

Overcoming the Pilot Shortage:

Employee Benefits Can Prove to Be a Differentiator for Airlines Looking to Attract Talent





CONTENTS

- 3 Tomorrow's world – ready for take-off?
- 5 Can the growing demand be met?
- 7 The current supply of pilots is decreasing
- 9 The life of a pilot – challenges and concerns
- 11 Competing for talent – how the right employee benefits can help
- 13 Conclusion – positioning your firm in a candidate-led market
- 14 References
- 15 About Marsh
- 15 About this report

The global airline industry continues to grow rapidly due to economic, technological, and demographic changes. As a result, it has been estimated that in the next 20 years the industry will need to find an additional 558,000 new commercial airline pilots to sustain itself.

TOMORROW'S WORLD – READY FOR TAKE-OFF?

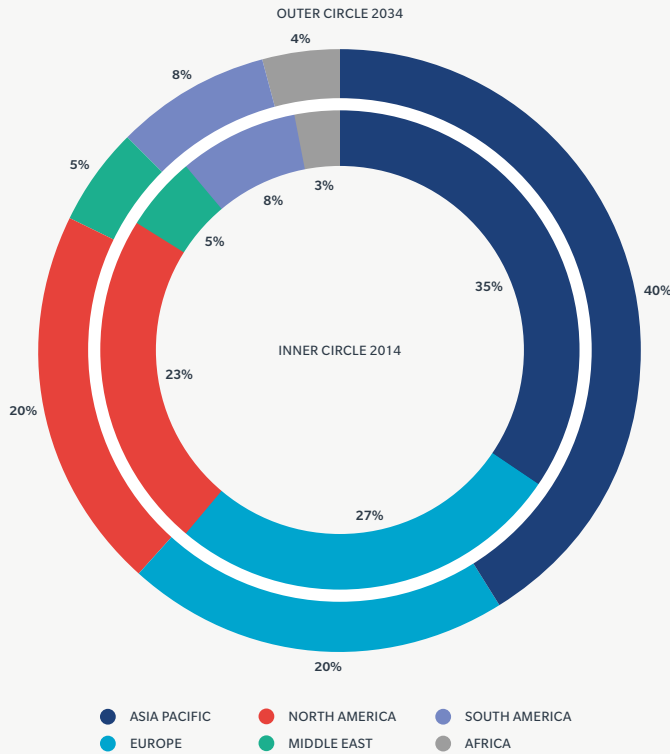
The aviation industry doubled in size in the decade between 2004 and 2014, up from a value of more than GBP258 billion per annum to approximately GBP522 billion per annum². On top of this, the International Air Transport Association (IATA) predicts that passenger traffic growth is expected to increase to more than seven billion people by 2034, with a 3.8% average annual growth in demand (2014 baseline year)³. That is more than double the 3.3 billion who flew in 2014⁴. This change is being driven primarily by steady economic growth, higher disposable incomes in emerging markets, and increased air travel in developing economies. Other predictions made by IATA are as follows:

- Asian, South American, and African destinations will see the fastest future growth, reflecting economic and demographic expansion in those markets.
- Seven of the 10 fastest-growing markets in percentage terms will be in Africa. Each of these markets is expected to increase by 7%-8% per annum on average over the next 20 years, doubling in size each decade.
- China is expected to overtake the United States (US) as the world's largest passenger market, and will account for some 1.2 billion passengers by 2034.
- In North America, passenger volumes will grow by 3.3% annually. In 2034, the region will carry a total of 1.4 billion – an additional 649 million passengers a year.
- The Middle East will grow strongly at 4.9% per annum and will see an extra 237 million passengers a year on routes to, from, through, and within the region by 2034.
- The United Arab Emirates, Qatar, and Saudi Arabia will enjoy strong annual growth of 5.6%, 4.8%, and 4.6% respectively. The total market size will be 383 million passengers by 2034.

By 2030, it is projected that two thirds of the global middle class will live in the Asia-Pacific region, up from just under one third in 2009¹.

FIGURE 1 Global Air Passengers by Region (% of Total Flows)

Source: IATA Forecasts



AN EVOLVING AIRSPACE

Notwithstanding favorable growth predictions, the global airline industry operates in a complex and ever-changing environment; one with the potential to be adversely affected by a wide variety of unexpected regulatory changes and external events, such as security fears, natural catastrophes, and infectious disease. The resilience of air travel to bounce back from these shocks is a reflection of global and sometimes regional economic conditions.

