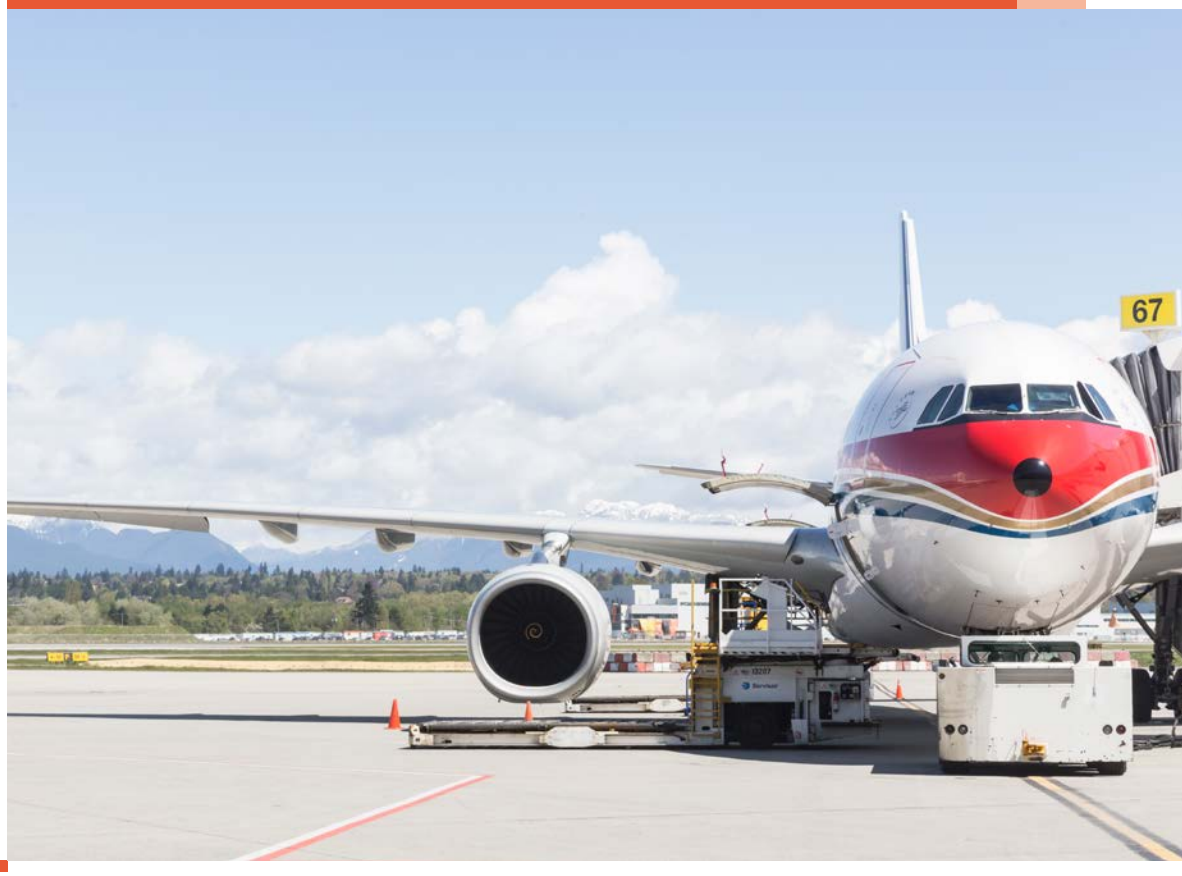
Tailwinds
2015 airline industry trends

Spotlight:

Ready for takeoff?
Managing growth in the rapidly expanding aviation industry



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Welcome to our 2015 edition of Tailwinds.

This publication provides an overview of the current state of the global airline industry and highlights emerging trends. Part one analyzes airline industry metrics such as revenue, pricing, profitability and global results by region. It concludes with a trends outlook for the remainder of the year. Part two examines the global surge in aircraft orders and its implications for air travel and passenger demand. With demand forecast to double over the next 20 years, how will the industry manage the challenges of this rapid growth?

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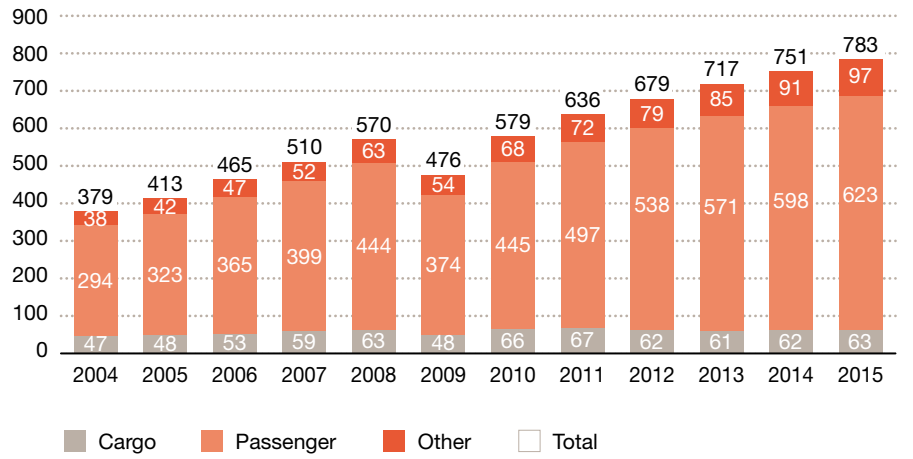
Part one: Current global industry trends

Revenue and pricing

Global airline revenues reached a historic high of $751 billion in 2014, increasing 4.7 percent from 2013 (*Figure 1*). This growth can be mainly attributed to a boost in passenger revenue as the numbers of both flights and scheduled passengers increased, offsetting a slight decline in passenger yields. At the same time, cargo revenue also increased, driven by a rise in freight tons; however, cargo performance continued to suffer from overcapacity, contributing to the third consecutive year of declines in cargo yields (*Figure 2*).

