, wide-body pilots at American, Delta, and United are probably flying closer to 600 hours per year. That will compare to pilots at regional airlines, in the domestic operation of US airlines and at airlines like JetBlue and Southwest that fly transcon as their longest legs that are probably flying closer to 800 or 900 hours per year.

\*\*These rates for Hawaiian take effect October 1, 2017 per the recently approved contract. Today's rates are lower.

Going forward, pilot pay should increase at a lower rate. American, Delta and United have contracts in place that become amendable in 2019 and 2020, and we do not believe the industry will change significantly between now and then. Secondly, the big pay raises have already been awarded, and none of the airlines have an advantage relative to the other. As a result, we suspect that as the contracts come due, the increases will be in more "normal" ranges, which we estimate will be 3% to 5%. Additional increases at United and American could be addressed through variable pay as both have lower profit sharing pay-outs than Delta.

# **Appendix**

Notes:

Alaska Air: 1875 active pilots

Most junior captain hired in April 2007

Virgin America: 780 active pilots

Horizon Air: 621 pilots

Most junior captain hired November 2014

American Airlines: 14,503 active pilots, hiring 750 this year

Most junior captain hired August 1999

Peak year for retirements is 2023

Allegiant: 821 active pilots

Most junior captain hired August 24, 2015

Delta Air Lines: 13,658 active pilots

Most junior captain based in Atlanta hired August 2015

Most junior captain based in NY JFK hired June 2016

Peak year for retirements is 2022

Hawaiian Airlines: 627 active pilots

Most junior captain hired February 2013 on the 717, based in Honolulu

JetBlue: 3400 active pilots

Most junior captain on Airbus aircraft hired October 2012

Most junior captain on E190 aircraft hired November 2013

Source: Airline Pilot Central

SkyWest: 4,260 active pilots

Most junior CRJ captain hired September 2016

Most junior CRJ captain hired March 2015 in Detroit

Most junior CRJ captain hired December 2014 in Chicago

Most junior CRJ captain hired June 2014 in Minneapolis

Most junior ERJ captain hired February 2014 in Chicago

Southwest Airlines: 8,600 active pilots

Most junior captain hired January 2007 in Houston

Peak year for retirements is 2035 when 444 pilots retire

Spirit Airlines: 1,564 active pilots

Most junior captain hired January 2014 based in Las Veg

Sun Country Airlines: 314 active pilots

Most junior captain hired November 2013

Peak year for retirements is 2028 when 740 pilots retire

Ticker	Rating	Price*	Price Target	Ticker	Rating	Price*	Price Target
AC.TO	Market Perform	C\$17.38	C\$14.75	ALK	Outperform	\$89.76	\$103.00
ALGT	Market Perform	\$135.60	\$157.00	AAL	Market Perform	\$50.32	\$52.00
CPA	Market Perform	\$117.00	\$115.00	DAL	Outperform	\$53.74	\$58.00
HA	Market Perform	\$46.95	\$50.00	JBLU	Market Perform	\$22.83	\$24.00
SKYW	Outperform	\$35.10	\$40.00	LUV	Outperform	\$62.14	\$67.00
SAVE	Market Perform	\$51.65	\$59.00	UAL	Market Perform	\$75.25	\$75.00
VLRS	Outperform	\$14.55	\$17.00	WJA	Market Perform	C\$23.15	C\$22.00

<sup>\*</sup>As of 06/30/2017

# Valuation Methodology And Risks

# **Valuation Methodology**

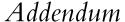
#### **Airlines:**

We generally use a combination of Enterprise Value to EBITDAR and P/Es to the value the group.

#### **Investment Risks**

### **Primary Airline Investment Risks:**

- Economic and Geopolitical Risk. Airlines are affected by worldwide economies, especially if they have international operations.
- Fuel Risk. Fuel represents ~30% of expenses and the companies have limited visibility into price changes.
- Liquidity. Airlines are capital intensive and there are times when the markets are capital constrained, which affects their ability to finance aircraft purchases.
- Credit card processing fees. Credit card companies often require airlines to maintain capital reserves related to future air travel.
- Seasonality. The airlines generally use cash in 1Q and 4Q and generate cash in 2Q and 3Q.
- Fare Risk. Fares may not rise as fast as expenses putting pressure on margins.
- Government Regulation. The industry is highly regulated and taxed.
- Terrorist Attacks and the outbreak of diseases. The unpredictability of terrorist attacks and disease outbreaks gives the airlines little margin of error.
- Labor Risk Some airlines are having issues attracting qualified pilots and mechanics which could limit their growth.
- Insurance Costs. Hull insurance varies from year to year, but is generally affected by the number of accidents in the previous year.
- Environmental Costs. Airlines are subject to various laws and government regulations concerning environmental matters and employee safety and health around the world



#### **Analyst Certification**

Each author of this research report hereby certifies that (i) the views expressed in the research report accurately reflect his or her personal views about any and all of the subject securities or issuers, and (ii) no part of his or her compensation was, is, or will be related, directly or indirectly, to the specific recommendations or views expressed in this report.