Although the aviation industry continues to grow rapidly, consistent and healthy profitability is often difficult to achieve due to operating models constantly having to adapt to change. Low-cost commercial airlines have performed best in

recent years, and now control some 25%⁵ of the global market, with continuous expansion into emerging markets. Profit margins, however, remain constrained to less than 3% overall.

Given this unpredictable and volatile business environment, the way that commercial airlines react to these growth trends will determine their performance over the coming years.



SPOTLIGHT

An industry liable to shocks

- In the recent past there have been a number of disruptions caused by cyber related incidents affecting airline reservation systems, flight planning and ground operations, as well as airport websites, and air traffic control networks.
- The SARS virus had more effect on the global airline industry than the war with Iraq, according to a report from the flight schedule provider OAG. According to a report by the group, the number of scheduled flights worldwide fell by 3% – equivalent to 2.5 million seats.
- In 2008 the average price of oil was US\$113 per barrel. That’s US\$40 per barrel more than the US\$73 per barrel average for 2007, pushing the industry fuel bill up by US\$50 billion⁶.
- The Icelandic volcano, Eyjafjallajökull, erupted on April 2010, causing flight disruptions and costing airlines US\$1.7 billion.
- Following 9/11, global passenger traffic declined by 2.7% in 2001⁷. Within months of the attacks, Swissair and Sabena went bankrupt as the shock pushed these financially weak airlines to collapse.

CAN THE GROWING DEMAND BE MET?

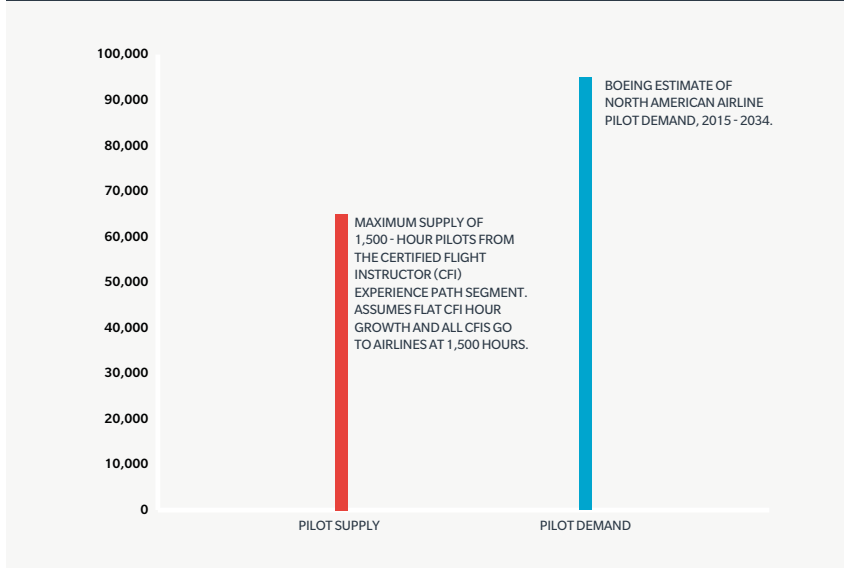
Over the course of the next 20 years, to meet the growing demand in air traffic, Boeing predicts that there will be a need for an additional 558,000 commercial airline pilots⁸. To put the scale of this into perspective, there are currently only around 130,000 commercial pilots in the world⁹. Today, 76% of airlines are saying they will hire more pilots by 2017¹⁰.

If we look at a specific region like the US, airlines are facing what threatens to be their most serious pilot shortage since the 1960s, with

annual demand being predicted to outstrip supply in the near future. In fact, the issue is already causing problems among smaller regional airlines. For example, Republic Airways, which operates for Delta, United Express, and American Eagle, recently filed for bankruptcy¹¹, which it in part blamed on a lack of pilots. Other US domestic airlines are also cutting routes due to pilot shortages. The problem looks set to continue and eventually spread to the bigger operators who may also be forced to terminate routes and flights¹².

Boeing predicts that, over the next 20 years, there will be a need for 558,000 new commercial airline pilots in order to facilitate the growth of the aviation industry.