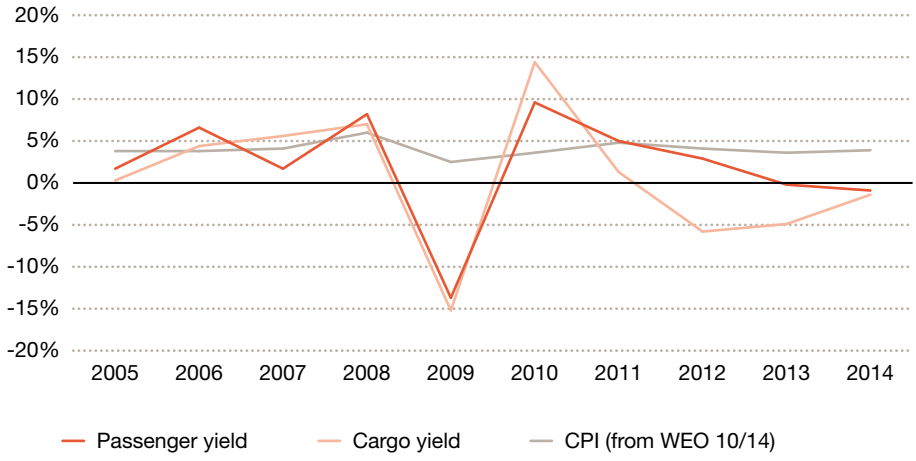
Passenger and cargo yields have not grown as quickly as consumer prices have in the past ten years, with 2.1 percent average passenger yield growth and 0.6 percent average cargo yield growth, compared with 4.0 percent average global consumer price growth. In addition, airline yields tended to be much more volatile than global consumer prices, reflecting the cyclical nature of airline demand and the impact of volatility in the cost of key inputs, especially fuel.[1]

Figure 1: Global commercial airline revenue ($ bil)



Source: International Air Transport Association (IATA)

Figure 2: Global airline passenger and cargo yields vs. CPI (%)



Sources: IATA, International Monetary Fund

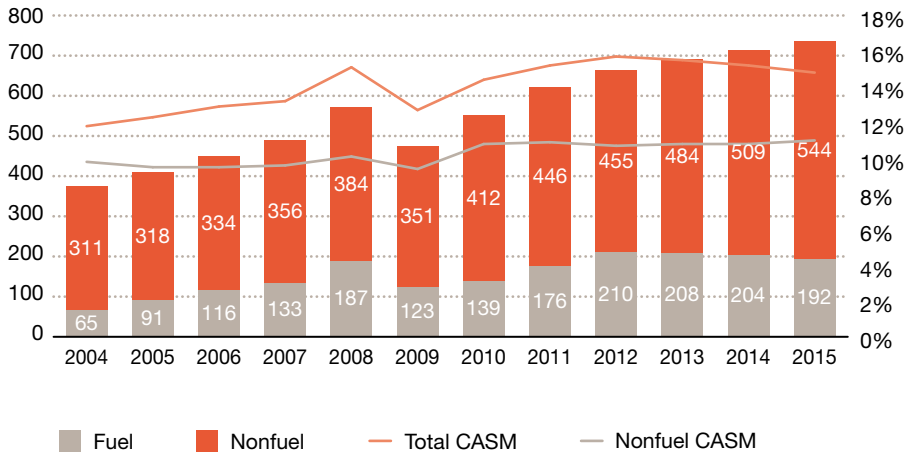
Profitability

The largest impact on airline profitability in the past year came from the steep reduction in fuel prices at year's end. Jet fuel prices fell to $1.62 per gallon in March 2015, down 44 percent from March 2014, and down 58 percent from a peak of $3.89 per gallon in July 2008.[2] Airlines saw some operating expense relief driven by this reduction, which led to declining fuel expenses, despite capacity and consumption growth (*Figure 3*). The impact in 2015 looks to be much larger, as fuel prices have stayed below $70 a barrel, contributing to significant profit increases in the first quarter of 2015.

In 2014, the average global operating margin rose to 5.1 percent from 3.5 in percent in the previous year (Figure 4), or to $38.3 billion from $25.3 billion. This increase of more than 50 percent in operating profits was driven primarily by lower fuel prices and stronger worldwide GDP growth. The International Air Transport Association (IATA) forecasts further growth in 2015, to $46.8 billion, with an operating margin of 6.0 percent.[3]

However, nonfuel expense has continued to grow and has limited operating margin upside. Since labor and maintenance are normally the largest nonfuel operating expenses

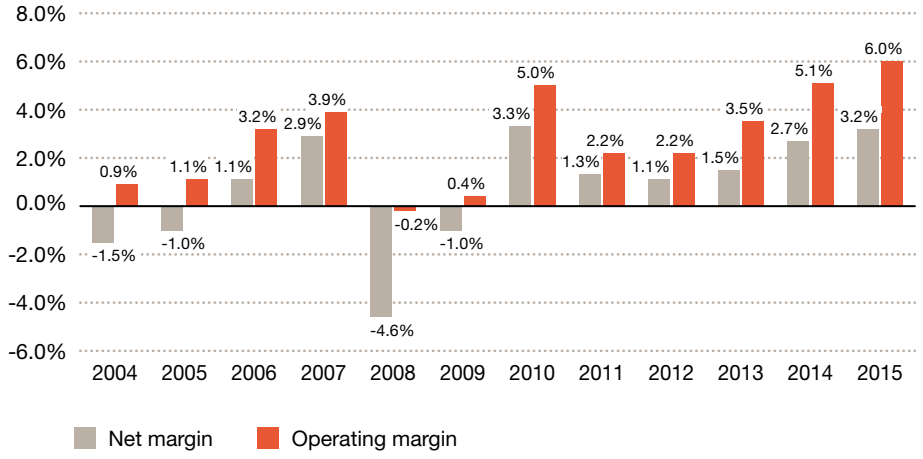
Figure 3: Total and nonfuel expense ($ bil and CASM*)



