Client Logo

Aircraft Leasing

January 2016

Aircraft Industry

Executive Summary

High Potential for Growth

- Globally, the Aviation sector employs over 56 mm people including related tourism industries. Its global economic impact is estimated at USD 2.2 tn.
- Two main structural factors that are impacting airline traffic growth and demand for aircrafts are:
  - Growth in emerging markets
  - Aircraft replacement cycle
- Over the past 40 years, demand for air travel has grown at a CAGR of 6.0%, the global aircraft fleet has grown at a similar 5.0%. In fact, there have only been 3 years with negative traffic growth in the last 40 years (1991, 2001 and 2009)
- The aircraft leasing industry represents over 150 aircraft lessors with an estimated asset value of about USD 179 bn (2020) based on current market values of aircrafts
  - In 2016, the aircraft leasing industry is projected to provide funding for approximately USD 127 bn (a growth of 4.1% over 2014)
  - Over the next five years, the commercial aviation industry is projected to require higher levels of aircraft financing due to healthy industry fundamentals and strong demand for new, fuel-efficient aircrafts

INVESTMENT CHARACTERISTICS	AIRCRAFT
Expected returns	12- 16% (in US$)
Return profile	Balance of Yield and Capital gain
Risk profile /Other risks	Medium matched funding - low financing, no currency and low interest rates risk
Level of gearing	65% - 75% (depending on vintage)
Listed market comparable - Conceptualised	Secured High Yield amortising bond
Factor Risk exposure - Market	Credit - High exposure
Factor Risk exposure - Economic/ Fundamental	Growth and Leverage - High exposure
Factor Risk exposure - Structural	Urbanisation, EM growth and Environmental - High exposure
Use in the portfolio	Absolute returns Yield
Asset Allocation	Opportunistic, Absolute return, Private debt

Source:

Aircraft Industry Overview – Narrow Body Fleet Market

Aircraft Industry

Single Aisle – Narrow Body Fleet Market

Single Aisle/Narrow Body Overview & Characteristics

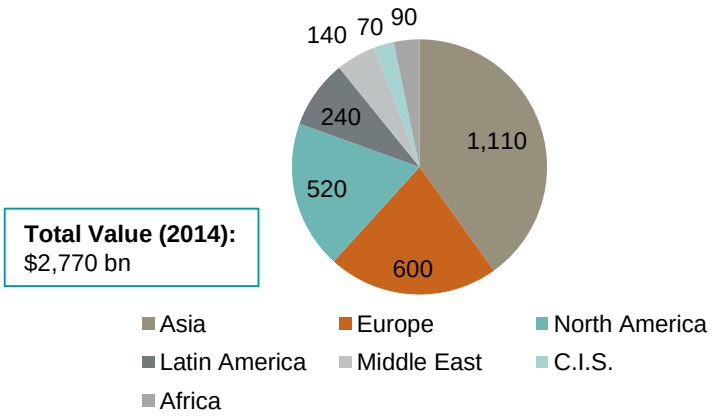
- Narrow body aircrafts are smaller and have a single aisle and typically have a short to medium range utilization. In contrast, wide body aircrafts are larger with twin-aisles and have a medium to long-range utilization
  - Narrow body aircraft are cheaper than wide body aircraft (up to USD 50 mn for a narrow body to over USD 200 mn for some types of wide body aircraft)
- The current single-aisle fleet consists of approximately 14,100 airplanes
  - North America leads with over 3,800 airplanes in service. Over the next 20 years, the single-aisle market will continue to enjoy robust demand — **26,730 airplanes**, **valued at USD 2.8 tn**
  - Due to higher production rates and higher demand from operators for short and medium range travel, narrow body aircrafts make up ~75% of all commercial passenger aircraft in operation
- Over the past decade, the global single-aisle market has changed substantially owing to key dynamics, including significant growth and development of low cost carriers (LCCs), consolidation in European and North American markets, impact of fuel prices, and continued market fragmentation
  - A simple average of single-aisle demand is >110 airplanes per month, (excluding deliveries for noncommercial private, military, government uses). However, current industry production levels are <90 airplanes per month