FIGURE 2 20-Year North American Pilot Demand and Supply
Source: Boeing and Oliver Wyman Analysis

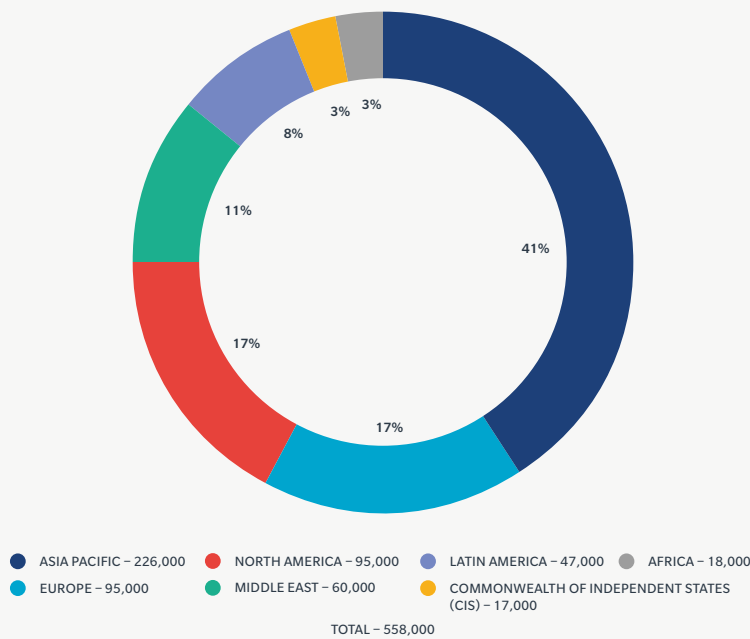


The problem isn't just in the US, however – the high demand for pilots is a global trend. In particular, the Asia Pacific region has the largest projected increase in pilot demand,

with 226,000 new pilots thought to be required by 2034 to sustain growth. Europe will require 95,000, the Middle East 60,000, and Latin America 47,000.

After fuel, labor is the second-largest operating expense for airlines¹³.

FIGURE 3 New Pilots Required by Region 2015-2034
Source: Boeing, 2015 Pilot & Technician Outlook



THE CURRENT SUPPLY OF PILOTS IS DECREASING

With globalization, demand for commercial flights is increasing so rapidly it is now beginning to outweigh the resources available to deal with the growth. Across the globe, various plans are being put in place to try to facilitate and cope with this need.

Many major airlines are increasing the number of flights scheduled and the size of their airline fleets. The key concern for the aviation industry is whether there are enough pilots available to feed this capacity. And yet, while not only is there an increasing demand for pilots, the number of pilots available is also decreasing due to a variety of reasons:

AN AGEING POPULATION

One of the current concerns is that the shortage will likely grow as many senior pilots reach their mandatory retirement age. When we consider that the average age of US commercial airline pilots is 50¹⁴, a wave of mandatory retirements for pilots will soon mean that there is going to be a significant number of them retiring around the same time as demand is set to increase. The number of retirements between 2013-2021 is predicted to be more than 15,000. In Japan, for example, the entry of low-cost airlines into the market has created a demand for more pilots, which has, in turn, prompted the Japanese Transport

Ministry to raise the retirement age for airline pilots from 64 to 67 to cope with the shortage.

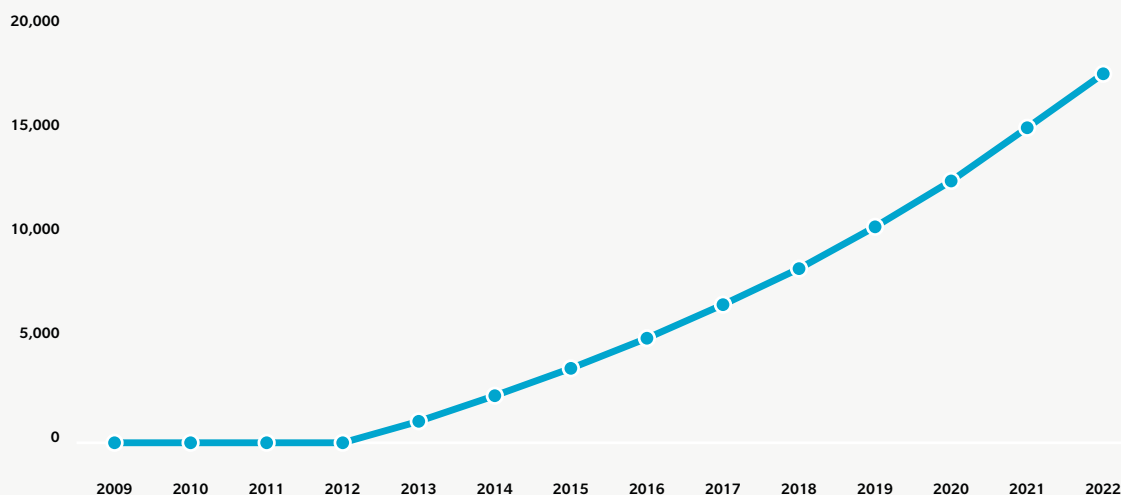
DECREASED MILITARY FLIGHT TRAINING, HIGH CIVILIAN INSTRUCTION COSTS, AND AN INCREASE IN MANDATED HOURS

