

# Onwards & Upwards

**2015 New Year Industry Snapshot**



**Dick Forsberg**

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**AVOLON** 

## **Dick Forsberg**

Head of Strategy, Avolon

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Dick Forsberg has over 40 years' aviation industry experience, working in a variety of roles with airlines, operating lessors, arrangers and capital providers in the disciplines of business strategy, industry analysis and forecasting, asset valuation, portfolio risk management and airline credit assessment.

As a founding executive and Head of Strategy at Avolon, his responsibilities include defining the trading cycle of the business, primary interface with the aircraft appraisal and valuation community, industry analysis and forecasting, driving thought leadership initiatives, setting portfolio risk management criteria and determining capital allocation targets. Prior to Avolon, Dick was a founding executive at RBS (now SMBC) Aviation Capital and previously worked with IAMG, GECAS and GPA following a 20-year career in the UK airline industry. Dick has a Diploma in Business Studies and in Marketing from the UK Institute of Marketing is a member of the Royal Aeronautical Society and also a Board Director of ISTAT (The International Society of Transport Aircraft Trading).

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## Introduction

**As we all get our feet back under the desk at the start of another year, this short paper picks up some of the key themes that are currently shaping our thinking. Over the coming months, we shall be expanding further on topics that we expect to be key influencers of our industry and hope to stimulate informed debate amongst our peers and colleagues.**

2014 was the year that the A320Neo flew for the first time, the DC10 and MD11 flew for the last time in scheduled passenger service, the 787-9 and A350 were delivered to their launch customers, OEMs unveiled the 737MAX 200, the A330neo and a 97MT A321, Dubai Airport overtook Heathrow to take the #1 spot measured by international passenger volume, 3.3 billion passengers flew on 33.4 million flights globally – that’s more than one departure every second... and the number of public market lessors increased by 25%.

The macro-industry backdrop for 2014 was positive and the year delivered growth and profitability in line with forecasts, as airlines saw passenger demand increase by 5.7% and added close to \$20 billion in net profit to their bottom lines, a record amount that represents a return on invested capital (ROIC) in excess of 6%. Most of this was achieved without the help of the rapid fall in the cost of fuel that has occurred since the summer – now over 50% in aggregate. Although this oil price shift may partly reflect weakness in some economies, the overall effect for airlines is clearly positive, even after the effects of hedging, adjustments to fare surcharges and the strengthening of the US dollar.

Looking ahead, IATA forecasts passenger traffic (RPKs) to increase by a very robust 7% in 2015, with cargo demand maintaining its recent move out of the doldrums with a 4.3% increase. Airline profitability is forecast to rise further in 2015, to \$25 billion – and that is likely to be a conservative estimate given that IATA’s associated average oil price assumption is \$100 a barrel. And since profitable airlines tend to invest in additional capacity and growth strategies, OEMs, lessors and aviation financiers can all expect to benefit.



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## Positive Underlying Fundamentals

Putting aside the outlook for fuel prices, several key factors that influence the growth and stability of commercial aviation remain in the ascendancy which, absent any external shock, should ensure further positive industry fundamentals in the coming years.

Commercial aviation has become a core component of the global economy, reaching a scale that would position it as the 21st largest economy in the world, according to ATAG. The industry supports over 58 million jobs and \$2.4 trillion in annual economic activity, according to IATA.

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In emerging markets, very large populations are now mobilising to travel by air, enabled by market liberalisation and the emergence of low cost airlines offering affordable tariffs. Emerging Asian economies alone are forecast to generate 100 million new passengers every year, according to Boeing. By way of perspective, London Heathrow handles 70 million passengers and Atlanta 95 million annually.

Within these high growth markets, visiting friends and relatives (“VFR”) traffic represents a major market segment with close to 200 million annual passengers, the growth of which is influenced by rising urbanisation and migrating workforces. VFR travel has proven to be a highly stable market segment, even during economic downturns, according to Airbus.