BOEING 737-800 (NARROW BODY)

KEY STATISTICS	
Seats	160-189
Range	short
Current Fleet	2,806
In Service	2,781
In Storage	25
% Stored	0.9%
On Order	1,334
Average Age	6.2

These are general characteristics of a narrow-body aircraft

Market Value by Geography $ bn - 2014



Total Value (2014): $2,770 bn

Source: Boeing Current Market Outlook – 2015, Investec Aviation Leasing as Part of a Broader Investment Portfolio - 2013

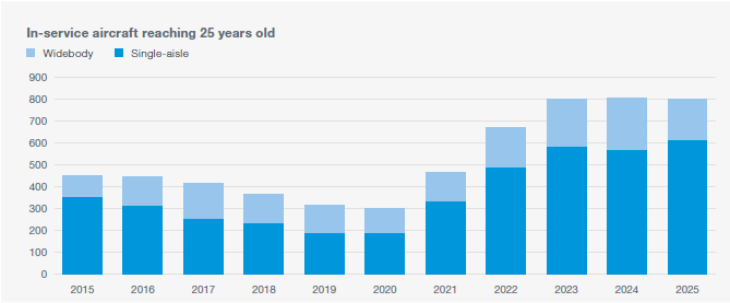
Aircraft Industry

Single Aisle – Narrow Body Fleet Market

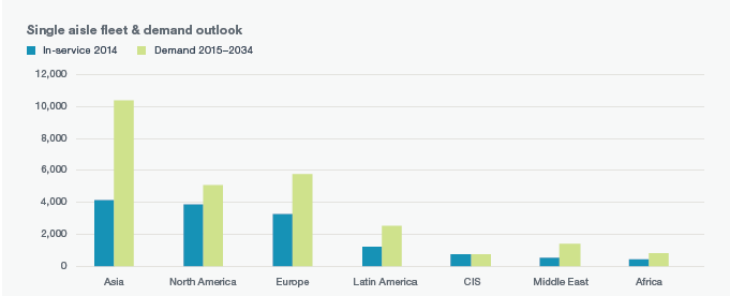
Industry Trends & Long Term Demand Forecasts

- With respect to near term backlog, approximately 75.0% of firm orders are in the middle-model category. There was an uptick in orders for the large single-aisle airplanes, reflecting aging 757 (and early A321) models due for replacement over the next 5-7 years
- The market is entering a period between now and 2020 during which:
  - Large single-aisle airplanes are expected to briefly represent up to 30.0% of the aging (25 years old and older) single-aisle fleet. (Beyond 2020, the share will fall to approximately 10-20%)
  - Large single-aisle airplanes will represent 23.0% of the near-term backlog
  - Over the past decade, through seat densification and modest up-gauging, numbers of single-aisle seats have increased an average of approximately 1 to 1.5 seats per year—from 139 per flight in 2004 to 152 seats in 2014
- As fuel-price volatility resumes in the near term, this trend is expected to strengthen as lower prices expand stimulation and fragmentation opportunities that are possible only with the risk-reward benefits of airplanes such as the 737-800 (160 seater)
- Innovations in LCC* business models have driven airline efforts to grow profitably in the most optimal due to the competitive environments in which they operate
  - Over the past four years, more than 1,200 airplanes, or more than 40% of the approximately 3,000 single-aisle airplanes produced for the market, have been delivered to LCCs worldwide
- Approximately 40% of the 20-year single-aisle deliveries—400 to 500 airplanes every year — will be in this market segment

Significant growth in replacement requirement



Regional variation in single aisle fleet



LCC* - Low Cost Carriers
Source: Boeing Current Market Outlook – 2015 :