The combined effects of decreased military flight training, high civilian instruction costs, and an increase in mandated hours for airline pilots in certain countries have made being an airline pilot – a profession once thought of in terms of perks and

glamour – more restrictive and less attractive. In the US, for example, new flight and duty time regulations enacted by the US Congress increased the minimum number of hours of cockpit experience a pilot must have in order to fly for a commercial airline, from 250 to 1,500¹⁵.

While, the majority of commercial pilots have traditionally come from the military/air force, today they come largely from aviation schools, where enrolment has dropped. Training takes not only time but money, with higher certification costs and the majority of pilots being self-funded, the enrolment of interested parties – no longer enamored by the lifestyle of a pilot – has declined.

FIGURE 4 Cumulative Number of US Mainline Pilots Reaching Retirement Age in Each Year
Source: Regional Airline Association



GREATER PRESSURE ON WAGES, PARTICULARLY FOR REGIONAL AND LOW-COST AIRLINES

Consolidation among the larger commercial airlines has also given them more negotiating power over the regional and low-cost airlines, making it harder for these smaller airlines to raise wages. As a result, commercial airlines are now in much greater competition with other industries in terms of career opportunities, pay, and benefits.

Potential pilot shortages have been talked about in the past; however, when pressure in this area has built up before, certain factors have reduced some of the demand. For example, events such as the terrorist attack on

September 11, 2001, and the severe acute respiratory syndrome (SARS) epidemic in China created a brief reluctance to fly. This time conditions seems to be different.

While the global economy remains lethargic, there are signs that airlines are taking the shortages more seriously, with many looking to training programs to help solve their future needs. With fewer pilot training programs outside of North America and Europe, Asia-Pacific airlines often hire western pilots to supplement their corps of locally-trained ones. This has caused the cycle to turn, increasing the job seeker/vacant position ratio and giving the upper hand back to pilots.

Airlines are taking the shortages more seriously, with many looking to training programs to help solve their future needs.



THE LIFE OF A PILOT – CHALLENGES AND CONCERNS

Cited as one of the top-five most stressful jobs, the role of an airline pilot can be a demanding one due to the physical and mental pressures put on them¹⁶. Safety and training requirements mean that regular testing for health and competency is commonplace, with the threat of loss of license for pilots if they do not meet the standards.

LONGER WORKING HOURS IN MORE CROWDED SKIES

The nature of the role has changed. Airlines no longer have the mixed fleets of the past, which allowed pilots more time off because they only flew the planes they were qualified to fly. Today, airlines are more inclined to use their personnel capacity to much greater advantage by flying longer working days with less time off. The British Airline Pilots Association¹⁷ reports that long-haul pilots are increasingly required to fly grueling “bullets”, which mean flying out to a destination on day one, overnighing, and then flying back on day two to day three, which can be demanding.

On top of this they have to contend with irregular hours, fatigue, and jetlag. At certain low-cost airlines over half of the pilots are self-employed or employed through contract agencies. Since the financial crash of 2008, there is a growing

trend in America and Europe for pilots to be on call at all times, but paid only when they are on duty – effectively working zero-hour contracts¹⁸.

Busy airspace, challenging destinations, and unforeseen circumstances are all factors that are out of the pilot’s control, but directly affect the workload and stress levels on the flight deck.

TERRORISM AND POLITICAL INSTABILITY

Geopolitical events such as wars and terrorist attacks continue to have a considerable influence on the airline industry. Against a backdrop of the attack on the twin towers, attempted bombings, hijackings, and, more recently, the shooting down of Malaysia Airlines MH17 over Ukraine, pilots operate in an unstable and unpredictable environment.