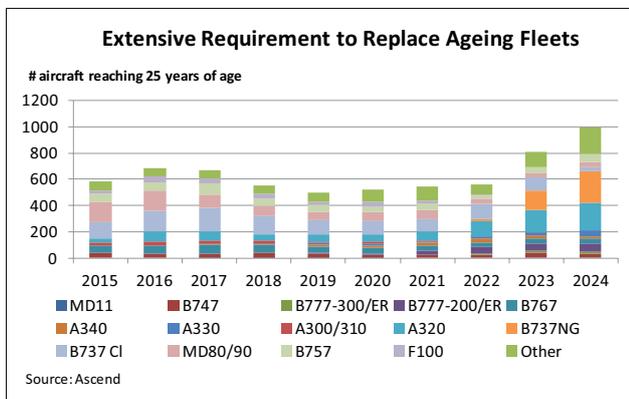
The increased urbanisation and GDP growth taking place in emerging markets is driving growth in wealth and personal disposable income, which in turn increases the number of people who could be classified as “middle class”. This social class is a significant source of new air travellers as well as generating repeat air travel business, according to Airbus. The size of the global middle class population is forecast by Airbus to increase by almost 60% over the coming decade - from 2.4 billion in 2013 to 3.7 billion by 2023, of which 2.1 billion will live in the Asia Pacific region, underpinning the strong air traffic demand forecast for that part of the world.

Airbus and Boeing continue to book new orders at record levels, driven by two core components - the ability of airlines to achieve a sustained level of retained earnings and the expectation that oil prices will revert to a higher level and remain there for the foreseeable future. This latter view, which has become the baseline fleet planning assumption for many airlines and has not changed in recent months, has created a desire to operate the most fuel-efficient aircraft possible through a combination of acquiring the new generation models that are now starting to come to market and retiring the oldest and least efficient equipment still operating.

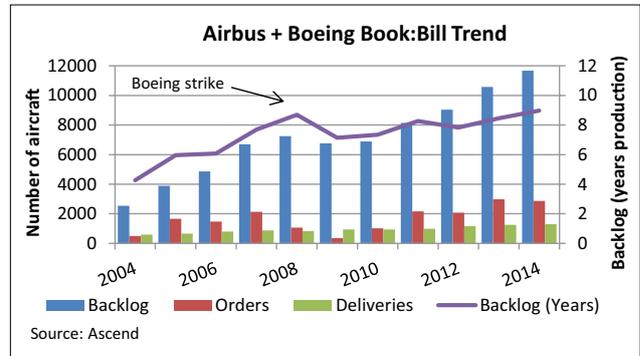


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Two factors have amplified the effect of this strategic positioning towards operating efficiency: firstly, the development and availability of new, fuel-efficient models in each of the three main fleet categories (single aisle, twin aisle and regional jet), and secondly, a rising tide of aircraft that are reaching their natural economic retirement age of 25 years, the result of a surge of orders and deliveries that began in the late 1980s and early '90s. Over 6000 passenger aircraft, 30% of the current fleet, will reach 25 years of age over the next decade.



The manufacturers are maintaining a high degree of production discipline, mindful of constraints on their global supply chains and committed to avoid building “white-tails” – aircraft lacking a customer to take delivery. Over the past five years, Airbus and Boeing orders have averaged a multiple of 1.9x their deliveries (their “book:bill ratio”) and reached 2.2x in 2014. Consequently, order backlogs have been growing steadily and now represent 8-9 years of production for the most popular types.



With respect to rate increases on single aisle aircraft, which account for more than 75% of the current global fleet, the number of aircraft deliveries, measured as a percentage of the in service fleet would remain within the historical range of 6% - 7% after Boeing’s planned increase to 52 from mid-2018 is taken into account, even assuming that Airbus will match that increase. Given the extent of the backlogs, though, these rate increases will do no more than allow the OEMs to meet their commitments out to the end of the decade.

Whilst demand for the popular twin aisle A330 and 777 products remains strong in the near term, both manufacturers still have work to do to build delivery skylines out through the 2016-2018 period.