Aircraft Leasing Industry Overview

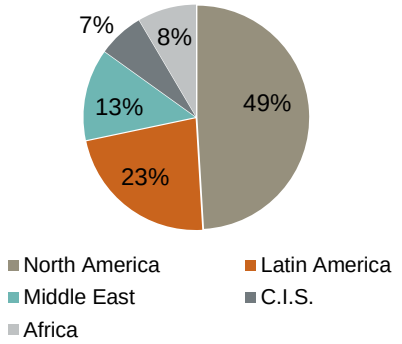
Aircraft Leasing Industry

Overview

Industry Overview

- The aircraft leasing industry represents over 150 aircraft lessors with an estimated asset value of about USD 179 bn based on current market values of aircraft. The industry is fairly fragmented with the 10 largest players accounting for <70% (USD 100 bn) of the industry's asset base and about 60% of the total number of units
- There are no clear trends of industry consolidation. On the contrary, the sector has become more fragmented in recent years, with a growing number of new leasing companies entering the space and building up portfolios relatively quickly
- A recent trend involves leasing companies joining with investors to establish a number of JV's and other structures designed to enable the transfer of aircraft portfolio ownership to the capital markets. This lessor portfolio sell-down trend is expected to continue to gain momentum in 2016 as well

Market Share of Lessors (Fleet Size) - 2015



Why Operating Leasing is becoming more Attractive to Airlines

Greater Financial Flexibility

- Leasing requires less capital investment, allowing airlines to invest capital in their operating business rather than deploying significant amounts into their fleets

Growth in LCC's

- The popularity of the LLC model across the world has also boosted demand for operating leases, as most start-up operators would rather lease than buy aircraft given the significant capital commitment. The ability to fly new aircraft helps build customer awareness, manage maintenance costs and subsequently gain market share

Avoid Pre-Delivery Payments

- Where the lessor orders the aircraft directly from the manufacturer, the airline can avoid pre-delivery payments (PDPs) - PDP financing decreases liquidity for several years without increasing revenue

Availability of Capital

- Lessors can sometimes access more and relatively cheaper capital than airlines, particularly newer airlines or those facing competition/business pressures

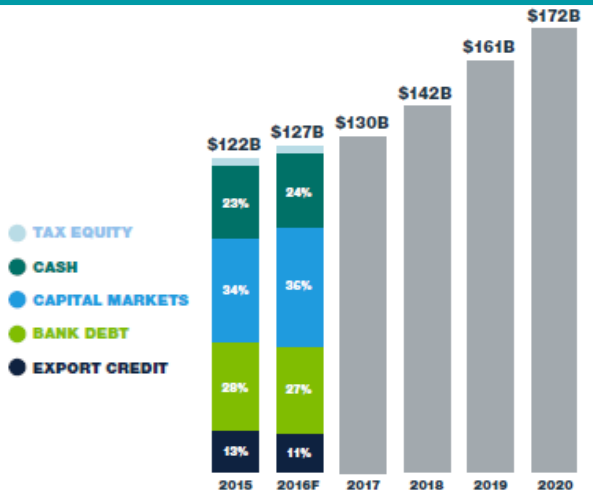
Source: Boeing Current Market Outlook – 2015, Investec Aviation Leasing as Part of a Broader Investment Portfolio - 2013

Aircraft Leasing Industry

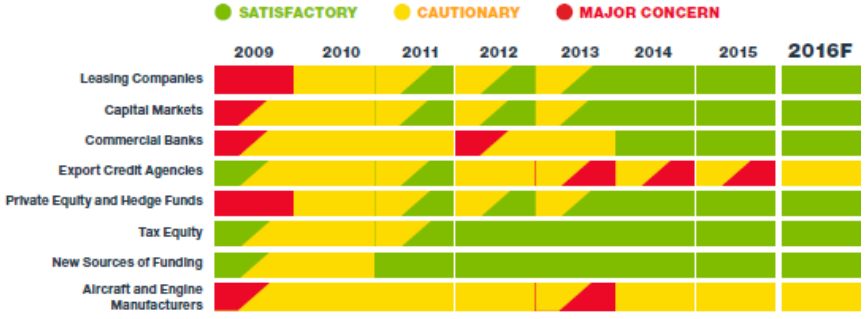
Near Term Outlook

Increased Funding Requirements

- In 2016, the aircraft leasing industry is projected to provide funding for approximately USD 127 bn (a growth of 4.1% over 2014), in new commercial aircraft deliveries, with the capital markets and commercial banks accounting for approximately two-thirds of that total
- Much of the funding should flow to lessors, who are expected to support around 40% of new airplane deliveries
- Over the next five years, the commercial aviation industry is projected to require higher levels of aircraft financing due to healthy industry fundamentals and strong demand for new, fuel-efficient aircrafts
- Aircraft finance markets, with their ability to offer a broad and balanced array of financing options at competitive prices, are expected to be well positioned to meet these rising funding requirements