*Cost per available seat mile

Source: IATA, The Airline Monitor

Figure 4: Operating and net margin (%)



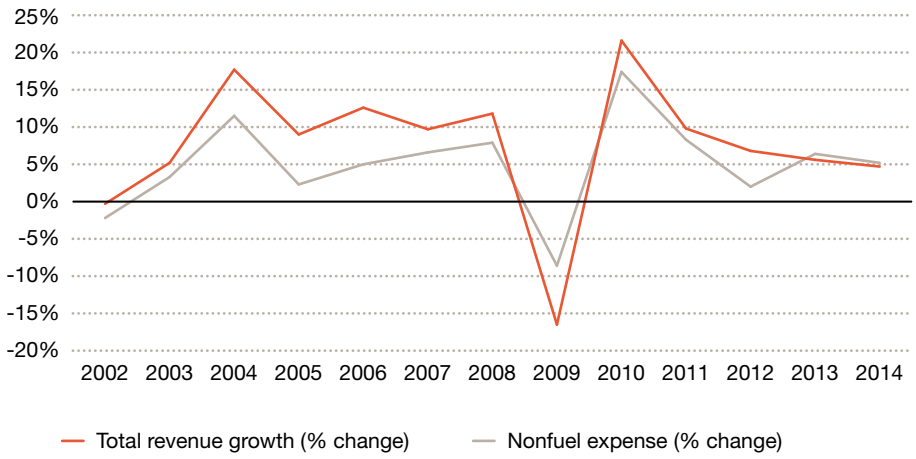
Source: IATA

for airlines, it is unlikely that airlines will see much relief from a labor cost perspective, due to expected growth in demand for pilots and maintenance technicians. Factors such as increased pilot training requirements, mandatory pilot retirement and global competition for pilots contribute to this demand. (See Section 2 for more about the airline workforce). As seen in *Figure 5*, the percentage growth in nonfuel expenses matched revenue growth in 2013 and 2014, driven in part by increased labor and maintenance costs. Many airlines maintained ticket prices in the face of reduced fuel prices, allowing them to weather the increase in nonfuel expenses without negatively impacting profitability.[4]

Fuel costs

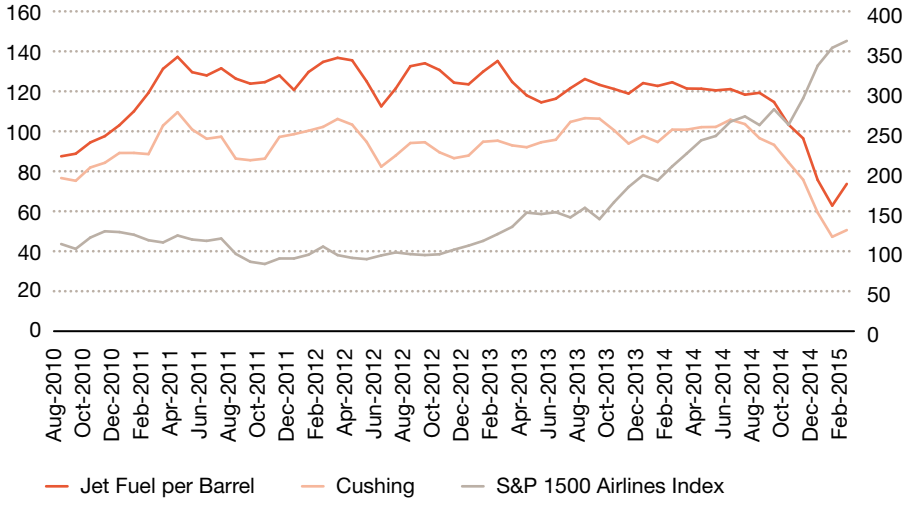
Fuel continues to be one of the largest expenses for airlines. It comprised more than 29 percent of total costs in 2014, and is expected to drop to 26 percent in 2015. Given the large impact of fuel on airline expenses, it is not surprising an inverse relationship appears between airline stock prices and fuel prices. Using the S&P 1500 Airline Index as a proxy for the industry's stock prices, we see a significant negative correlation between fuel and stock prices[5] from October 2010 to February 2015. This relationship was broken briefly in 2013–14 (*Figure 6*),

Figure 5: Total revenue vs. nonfuel expense (%)



Sources: IATA

Figure 6: Stock price vs. jet fuel price



Sources: Capital IQ. US Energy Information Administration

as US airline stocks appreciated significantly despite persistently high fuel prices. The combined impact of consolidation and capacity discipline has helped the industry adapt and achieve sustained profitability even in a high fuel price environment. However, the recent surge in airline stocks following the dramatic drop in crude oil prices suggests that the traditional relationship still largely holds.

Not all regions and carriers are benefiting equally from the decline of fuel prices. Because fuel is priced in US dollars, and the US dollar is currently very strong, foreign currency conversion disadvantages carriers in countries whose currencies have depreciated against the dollar. As *Figure 7* illustrates, not all airlines are capturing the full advantage of lower fuel prices due to foreign exchange rates; for example, airlines in the Eurozone and Brazil are seeing less benefit than those in the United States, China and India.