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In order to sustain and manage their record order books, Airbus and Boeing apply a policy of overbooking for their single aisle product lines, coupled with sophisticated processes for monitoring and managing their near-term production and delivery streams that are now embedded in their planning processes. A considerable buffer exists to ensure that, even in the event that some customers hit turbulence that results in order cancellations or deferrals, all of the planned production can and will be delivered. Production of “Future Generation” models will not begin to match underlying demand until the middle of the next decade. With most products essentially sold out, there are plenty of airlines that have not been able to secure their preferred delivery positions, presenting opportunities to replace deferred or cancelled order positions or, more frequently, for sourcing capacity through the lessor community that is the de facto swing provider when capacity is sold out.

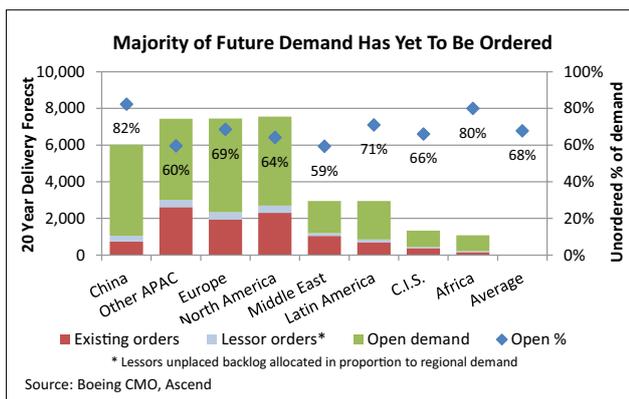
Despite the growing backlog, many operators that are historical direct customers of the OEMs do not currently have a direct order backlog. 66% of A320 family operators that have previously placed direct orders with Airbus for the type have no Neo backlog. Similarly, 79% of 737 operators have no Max orders in place and 54% of A330 operators have no A350 orders. In aggregate, more than 2/3rds of the 36,000 aircraft that Boeing forecasts will be required over the next 20 years have not yet been ordered.

Since aircraft are highly mobile assets, if an airline finds that anticipated demand does not materialise, it can readily transfer aircraft to other operators – a commonplace activity today, facilitated by operating lessors and the OEMs’ overbooking profiles.

The rising tide of ageing aircraft approaching their natural retirement age will absorb a significant proportion of new deliveries – even at the higher production rates planned by Airbus and Boeing, The industry expects between 40% and 50% of deliveries to be absorbed by replacement of older, less efficient aircraft, with growing numbers of aircraft approaching a natural replacement age of 25 years through the remainder of the decade and into the 2020s.

The remaining deliveries will be readily absorbed by growth in demand, which remains closely correlated to economic growth, which the IMF and other economic forecasters expect to average more than 3% per annum over the medium term, with substantially higher levels being achieved in emerging markets, notwithstanding any short-term regional perturbations. Any slowdown can be expected to be short-lived, with past events exhibiting full recovery of passenger traffic volumes to their long-term trend within 1 to 3 years.

In summary, then, industry traffic growth has proven to be highly resilient to external shocks, the appearance of “order exuberance” is misleading as the lead time to delivery has lengthened significantly and most popular models are sold out until the end of the decade; over 65% of future demand has not yet been ordered; and a rising tide of aircraft approaching their natural retirement age will absorb over 40% of deliveries. The outlook for further growth and advancement of the aviation cycle is therefore positive, with multiple indications that the current recovery phase is a long way from peaking. With supply of new generation types lagging demand for several years, the values of current generation aircraft should also be maintained.



## The Fuel Price Question

Every time that the markets produce big swings in the price of oil, the same questions are asked – is it a good or bad thing? Who will be the winners and losers? What will happen to demand, supply and values? And typically, by the time we have collectively figured out the answers, the oil markets have returned to an existing, or new, equilibrium.

So, how could the recent regime of falling oil prices affect aircraft demand and values and who are the likely winners or losers?