### **Important Disclosures**

This report constitutes a compendium report (covers six or more subject companies). As such, Cowen and Company, LLC chooses to provide specific disclosures for the companies mentioned by reference. To access current disclosures for the all companies in this report, clients should refer to <a href="https://cowen.bluematrix.com/sellside/Disclosures.action">https://cowen.bluematrix.com/sellside/Disclosures.action</a> or contact your Cowen and Company, LLC representative for additional information.

Cowen and Company, LLC compensates research analysts for activities and services intended to benefit the firm's investor clients. Individual compensation determinations for research analysts, including the author(s) of this report, are based on a variety of factors, including the overall profitability of the firm and the total revenue derived from all sources, including revenues from investment banking, sales and trading or principal trading revenues. Cowen and Company, LLC does not compensate research analysts based on specific investment banking transactions or specific sales and trading or principal trading revenues.

#### **Disclaimer**

Our research reports are simultaneously available to all clients are on our client website. Research reports are for our clients only. Not all research reports are disseminated, e-mailed or made available to third-party aggregators. Cowen and Company, LLC is not responsible for the redistribution of research by third party aggregators. Selected research reports are available in printed form in addition to an electronic form. All published research reports can be obtained on the firm's client website, <a href="https://cowenlibrary.bluematrix.com/client/library.jsp">https://cowenlibrary.bluematrix.com/client/library.jsp</a>.

The information, opinions, estimates and forecasts are as of the date of this report and subject to change without prior notification. We seek to update our research as appropriate, but various regulations may prevent us from doing so. Research reports are published at irregular intervals as appropriate in the analyst's judgement.

Further information on subject securities may be obtained from our offices. This research report is published solely for information purposes, and is not to be construed as an offer to sell or the solicitation of an offer to buy any security in any state where such an offer or solicitation would be illegal. Other than disclosures relating to Cowen and Company, LLC, the information herein is based on sources we believe to be reliable but is not guaranteed by us and does not purport to be a complete statement or summary of the available data. Any opinions expressed herein are statements of our judgment on this date and are subject to change without notice. The opinions and recommendations herein do not take into account individual client circumstances, objectives or needs and are not intended as recommendations of investment strategy. The recipients of this report must make their own independent decisions regarding any securities subject to this research report. In some cases, securities and other financial instruments may be difficult to value or risks related to the security or financial instrument may be difficult to obtain. To the extent that this report discusses any legal proceedings or issues, it has not been prepared to express or intended to express any legal conclusion, opinion or advice. Our salespeople, traders and other professionals may provide oral or written market commentary or trading strategies to our clients that reflect opinions that are contrary to the opinions expressed in our research. Our principal trading area and investing businesses may make investment decisions that are inconsistent with recommendations or views expressed in our research. Cowen and Company, LLC maintains physical, electronic and procedural information barriers to address the flow of information between and among departments within Cowen and Company, LLC in order to prevent and avoid conflicts of interest with respect to analyst recommendations.

For important disclosures regarding the companies that are the subject of this research report, please contact Compliance Department, Cowen and Company, LLC, 599 Lexington Avenue, 20th Floor, New York, NY 10022. In addition, the same important disclosures, with the exception of the valuation methods and risks, are available on the Firm's disclosure website at <a href="https://cowen.bluematrix.com/sellside/Disclosures.action">https://cowen.bluematrix.com/sellside/Disclosures.action</a>.

Equity Research Price Targets: Cowen and Company, LLC assigns price targets on all companies covered in equity research unless noted otherwise. The equity research price target for an issuer's stock represents the value that the analyst reasonably expects the stock to reach over a performance period of twelve months. Any price targets in equity securities in this report should be considered in the context of all prior published Cowen and Company, LLC equity research reports (including the disclosures in any such equity report or on the Firm's disclosure website), which may or may not include equity research price targets, as well as developments relating to the issuer, its industry and the financial markets. For equity research price target valuation methodology and risks associated with the achievement of any given equity research price target, please see the analyst's equity research report publishing such targets.

Cowen Credit Research and Trading: Due to the nature of the fixed income market, the issuers or debt securities of the issuers discussed in "Cowen Credit Research and Trading" research reports do not assign ratings and price targets and may not be continuously followed. Accordingly, investors must regard such branded reports as providing stand-alone analysis and reflecting the analyst's opinion as of the date of the report and should not expect continuing analysis or additional reports relating to such issuers or debt securities of the issuers.

From time to time "Cowen Credit Research and Trading" research analysts provide investment recommendations on securities that are the subject of this report. These recommendations are intended only as of the time and date of publication and only within the parameters specified in each individual report. "Cowen Credit Research and Trading" investment recommendations are made strictly on a case-by-case basis, and no recommendation is provided as part of an overarching rating system or other set of consistently applied benchmarks. The views expressed in this report may differ from the views offered in the firm's equity research reports prepared for our clients.