SPOTLIGHT

Stress – a case in point

Stress among airline pilots has been propelled into the news recently due to the Germanwings incident in March 2015, where the pilot deliberately crashed the plane, resulting in the death of 150 people. Since then, the issue of stress and mental health has been taken much more seriously, and the European Commission is funding a review of aviation safety regulations, including pilot health checks.

In the wake of the tragedy, experts believe that an industry-wide solution is needed to deal with the issue of future careers for pilots grounded due to health issues. Unlike in most other professions, pilots that report medical issues such as depression can be declared unfit to fly and risk losing their primary source of income¹⁹.

ENVIRONMENTAL AND BIOLOGICAL INSTABILITY

Similarly, environmental and biological factors can also cause considerable disruption to the airline industry. Highly contagious viral outbreaks such as SARs and Ebola, volcanic ash clouds, tsunamis, earthquakes, etc., can halt travel to affected terminals and even prevent transit through certain airspace.

LASER STRIKES

While technology has improved the aviation industry, it has also created a number of new challenges. Laser strikes pose a growing area of concern for pilots, particularly when their aircraft are close to the ground during the critical take-off and landing phases of flight. In addition to risks including dazzle, loss of night vision, and distraction, pilots may also be anxious that their vision might be permanently damaged by a laser, leading to the subsequent loss of their license. Despite continuing efforts, this issue is on the increase: There were 1,440 reported laser strikes on aircraft in the UK and more than 3,800 in the US in 2014 alone²⁰.

DRONES

Concerns regarding rogue drone activity operating in shared airspace have also intensified. With more and more drones being operated by private individuals, the number of incidents involving their misuse is also rising – including near collisions with aircraft. In 2015, the UK Airprox Board reported 40 aircraft near-misses, compared with only nine in 2014.

Meanwhile, the ever-present possibility of accidents and technical failures can lead to crew being temporarily stranded a long way from home.

There were 1,440 reported laser strikes on aircraft in the UK, and more than 3,800 in the US, in 2014 alone.



COMPETING FOR TALENT – HOW THE RIGHT EMPLOYEE BENEFITS CAN HELP

Due to the increasing demand for pilots and a growing lack of suitable candidates, airlines need to develop strategies to ensure they attract, and retain, the right crew.

CONDUCTING REGULAR PAY REVIEWS

Conducting pay reviews is perhaps the most obvious method of attracting and retaining pilots. In addition, given that the cost of flight training is considered to be a deterrent for young talent, they are more likely to be attracted to airlines who offer generous packages covering these costs. Having then borne the pilot training costs, the airline must seek to protect its investment by taking proactive care to retain its staff. But there are now decades of research²¹ suggesting that pay alone has a limited positive effect on employee satisfaction. Furthermore, other financial benefits such as free meals, accommodation, and flights for family members are a “given” in the industry, so they provide limited opportunity for true differentiation from competitor airlines.

IMPROVING WORKING CONDITIONS

Airlines could also seek to improve working conditions, taking steps to ensure their corporate culture promotes a better work/life balance for employees. For example, longer rest periods, more regular schedules and revisions in the number of hours they are required to fly annually could all have positive effects.

However, in reality many pilots try to maximize the number of hours they fly so they can obtain lucrative bonuses, perhaps worth as much as 30%-40% of their regular salaries. Additionally, given that there is a shortage of pilots, airlines are unlikely to want to encourage their pilots to spend less time in the air.

OFFERING ENHANCED EMPLOYEE BENEFITS

Another mechanism for airlines to distinguishing themselves from the competition is to provide an enhanced employee benefits package. This becomes more impactful when airlines take time to properly explain the full value of such coverage to their pilots. Given the unique challenges faced by pilots, most airlines recognize they need to provide specialized aviation employee benefits coverage, as opposed to some of the more generic employee benefits packages available. Such niche coverage typically falls into four key areas: personal accident, term life, emergency medical expense, and loss of license.

"The right employee benefits for pilots could give an airline the competitive advantage over other companies."

ANDREW MAYNARD
SENIOR ACCIDENT &
HEALTH UNDERWRITER,
XL CATLIN

But this strategy for attracting and maintaining crew is not without its own associated risks: Even within the realm of specialized aviation employee benefits, the policy terms, conditions, and exclusions can vary considerably between insurers.