When oil is trading at \$100 a barrel or more, fuel typically represents 30-35% of an airline's operating costs (up to 40% for widebodies) and this has provided a clear impetus for the industry to develop, and invest heavily in, highly fuel-efficient aircraft such as the 787, A320neo and 737MAX. As oil prices fall below \$100, the fuel component of airline operations decline and, in the short-to-medium term at least, this boosts their profitability. Improved airline profitability typically leads to increased demand for aircraft linked to a heightened appetite for growth, which will offset any tendency to slow the rate of retirements.



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Although we have seen a significant fall in oil prices since the summer, it remains unclear whether this is a short- or longer-term phenomenon. Although large producers such as Saudi Arabia and Russia have been resisting production cuts, history tells us that supply will ultimately be moderated to match demand, which has been affected by a drop in US imports as their domestic production grows as well as by lower consumption in key markets such as Germany, China, Japan – and the US. Supply has meanwhile been boosted, not only by the growth in “tight oil” extraction in North America, but also from a resumption of meaningful exports by Libya and Iraq, all of which contribute to a continued steady rise in global inventories.

Whilst market sentiment and speculation in oil futures may play an exaggerated role in driving short-term oil prices, the prevailing view of the experts in the oil sector is that prices significantly below \$75 a barrel are unlikely to be sustained over the long-term, in part due to the higher cost of extraction from shale sources, such as those that have been developed in the US, which often involve the use of fracking and/or horizontal drilling methods.

It is also important to remember that greenhouse gas emissions, which derive directly from the burning of fossil fuels, remain a high-profile issue on the global stage, increasingly attracting financial penalties and taxes in addition to the actual cost of the fuel itself and expected to become a meaningful cost item for airlines in the future.

Sustained lower fuel prices, amongst other factors, would likely lead to stronger demand for older aircraft, which would, in the opinion of many of the appraisers, have a positive influence on the values of both older and younger vintages.

Nevertheless, airline fleet planners continue to take a prudent long-term perspective on operating requirements and do not take investment decisions on 25 year assets based on short-term input cost fluctuations.

## The Crystal Ball

As is customary, I will close with some predictions for the industry in 2015. Sadly, success in forecasting future events proved to be more elusive last year, with only four out of ten predictions proving to be 100% correct.

1.	The airline industry will succeed in maintaining load factors and improving profits	✓	
2.	Boeing will step up the pace on Max sales	✓	
3.	Airbus will announce additional performance tweaks for the A350-1000		✗
4.	Flight tests will validate CSeries performance targets, but it will not enter service in 2014	✓	✗
5.	There will be a 50% reduction in the number of parked freighter aircraft by year-end		✗
6.	Airbus will reveal a further narrowbody rate increase	✓	
7.	The capital markets will finance at least 15% of 2014 new aircraft deliveries	✓	
8.	Appraisers will reflect a further 5-10% improvement in production aircraft CMVs by year-end	✓	✗
9.	Public lessor stock prices will rise further, with an average increase of 10-20%		✗
10.	ICAO will continue to move slowly on a global emissions strategy, but the European ETS scheme will remain in suspension	✓	✗

Circumstances conspired to delay flight test results for the CSeries, whilst Airbus has held firm on A350-1000 performance specifications, despite the backlog for the variant reducing by 20 units during the year. The number of parked freighters was cut, but by a mere 12%, and the average valuation of the public lessors improved by 6% over the year. Appraisers fell short of calling market value gains, mostly on the widebody types – narrowbodies averaged around 5%. Finally, the EU did restart the ETS emissions charging scheme, although its scope is limited to flights segments within the EU.

Undaunted, here are my 2015 fearless forecasts. I hope to be more accurate (or luckier) this year and, to improve my chances, have limited my predictions to five.

1. An A380 NEO will be announced, with sole source Rolls Royce engines.
2. Airbus will book orders for at least 150 A330neos during the year
3. Net passenger jet orders will come in at around the 2014 level of 2,500
4. Notwithstanding the low oil price, at least 650 commercial jets will be retired in 2015
5. A350-1000 performance **will** be revisited.





**Avolon Holdings Limited**

The Oval, Building 1  
Shelbourne Road  
Ballsbridge, Dublin 4  
Ireland

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