Global results by region

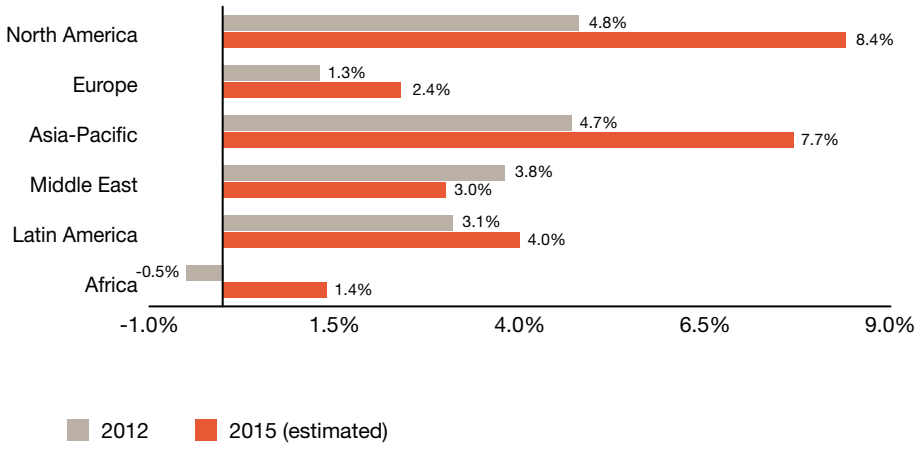
Since 2012, when the global airline industry hit a low point in margin, North America has led in EBIT (earnings before interest and taxes) margin (*Figure 8*), followed by the Asia-Pacific region. North American carriers have also become much more profitable than airlines in

Figure 7: Effective oil price reduction by country (4Q14 vs 1Q15)

Location	F/X % change	Change in oil price in local currency
Brazil (Real)	-17%	-41%
Eurozone (Euro)	-18%	-41%
Japan (Yen)	-14%	-43%
United Kingdom (Pound)	-9%	-46%
China (Yuan)	-2%	-49%
India (Rupee)	-1%	-50%
United States ($USD)	N/A	-50%

Source: Oxford Economics

Figure 8: EBIT margin by region (%)



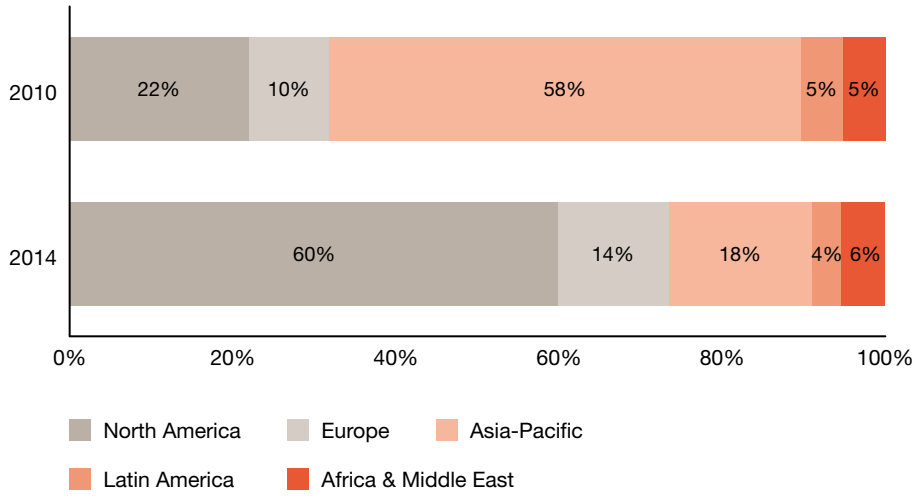
Source: IATA

other regions, accounting for more than half of the global industry's net profits, up from about a quarter in 2010 (*Figure 9*). Carriers in this region have benefited from a wave of domestic consolidations and capacity discipline.

While Asia-Pacific carriers earned relatively high EBIT margins from 2012 to 2014, they contributed significantly less to overall global net profit, falling from almost 60 percent in 2010 to just 18 percent in 2014. European EBIT margins have improved, but Europe still trails North America and Asia-Pacific. The European economic environment remains sluggish. Also, European airlines are grappling with increased competition from rapidly growing, low-fare competition in short haul markets and from fast-growing Middle East carriers in intercontinental markets.

The regional challenges can be seen in recent yield trends across regions. *Figure 10* shows the yield and load factors for the top 25 global airlines. While North American carriers saw an increase in yields of 2.3 percent from 2013 to 2014, carriers in other regions saw yield declines of 5 to 8 percent. In contrast to the yield differences, load factors have been basically flat across regions (except in Latin America) as carriers have become more adept at matching capacity to demand.

Figure 9: Global net profits by region (%)



Source: IATA

Figure 10: Yield and load factors for the largest global airlines

	Yield			Load factor		
	2013	2014	Change	2013	2014	Change
North America	18.7	19.2	2.7%	82.9%	83.2%	0.3%
Europe	21.8	20.7	-5.0%	81.6%	81.7%	0.2%
Asia-Pacific	22.8	21.4	-6.1%	77.8%	77.2%	-0.6%
Latin America	19.5	17.9	-8.2%	80.8%	83.4%	2.5%
Total	20.8	20.1	-3.4%	80.6%	80.6%	0.0%

Sources: CapIQ, PwC analysis of the public financial statements of the top 25 passenger airlines

Outlook for 2015

We expect to see several trends evolve over the remaining months of 2015.