Confidence Meter for Major Stakeholders



Efficient Financing Costs

- A combination of low interest rates and tight risk spreads is resulting in historically low aircraft financing costs. Commercial banks are lending at higher volumes and tighter spreads than before the financial crisis.
- An influx of new lenders has increased competition and driven down pricing, especially for loans to lessors and first-tier carriers. Private placement structures are enabling a broader range of carriers to access the capital markets at a reasonable price, while lessors and strong airline credits continue to enjoy efficient unsecured financing
- The markets anticipate higher interest rates and increased aircraft financing costs in 2016. However even if these developments occur, they will have a modest impact on airline carriers

Source: Boeing Current Market Outlook – 2015, Boeing Current Aircraft Finance Market Outlook - 2016

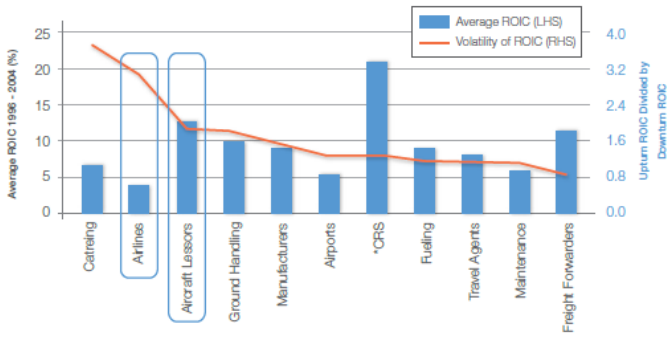
Aircraft Leasing Industry

Profitability

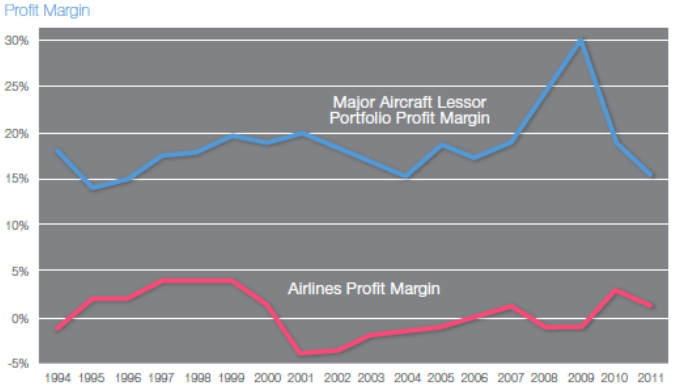
Leasing is the Most Profitable Aviation Sub-Sector

- In the past 10 to 20 years leasing companies have been steadily building up a significant market presence through financing not only new deliveries but also through purchase and lease-back transactions.
- As a result their market share has increased to close to 40% of the total number of commercial aircraft in operation globally. In order to finance the purchase of an aircraft, a leasing company would typically borrow up to 75% of the aircraft's base value
  - Based on estimates by Ascend, operating leasing will account for 50% of the overall market after 2020
- The main funding sources for aircraft purchases have traditionally been cash, capital markets, bank debt and ECA (Export Credit agencies guarantees). In recent years, many of these traditional sources of funding have been constrained by market and sector issues or structural changes, thus impacting the cost and access to financing
- Leasing is one of the most profitable sectors in the Aviation industry (as measured by the ROIC) and as such it is often preferred by investors and lenders due to the risk/reward profile
- Leasing companies are expected to play a key role in financing aircraft deliveries in the future as they become better placed to attract new investment
- This investment is particularly favorable for banks who will continue to see the diversification benefits in financing lessors that have a strong mix of airlines and aircraft types in their portfolios