Notice to UK Investors: This publication is produced by Cowen and Company, LLC which is regulated in the United States by FINRA. It is to be communicated only to persons of a kind described in Articles 19 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005. It must not be further transmitted to any other person without our consent.

Notice to European Union Investors: Individuals producing recommendations are required to obtain certain licenses by the Financial Regulatory Authority (FINRA). You can review the author's current licensing status and history, employment history and, if any, reported regulatory, customer dispute, criminal and other matters via "Brokercheck by FINRA" at <a href="http://brokercheck.finra.org/">http://brokercheck.finra.org/</a>. An individual's licensing status with FINRA should not be construed as an endorsement by FINRA. General biographical information is also available for each Research Analyst at <a href="https://www.cowen.com">www.cowen.com</a>.

Additionally, the complete preceding 12-month recommendations history related to recommendation in this research report is available at https://cowen.bluematrix.com/sellside/

The recommendation contained in this report was produced at July 03, 2017, 11:43 ET. and disseminated at July 05, 2017, 06:00 ET.

Copyright, User Agreement and other general information related to this report

© 2017 Cowen and Company, LLC. Member NYSE, FINRA and SIPC. All rights reserved. This research report is prepared for the exclusive use of Cowen clients and may not be reproduced, displayed, modified, distributed, transmitted or disclosed, in whole or in part, or in any form or manner, to others outside your organization without the express prior written consent of Cowen. Cowen research reports are distributed simultaneously to all clients eligible to receive such research reports. Any unauthorized use or disclosure is prohibited. Receipt and/or review of this research constitutes your agreement not to reproduce, display, modify, distribute, transmit, or disclose to others outside your organization the contents, opinions, conclusion, or information contained in this report (including any investment recommendations, estimates or price targets). All Cowen trademarks displayed in this report are owned by Cowen and may not be used without its prior written consent.

Cowen and Company, LLC. New York (646) 562-1010 Boston (617) 946-3700 San Francisco (415) 646-7200 Chicago (312) 577-2240 Cleveland (440) 331-3531 Atlanta (866) 544-7009 Stamford (646) 616-3000 Washington D.C. (202) 868-5300 London (affiliate) 44-207-071-7500

#### **COWEN AND COMPANY EQUITY RESEARCH RATING DEFINITIONS**

Outperform (1): The stock is expected to achieve a total positive return of at least 15% over the next 12 months

Market Perform (2): The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

Underperform (3): Stock is expected to achieve a total negative return of at least 10% over the next 12 months

Assumption: The expected total return calculation includes anticipated dividend yield

#### **Cowen and Company Equity Research Rating Distribution**

Distribution of Ratings/Investment Banking Services (IB) as of 06/30/17

Rating	Count	Ratings Distribution	Count	IB Services/Past 12 Months
Buy (a)	461	60.03%	102	22.13%
Hold (b)	298	38.80%	12	4.03%
Sell (c)	9	1.17%	0	0.00%

(a) Corresponds to "Outperform" rated stocks as defined in Cowen and Company, LLC's equity research rating definitions. (b) Corresponds to "Market Perform" as defined in Cowen and Company, LLC's equity research ratings definitions. (c) Corresponds to "Underperform" as defined in Cowen and Company, LLC's equity research ratings definitions. Cowen and Company Equity Research Rating Distribution Table does not include any company for which the equity research rating is currently suspended or any debt security followed by Cowen Credit Research and Trading.

Note: "Buy", "Hold" and "Sell" are not terms that Cowen and Company, LLC uses in its ratings system and should not be construed as investment options. Rather, these ratings terms are used illustratively to comply with FINRA regulation.

# Points Of Contact

# **Analyst Profiles**



Helane Becker New York 646.562.1399

helane.becker@cowen.com

Helane Becker is a senior research analyst covering airlines & air-related industries for the past 30+ years. She has an MBA from NYU.



**Conor Cunningham** New York 646.562.1373 conor.cunningham@cowen.com

Conor Cunningham covers airlines and air-related industries. He joined Cowen in 2013 through the merger with Dahlman Rose.

# **Reaching Cowen**

# **Main U.S. Locations**

599 Lexington Avenue New York, NY 10022 646.562.1010 800.221.5616

#### Atlanta

**New York** 

3399 Peachtree Road NE Suite 417 Atlanta, GA 30326 866.544.7009

#### Boston

Two International Place Boston, MA 02110 617.946.3700 800.343.7068

# Chicago

181 West Madison Street Suite 3135 Chicago, IL 60602 312.577.2240

# Cleveland

20006 Detroit Road Suite 100 Rocky River, OH 44116 440.331.3531

#### Stamford

262 Harbor Drive Stamford, CT 06902 646.616.3000

#### San Francisco

One Maritime Plaza, 9th Floor San Francisco, CA 94111 415.646.7200 800.858.9316

# Washington D.C.

2900 K Street, NW Suite 520 Washington, DC 20007 202.868.5300

# **International Location**

# **Cowen International** Limited

# London

1 Snowden Street - 11th Floor London EC2A 2DQ United Kingdom 44.20.7071.7500







11