Increase in air travel

Globally, scheduled passenger miles are forecast to grow almost 7 percent in 2015, the largest one-year increase since 2010.[6] This change is being driven primarily by steady economic growth, higher disposable incomes in emerging markets and increased air travel in developing economies. Spurred by lower fuel prices, capacity is expected to increase faster than passenger miles across all regions, driving a small decline in load factor and contributing to a 2.5 percent decline in passenger yield.[7]

In the United States, Airlines for America (A4A) projects summer 2015 air travel will rise to its highest level ever. From June 1 through August 31, 2015, A4A predicts 222 million passengers, causing airlines to increase the number of available seats by 4.6 percent to accommodate this growth.[8] The FAA recently announced that US airlines will carry 1.14 billion passengers annually by 2035, an increase of about 50 percent.[9]

Increase in competition on international routes

European and Southeast Asian carriers are most acutely feeling the competitive impact of the growing Middle Eastern carriers on international routes. There is no near-term evidence of this competition abating; carriers based in the Middle East have retained their existing large order books for additional aircraft, and they will continue to reshape passenger flows across the world.

The United States is just beginning to feel the impact of Middle Eastern carriers as they extend their networks across the Atlantic. These carriers have new, highly efficient, long-range aircraft and centrally located hubs that are capable of handling traffic across the Atlantic and, increasingly, almost anywhere on the globe.

US carriers are also feeling the effects of a strong dollar. With revenue collected from abroad in foreign currencies, the strong dollar relative to other currencies effectively lowers revenue. As a result, US carriers are reducing some international capacity. The US carrier portion of the international flight market has fallen to 53 percent from 57 percent since 2010, ceding market share to Middle Eastern, Chinese and other foreign carriers.[10]

Modest growth in profitability through 2015

Metrics have improved from a year ago, and the outlook remains favorable, according to IATA's most recent Airline Business Confidence Index.[11] IATA has forecast industry net profits in 2015 of $25 billion, a 25 percent increase from 2014, with EBIT margins increasing from 5.1 percent to 6.0 percent. The key drivers of improved financial performance are lower fuel costs and continued increase in volumes. IATA reported that both passenger and cargo volumes increased in the first quarter and are expected to remain positive throughout the year. Given that IATA's annual profit forecast was based on Brent fuel prices averaging $85 a barrel for 2015, there is substantial upside potential on profits if fuel prices remain below $70. A $15 decrease in jet fuel prices could be worth as much as $29 billion in reduced expenses at the projected level of global airline fuel consumption.

Increase in capacity

With lower fuel prices, carriers are beginning to increase capacity and reduce prices as the law of supply and demand kicks in. However, fuel hedges defer the full fuel-saving benefit and carriers remain cautious about the long-term price of fuel. In the short run, carriers can make low-risk marginal adjustments to increase utilization by adding incremental trips to their networks — trips that were previously unprofitable with higher fuel prices. Carriers also could restore some hub overfly routes (bypassing crowded hubs on route), increase the flying hours of less efficient aircraft types, and add flights in smaller, marginal markets. These modest increases in capacity could lead to moderation in ticket prices consistent with IATA's forecast for a 2.5 percent decline in 2015 yields. Over the medium term, carriers could make marginal decisions to overhaul older aircraft that are currently scheduled to be retired, providing incremental capacity for five to six years with limited investment, while not necessarily impacting long-term fleet plans.

Differentiation in service

The trend toward greater differentiation in service levels will continue. Airlines are reinvesting some of their increasing profits in improving service for their highest-revenue customers, while unbundling services at the low end of the market to serve price-sensitive customers. Carriers are upgrading the quality of their long-haul business class cabins and adding amenities (such as Wi-Fi) across their fleets. At the same time, carriers are responding to the success of ultra low-cost carriers by offering limited amenity products and increasing seat density in coach to add capacity at low cost. Loyalty programs are being adapted to match this trend as some carriers shift to reward models based on fares paid vs. miles flown to better align benefits to their highest-value customers (premium-fare paying passengers who contribute the most revenue per trip).

Another component of service differentiation is the growth in ancillary services revenue. US airlines increased ancillary revenues by almost seven percent in 2014, the largest increase since 2010. Ancillary revenues are expected to reach $49.9 billion globally in 2014, up 16 percent from 2013, and more than double the $22.6 billion collected in 2010. These fees drive almost 7 percent of total revenue.[12]

Response to changing fuel prices

As of June 1, 2015, oil prices ($63 per barrel of Brent crude) have rebounded 21% from their recent lows in January ($52 per barrel), but still remain 38% lower compared to the same time a year ago ($103 per barrel). While all airlines are benefiting from lower prices, the degree of their participation has varied based on different hedging strategies in places across the industry. This dramatic swing is forcing airlines to reevaluate their hedging strategies, with some abandoning the practice while others are looking to take advantage of the current attractive price levels by increasing their hedging activities.

In the meantime, airlines are applying their realized savings towards a range of strategic options, including increasing shareholder returns, lowering passenger fares and increasing capacity. Lower fuel prices are also enabling airlines to continue fleet renewal strategies with more fuel efficient aircraft that will provide another hedge against future increases in fuel prices.

Part two: Ready for take-off?

Managing growth in the rapidly expanding aviation Industry

For the past four years, aircraft orders have surged, resulting in a record-breaking backlog of orders both in absolute terms and as a percentage of the in-service fleet. In mature economies, these orders have been driven primarily by purchases of new, more fuel efficient aircraft models (as a response to record high fuel prices, which moderated only toward the end of 2014) and low capital costs. Many of these orders have been placed to accelerate the replacement of aging fleets. In emerging countries, demand is being driven more by economic and demographic growth. As a result of the global surge in orders, the long-term forecast projects that air travel and aircraft demand will more than double in the next 20 years. A number of factors can impact this demand, as well as the industry's challenges in realizing potential growth.