COMPARISONS OF AIRLINE AND OTHER AVIATION SECTOR RETURNS AND VOLATILITY



AIRCRAFT PORTFOLIO INVESTMENT VS AIRLINE PERFORMANCE



Source: Boeing Current Market Outlook – 2015,

Aircraft Leasing Industry Drivers

Aircraft Leasing Industry

RPK's

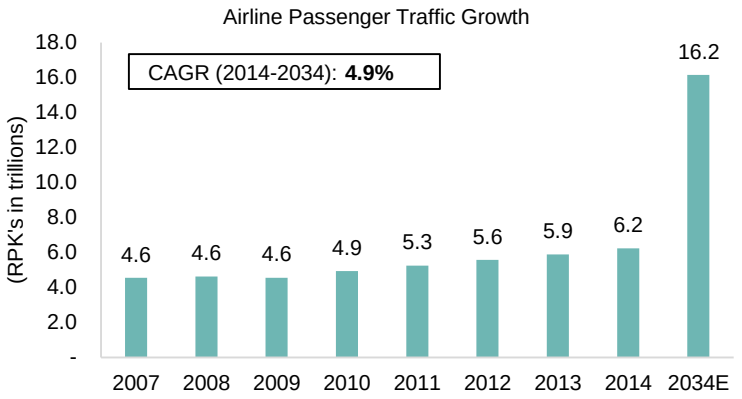
Increasing Airline Traffic

AIRLINE PASSENGER TRAFFIC IN 2014

RPKs in billions	Africa	Latin America	Middle East	Europe	North America	Asia
Asia	21.7	2.2	268.0	348.2	315.8	**1438.3**
North America	12.5	235.7	73.7	462.7	**1029.9**	
Europe	146.5	189.5	210.9	**760.3**		
Middle East	53.7	-	**91.7**			
Latin America	3.2	**225.3**				
Africa	**56.6**					

AIRLINE PASSENGER GROWTH RATES 2014–2034

RPKs	Africa	Latin America	Middle East	Europe	North America	Asia
Asia	7.1%	7.2%	7.2%	5.1%	4.4%	**6.2%**
North America	6.2%	4.9%	6.1%	3.0%	**2.4%**	
Europe	4.7%	5.0%	5.4%	**3.3%**		
Middle East	7.3%	-	**5.0%**			
Latin America	8.1%	**6.6%**				
Africa	**6.7%**					



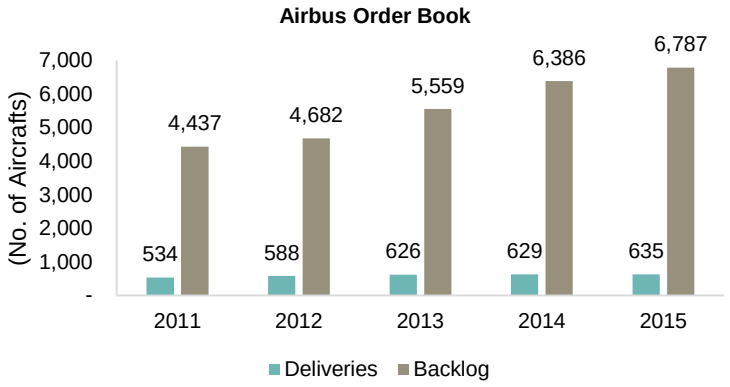
- Industry traffic (RPK) grew approximately 6% in 2014 over 2013 — the fourth consecutive year of growth of ~5% growth
- In passenger terms, this growth translated to an additional 150-170 mm passengers over 2013 levels of more than 3.1 bn passengers
- Approximately 900 additional airplanes, 4-4.5% of the installed fleet, were needed to carry the increased passenger load
- Annual industry replacement requirements in 2014 numbered ~2-3% of the installed fleet, or approximately 500 airplanes
- Due to economic development, increased trade, and improving efficiency, annual airplane demand is projected to increase 35-40% over the next decade at an ~5% CAGR