It could be quite easy for an airline to purchase a benefits program which contains some significant gaps in cover – so it requires a trained eye to ensure that the coverage being provided is fit for purpose.



SPOTLIGHT

Identifying gaps in employee benefits cover

Airlines should ask themselves the following questions:

- For personal accident cover, do we have coverage for nuclear, chemical, and biological events?
- For emergency medical expenses, does our policy provide for emergency political evacuation?
- For term life cover, are we confident that our broker has arranged for as many exclusions as possible to be deleted?
- For loss of license cover, does our policy cover pre-existing conditions for pilots?

Where airlines lack the full knowledge of what is available in the insurance marketplace, unnecessary – and potentially damaging – gaps in cover may occur.

Conversely, while there can be gaps in cover, it is not uncommon for airlines to face potential problems from overlaps in cover. At best, this might mean the premium they pay on behalf of their employees is unnecessarily high. At worst, it could lead to material delays and over-complications in the claims settlement process, as two sets of insurers debate over who should pay.

Finally, it is important to recognize that, as a company's crew demographics change through time, there is a risk that employee benefits costs can spiral in the future. For example, moral hazards have arisen when a pilot considers that their sick pay, pension, and income protection cover actually make it more cost-effective for them to lose their license than to continue working!

Employees are looking for more flexible and tailored solutions for their rewards and benefits²².

CONCLUSION – POSITIONING YOUR FIRM IN A CANDIDATE-LED MARKET

The aviation industry is coming under increasing pressure to match the growing demand for pilots with enough supply. As this race for the best talent intensifies, airlines will be forced to fundamentally rethink their people strategies.

Given that they operate within an often harsh and volatile economic environment, airlines will need to explore a variety of creative approaches to attracting and retaining crew, beyond simply raising salaries – certainly one approach is to put in place an aviation employee benefits program that distinguishes an airline from its competitors.

REFERENCES

- ¹ Ernst & Young, 'Entering the Global Middle Class', available at <http://www.ey.com/GL/en/Issues/Driving-growth/Middle-class-growth-in-emerging-markets---Entering-the-global-middle-class>, accessed on September 14, 2016.
- ² PWC, '2015 Aviation Trends', available at <http://www.strategyand.pwc.com/perspectives/2015-aviation-trends>
- ³ Ibid.
- ⁴ International Air Transport Association (IATA), *IATA Forecast*, available at <http://www.iata.org/pressroom/pr/Pages/2015-11-26-01.aspx> accessed on September 14, 2016.
- ⁵ AT Kearney, *Low-Cost Air Travel Enters the Next Stage*, 2016, available at <http://www.atkearney.co.uk/documents/10192/7849535/Low-Cost+Air+Travel+Enters+the+Next+Stage.pdf/82879799-c94b-410c-a219-7104df388c9a>, accessed September 14, 2016.
- ⁶ IATA, 'Airlines to lose US\$5.2 billion in 2008 - Slowing Demand and High Oil to Blame', available at <http://www.iata.org/pressroom/pr/Pages/2008-09-03-01.aspx>
- ⁷ IATA, 'Volcano Crisis Cost Airlines \$1.7 Billion in Revenue - IATA Urges Measures to Mitigate Impact', available at <http://www.iata.org/pressroom/pr/Pages/2010-04-21-01.aspx>, accessed on September 14, 2016.
- ⁸ Boeing, *2015 Pilot & Technician Outlook*, available at <http://www.boeing.com/resources/boeingdotcom/commercial/boeing-edge/assets/brochure/edge-flight-services/pilottechnicianoutlook.pdf>, accessed on September 14, 2016.
- ⁹ Estimates from *Flyer Magazine*, February 2015.
- ¹⁰ AeroProfessional, *Pilot Skills Shortage*, available at <http://info.aeroprofessional.com/pilot-skills-shortage-report>, accessed on September 14, 2016.
- ¹¹ *TIME Magazine*, 'Here's the Major Crisis the Airlines Are Facing Now', 23 March 2016, available at <http://time.com/4257940/pilot-shortage/>, accessed on September 2016.
- ¹² *The Economist*, 'America is running out of people to fly planes', available at <http://www.economist.com/blogs/gulliver/2016/03/pilot-light>, accessed on September 14, 2016.
- ¹³ IATA. *IATA Economic Briefing: Airline Fuel and Labour Cost Share*, available at https://www.iata.org/whatwedo/Documents/economics/Airline_Labour_Cost_Share_Feb2010.pdf, accessed on September 14, 2016.
- ¹⁴ General Aviation Manufacturers' Association, *2014 General Aviation Statistical Databook & 2015 Industry Outlook*, available at http://www.gama.aero/files/GAMA_2014_Databook_LRes%20-%20LowRes.pdf, accessed September 14, 2016.
- ¹⁵ *Travel Weekly*, 'Training rule blamed for pilot shortage', available at <http://www.travelweekly.com/Travel-News/Airline-News/Training-rule-blamed-for-pilot-deficit>, accessed September 14, 2016.
- ¹⁶ *Business News Daily*, 'The 10 Most (and Least) Stressful Jobs of 2016', available at <http://www.businessnewsdaily.com/1875-stressful-careers.html> accessed on September 14, 2016.
- ¹⁷ Balpa, *Becoming a pilot – the Inside Track*, available at <http://www.balpa.org/insidetrack>, accessed September 14, 2016.
- ¹⁸ European Cockpit Association, 'Dramatic rise in 'self-employment' and zero-hours contracts for crew on European aircraft', available at <https://www.eurocockpit.be/stories/20150212/dramatic-rise-in-self-employment-and-zero-hours-contracts-for-crew-on-european-airc>, accessed September 14, 2016.
- ¹⁹ Balpa, <https://www.balpa.org/Positions/Lasers>
- ²⁰ Aviation Safety Network, 'Final investigation report released into Germanwings flight 4U9525 pilot suicide accident', available at <http://news.aviation-safety.net/2016/03/13/final-investigation-report-released-into-germanwings-flight-4u9525-pilot-suicide-accident/>, accessed on September 14 2016.