Demand forecast

Both Airbus and Boeing are forecasting large increases in aircraft deliveries into 2033, suggesting that demand is strong enough to support a doubling of the in-service commercial fleet. Airbus maintains that airliner sales will total $4.6 trillion in the next two decades, while Boeing is forecasting sales of $5.2 trillion.[13] Though both companies are bullish on growth, demand particulars vary. Despite not signing any new A380 customers in two years, Airbus sees greater demand for superjumbo planes and is projecting that 1,500 very large aircraft will be delivered in the next two decades, more than twice the 620 forecast by Boeing. On the other hand, Boeing is projecting greater demand than Airbus for narrow-body planes, 25,680 vs. 22,000.[14]

Demand growth is expected to be strongest in the emerging economies of Asia-Pacific (especially China), the Middle East, Latin America and parts of Africa.

Several megatrends explain this phenomenon, notably shifts in global economic power and demographics, and accelerating urbanization in emerging economies.[15] Rapid population growth and rising incomes in these countries are creating a larger middle class with greater consumption needs and an appetite for travel. With much of the population boom young and tending to migrate to urban centers, airlines can service more customers through refined route and network planning.

Figure 11: Global aircraft orders, commercial deliveries & retirements

Source: Airline Monitor

Demand constraints

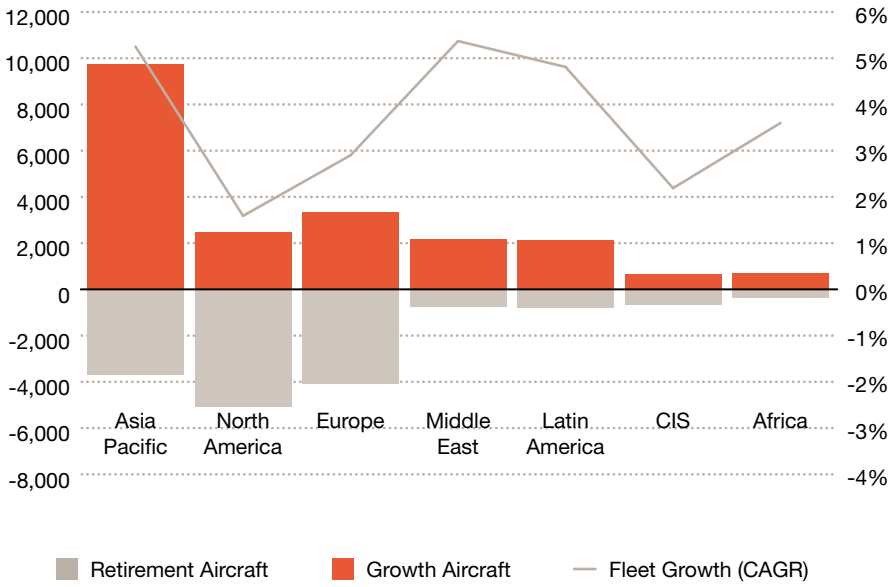
While Boeing and Airbus are raising production rates on some of their most popular aircraft models, and backlogs are reaching more than seven years for some planes,[16] several important factors could adversely impact the aviation industry's ability to service planned passenger growth and profitably and manage planned aircraft deliveries. Three major factors are infrastructure, fuel prices and the aviation industry workforce.

Infrastructure needs

Increased demand for air travel requires not only additional aircraft, but also infrastructure investment to support the operation of those aircraft, including airport expansions and efficiency-based improvements to air traffic control (ATC).

Nearly three-quarters of airline CEOs cited inadequate infrastructure as a barrier to industry efficiency in PwC's global airline CEO survey.[17] In some countries, airport infrastructure is a stated government political and investment priority. Yet in others, there is a track record of insufficient funding, limited political alignment and/or concerns about environmental impacts that could make accommodating the projected growth in passengers and aircraft quite challenging. In the United Kingdom, for example, discussion has been ongoing about new runway options at the major London airports for 15 years, with no resolution in sight.[18]

Figure 12: Drivers of new aircraft delivery



Source: Boeing Commercial Market Outlook 2014

ATC is another key infrastructure concern. While airspace is global, control of airspace is largely national. There is no global operating standard for airspace, and efforts made by the European Commission (EC) indicate how difficult it is for countries to relinquish control. The EC's "single European sky" initiative, which would centralize airspace management for its 28 member states, has been mired in political debate for more than 10 years.[19]

The infrastructure limitations will likely be felt most acutely in the rapidly developing markets of Brazil, China, India, Indonesia, the Philippines and Turkey — countries that are projected to see the biggest jumps in the number of air passengers[20] and that are in need of significant infrastructure upgrades. Since the large surge in Asian airport development in the 1990s, development has not kept up with demand. Traffic at most major Asian hubs already exceeds capacity, and even secondary hubs are starting to show capacity strain.[21]

China and India are two countries where investments in ATC and other infrastructure needs are not keeping pace with demand. China, with almost 70,000 flights every week and annual growth of more than 8 percent,[22] is experiencing severe bottlenecks at its airports as a result of ATC issues. Beijing's airport

ranked last among the world's top 35 airports, with 82 percent of flights failing to leave on time, followed by Shanghai at 71 percent.[23] India has also fallen behind and failed to build badly needed airports and other infrastructure; the Centre for Aviation (CAPA – http://centreforaviation.com) says India is woefully unprepared to meet the challenges ahead and will need massive investment in airport development by 2025.[24]

Unless these issues are addressed systematically and soon, the growth projected in developing markets will be difficult to achieve. Flight delays are already a significant tax on growth, increasing operational and customer costs and preventing the efficient functioning of airline networks. If left unaddressed, congestion not only will affect airline and aviation-related revenues, but also will restrain country and regional economic growth.