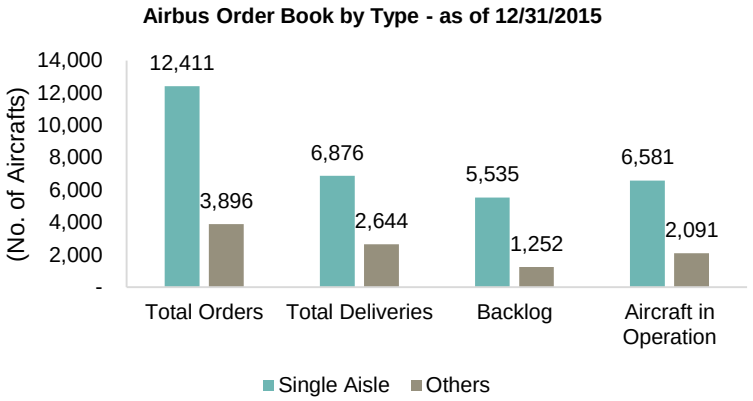
Source: Boeing Current Market Outlook – 2015

Aircraft Leasing Industry

OEM's Order Book - Airbus

Airbus





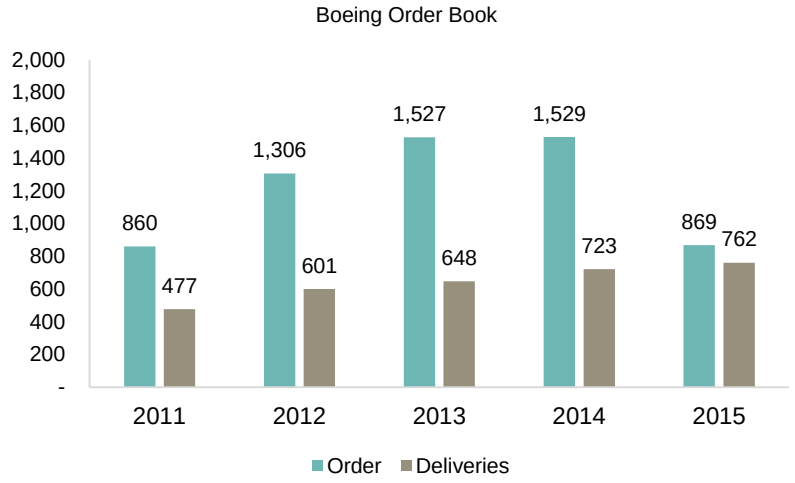
- Airbus logged 60 aircraft orders in December 2015 across its commercial product lines, bringing the year's orders to 1,036. 79 jetliners provided to customers during the month raised the 2015 total to a new annual record of 635 deliveries
  - The record 635 deliveries by Airbus during 2015 exceeded its targets for the year also marked its 13th consecutive annual increase in output
- Based on the orders and deliveries activity, Airbus achieved a year-end industry record backlog of 6,787 aircraft as of 2015 – representing a combined value of USD 996.3 bn at list prices, providing a volume equivalent to 10 years of production at current rates
- The A320 single-aisle family paced December's new business activity, with 36 for the New Engine Option (NEO) versions of Airbus' A319, A320 and A321; along with three for the A320ceo (Current Engine Option) configuration

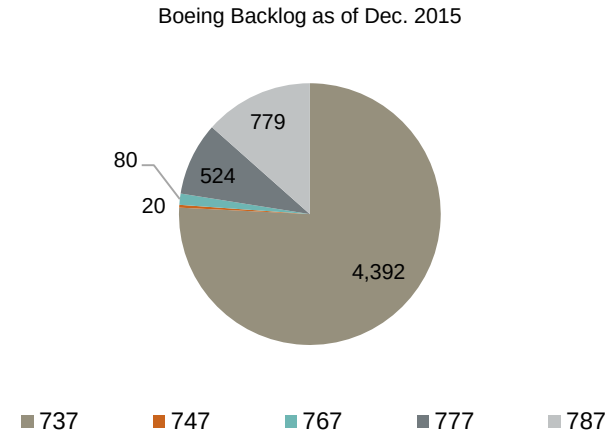
Source: Airbus Website

Aircraft Leasing Industry

OEM's Order Book - Boeing

Boeing





- Boeing received a total of 869 order details in 2015 of which 657 were for the narrow-body Boeing 737. Boeing made 762 deliveries in 2015 of which 495 were for the 737
- Total unfulfilled orders for Boeing was 5,795 as of December 31, 2015 of which 4,392 (75.8%) orders were for the narrow body Boeing 737