- ²¹ *Forbes Magazine*, 'The Top 10 Factors For On-The-Job Employee Happiness', available at <http://www.forbes.com/sites/jacobmorgan/2014/12/15/the-top-10-factors-for-on-the-job-employee-happiness/#6555656c44fe>, accessed on September 14, 2016.
- ²² Mercer, *Future Proofing HR – Bridging the Gap Between Employers and Employees*, 2016, available at <https://info.mercer.com/Global-HR-Talent-Trends.html>, accessed on September 9, 2016.



About Marsh

Marsh is a global leader in insurance broking and risk management. We help clients succeed by defining, designing, and delivering innovative industry-specific solutions that help them effectively manage risk. Marsh's approximately 30,000 colleagues work together to serve clients in more than 130 countries. Marsh is a wholly owned subsidiary of Marsh & McLennan Companies (NYSE: MMC), a global team of professional services companies offering clients advice and solutions in the areas of risk, strategy, and people. With 60,000 employees worldwide and annual revenue exceeding US\$13 billion, Marsh & McLennan Companies is also the parent company of Guy Carpenter, a global leader in providing risk and reinsurance intermediary services; Mercer, a global leader in talent, health, retirement, and investment consulting; and Oliver Wyman, a global leader in management consulting. Follow Marsh on Twitter [@MarshGlobal](#).

About this report

This report was prepared by Marsh's Aviation and Aerospace Practice, which acts as insurance broker and risk advisor to some of the world's largest airlines, manufacturers, helicopter operators, and airports. We are also the broker of choice for many smaller firms around the world. Our clients, large and small, choose Marsh because they value our specialized knowledge, not only of the aviation and aerospace insurance markets, but also of their businesses.

For more information, visit our website at www.marsh.com or contact:

GRAHAM KNOTT FCII

Senior Vice President
Global Aviation Practice
+44 (0) 207 357 5374
graham.knott@marsh.com

MARSH IS ONE OF THE MARSH & McLENNAN COMPANIES, TOGETHER WITH
GUY CARPENTER, MERCER, AND OLIVER WYMAN.

The information contained herein is based on sources we believe reliable and should be understood to be general risk management and insurance information only. The information is not intended to be taken as advice with respect to any individual situation and cannot be relied upon as such.

In the United Kingdom, Marsh Ltd is authorised and regulated by the Financial Conduct Authority.

Marsh Ltd, trading as Marsh Ireland is authorised by the Financial Conduct Authority in the UK and is regulated by the Central Bank of Ireland for conduct of business rules.

Copyright © 2016 Marsh Ltd. All rights reserved. GRAPHICS NO. 16-0742