Fuel prices

The tripling of energy prices from 2009 to 2014 contributed to the demand for more energy efficient aircraft. Yet with fuel prices almost half the level they were a year ago, demand for new aircraft hasn't materially changed; both Boeing and Airbus predict record deliveries based on their order books. One reason may be that some airlines have binding fuel hedging contracts that will last for some time, limiting the benefits of adjusting their fleet mix. And many unhedged carriers are keeping their existing fleet strategy, believing that low fuel prices will not be sustainable in the foreseeable future.

If lower fuel prices do hold, they will help increase air travel demand by reducing the marginal cost of flying, which typically results in lower prices and increased flying. To support this trend in the near term, some airlines may decide to delay the retirement of the 50-seat regional jets that have been the workhorses of the US market. These inefficient planes may be uneconomical under high fuel cost conditions, but they return to profitable flying when fuel is cheap. If fuel prices stay low, and part of the resulting financial benefit is passed on to passengers in the form of reduced fares, there may enough expansion in passenger demand to support an overall increase in the number of planes flying.

With less expensive fuel, there is a risk that the hard-fought capacity discipline enforced by US carriers in recent years will dissipate. Most US carriers increased capacity faster than demand growth in the first quarter of 2015. Further, preliminary findings in PwC's Global Airline CEO Survey reveals that CEOs in the United States and worldwide are prioritizing increases in aircraft utilization and planned capacity in the next year.[25] While these measures should lead to increased revenues, it is unclear if they will likewise translate into higher margins and profitability.

If this year's level of fuel prices becomes the new normal, pressure on aircraft deliveries could mount as airlines choose to defer retirement of less efficient aircraft. One aircraft leasing company reported earlier this year that it had leased out five fuel-intensive aircraft it had intended to retire.[26] This pressure to postpone deliveries will be seen primarily among carriers in the mature economies pursuing fleet replacements. Any impact on orders for fleet replacement aircraft could be offset by the increase in demand for flying as carriers respond to lower prices and stronger economies. While the net impact on order books is unclear, it is unlikely to be significant or sudden.

Workforce

Labor is the second-largest operating expense for airlines after fuel, and the largest operating expense for many carriers in mature markets, so it is no wonder that airline CEOs rated the availability of key labor skills as the second-largest business threat to growth. These same CEOs are addressing the issue: 88 percent say they have initiated or are planning changes to their talent management strategies.[27]

Airlines and other entities in the aviation sector, such as airports and air navigation service providers (ANSPs), face two emerging challenges: the need to hire nearly three million new employees overall in 10 years, and attracting and training skilled employees, including pilots and mechanics.

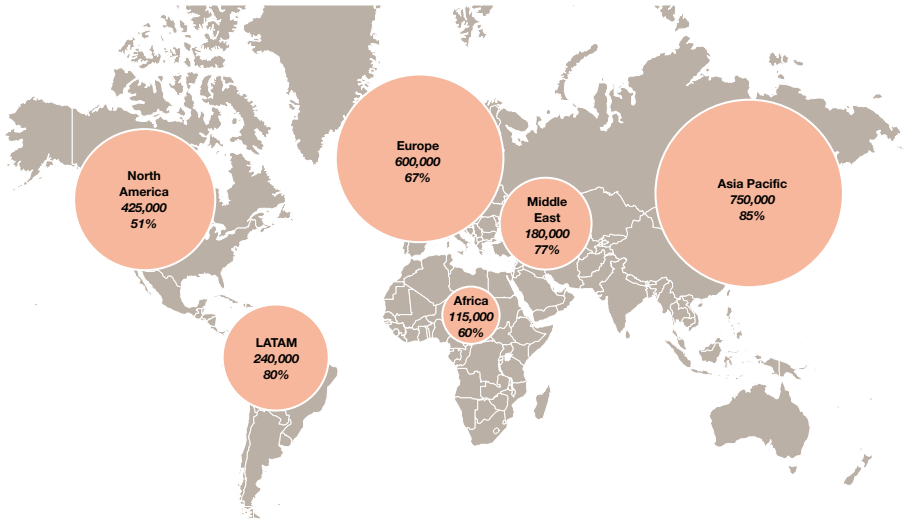
Challenge 1: Hiring 2.7 million new aviation industry employees by 2025

With many employees from the baby boomer generation reaching retirement age, a significant number of incremental new hires will be required to take the place of these employees. In some of the largest economies, the aviation growth rate is projected to outpace the workforce growth rate. Airlines will have to become more competitive in the "war for talent," which is likely to accelerate the upward pressure on wages in the near to medium term. Examples of this trend are plentiful in both developed and developing economies. One major US carrier recently raised base wages for flight attendants and other groups to "reward workers with industry leading wage rates,"[28] creating a 7 percent difference in its base hourly pay compared with other major US carriers. In the United Kingdom, airline pilots and air traffic controllers are already among the highest-paid workers.[29] And airlines in some developing countries are raising pilot wages to attract foreign-trained talent to support near-term growth.[30]

With passenger volumes projected to grow annually from 4 to 5 percent globally, and up to 7 percent in the regions of Latin America, Asia-Pacific, and the Middle East, nearly two billion more airline passengers will move through the global aviation system each year by 2025.[31] Nearly 9 million people globally work for aviation related or supporting entities,[32] and approximately 3.3 million people are employed directly by airlines, airport operators and ANSPs.[33] If employee growth parallels passenger growth volumes through 2025, the number of employees under direct employment by airlines, airports and ANSPs will increase to 5.2 million, for a net increase of 1.9 million. Assuming a conservative annual retirement rate of 2.5 percent,[34] the number of new hires in the next 10 years to scale for growth and replace retirements will be 2.7 million employees — more than 80 percent of the aviation industry's direct workforce today.

While aviation is a global industry, workers are generally hired in their own countries or regions. The difference between projected regional employment growth rates and projected regional aviation

Figure 13: Estimated aviation industry employment gap by 2025*



* Includes direct employment by airlines, airport operators and ANSPs

Source: Oxford Economics (May 2015), "Employment Levels by Country, 2015–2025"

industry job growth rates through 2025 defines the "employment gap" on a region-by-region basis. This gap quantifies the number of new hires the aviation industry effectively needs to recruit to maintain its current employee-to-passenger ratio.

The world map in *Figure 13* estimates the employment gap by region, combining expected new hires and backfilling for retirements. North America and Europe combined represent nearly 45 percent of the global total, driven more by an aging workforce than in the faster growing regions of Asia-Pacific, Latin America and the Middle East, which must recruit new hires to support higher rates of passenger growth.[35]

In some of the faster-growing economies, the employment gap is particularly acute. *Figure 14* shows the comparison between projected employment growth at the national level and airline passenger growth in three of the largest aviation markets in the world.

Figure 14: Employment gap for China, Brazil, and India

Country	Employment Growth 2015–'25 (CAGR)[36]	Passenger Growth IATA 2015–'25 (CAGR)[37]	Employment Gap by 2025 (jobs as % of current aviation industry employment)
China	0.4%	5.6%	300,000 (65%)
Brazil	0.7%	5.4%	45,000 (55%)
India	1.7%	6.9%	45,000 (70%)

Challenge 2: The need for skilled employees

The predicted shortage of pilots is probably the most challenging workforce issue for airlines because of extensive training requirements, the need for candidates to self-fund some of their training, and regulatory and corporate constraints and guidelines on years of service.

As reported in a previous Tailwinds edition,[38] there are numerous reasons for the shortage, which could reach critical proportions. In the United States, a new regulation has greatly increased the number of hours of flight experience needed before a pilot is permitted to fly a major commercial airliner. Military pilots, who often joined commercial airlines after they left the armed forces, are choosing to stay in the military for longer periods. Adding to these factors is that pilots are required to retire at 65, leading to a total need of 70,000 pilots with an ATP certificate through 2032, which represents about 3,400 new pilots annually through 2022.[39] Further aggravating this shortage is a new requirement that mandates more daily rest time for pilots, which may result in an additional 5 percent increase in the number of commercial pilots needed to service the existing fleet.[40]

The global shortage of skilled pilots is already affecting the operations of many airlines, forcing schedule cancellations and the maneuvering of crew rosters to cover flights. Looking ahead, the pilot shortage will affect all airlines. Boeing's long-term market outlook forecasts that about 533,000 new commercial airline pilots and 584,000 new maintenance technicians will be needed in the next 20 years to support the growing world fleet.[41]

Addressing the workforce issues

The 2015 PwC Global Airline CEO Survey shows that 75% of airline CEOs are increasing investment in talent management, their second highest priority for investment behind only customer service. While many carriers are already well down the path of addressing their projected human resource shortfall, some carriers have not yet developed a holistic and proactive strategy.

How are some airlines dealing with these workforce issues? Below are four strategic approaches:

1. **Building a local supply base.** Some airlines are taking financial and operational measures to address the perceived employment gap. For example, one major Middle Eastern carrier is buying$200 million worth of simulatorsand training tools for its pilots' academy — a level of investment that speaks to the critical and immediate need for trained pilots. It is also investing heavily in a cadet training program, taking on about 50 new recruits each year. Nationals get free training, while foreigners have to repay their training costs over five years. Additionally, the carrier is organizing "roadshows" in schools to educate and excite schoolchildren about careersin aviation.[42]

2. **Creating global staffing models.** A leading European low-cost carrier is being accused of usinga "flag of convenience" strategy to globally redeploy labor by sourcing workers from lower-cost geographies and staffing them in higher-cost countries. While this approach has been criticized by governments and labor unions as circumventing rules about employment of nationals,[43] it shows that airlines are not limiting themselves to the most readily available labor markets, but instead are exploring ways to expand access to resources.

3. **Investing in emerging technologies.** The recent introduction to the market of mature information-based solutions is providing airlines with viable opportunities to automate manual processes and redeploy labor to more value-added activities. This can be seen in airlines that have reduced the focus of their workforces on transactional activities, such as manual re-accommodation, and transitioned to more strategic activities, including personalizing service offerings and increasing interaction time with premium passengers. Technology-related solutionsare also providing new career paths for existing employees, providing upskilling opportunities in analytics, statistics, information management and mobile applications.

4. **Expanding flexibility and inclusion programs.** As in other global industries, airlines should create a comprehensive recruiting and talent management strategy that addresses the needs and cultural sensitivities of employees in each geography. In particular, airlines should address the demands of the millennial generation, which is expected to form half of the global workforce by the end of the decade. If airlines are going to be able to renew their workforce, they'll need to consider the flexible work arrangements and lifestyle-friendly programs that are valued by millennials while they continue to develop diversity programs that expand the workforce. This is reinforced by our 2015 airline survey, as nearly two-thirds of airlines have implemented talent diversity strategies.[44] CEOs are recognizing the potential benefits, including attracting and retaining talent, innovating and improving overall business performance.

Conclusion

The prospects for the global airline industry are promising. Given demographic and economic trends, the potential demand for air travel is expected to more than double in the next 20 years, driven by growing populations and higher incomes in Asia, the Middle East and Latin America. Accommodating this demand will require that airlines and their partners, including airports and governments, take action collaboratively to ensure that the infrastructure and workforce are available to support increased growth. The related implications are significant. Whether these groups are considering the technology upgrades involved in squeezing infrastructure capacity, the industry's aging talent and skilled labor shortage or the need for more effective fuel management capabilities, airlines have entered an era in which flexibility and adaptability are the essential drivers of growth.

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Note: Some endnotes are out of sequence due to certain sources being used multiple times.

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