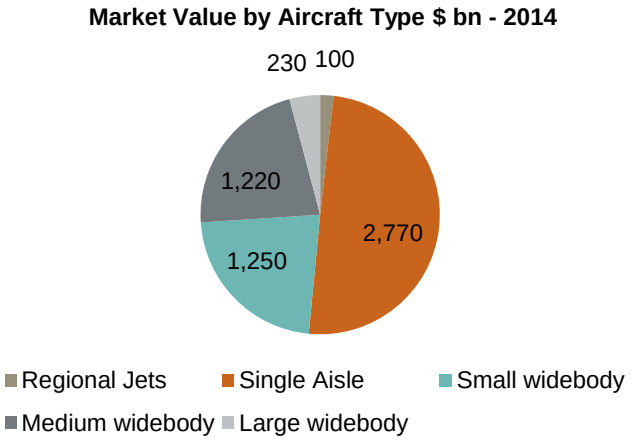
Source: Boeing Website

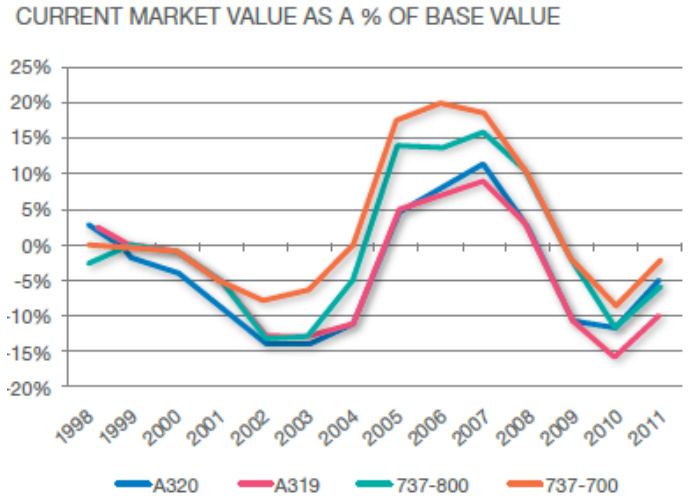
Aircraft Leasing Industry

Aircraft Values

Aircraft Values Depend on the Economic Cycle

- Aircraft values are driven by supply & demand. Given the cyclical nature of the industry, asset trading activity and value realization is closely aligned to the different phases of the industry cycle
  - When valuing aircraft the stage of the economic/industry cycle needs to be taken into account as there is a consistent temporal correlation between value movements across all aircraft, which results in values rising and falling broadly in phase
- Based on analysis conducted by Avolon, 2/3rds of an aircraft's underlying value retention is directly correlated to the age of the asset. The remaining 1/3rd of value retention is linked to an asset's remaining economic life and the forecast returns it will generate over this period





Source: Boeing Current Market Outlook – 2015, Investec Aviation Leasing as Part of a Broader Investment Portfolio - 2013

Aircraft Leasing Industry

Aircraft Values for Narrow Body Aircrafts

Current Lease Rates for Narrow Body Aircrafts

- During the first quarter of 2015, an increase in lease rates was observed only in narrow-body aircraft segment whilst the rates for the rest of aircraft types dropped by approximately 3%
- The trend could be explained by a rising demand for narrow–body aircraft leasing services in the global aviation market
- Narrow-body aircraft lease rates increased by an average of 6%.
  - The highest – 10% - increase was seen in Airbus A319-100 and Boeing 737-300‘s average lease rates.
  - Airbus A320-200 and Boeing 737-400/700‘s lease rates gained 5%, 3%, and 7% respectively
- In the meantime, Boeing 737-800 lease rates maintained stable compared to the ones at the end of 2014

Average lease rates for narrow-body aircraft ('000 USD)

Aircraft	2014 Oct	2014 Nov	2014 Dec	2015 Jan	2015 Feb	2015 March	2014 Dec vs 2015 March	
Airbus A319-100	188	190	190	190	209	209	↑	10%
Airbus A320-200	195	204	204	204	214	214	↑	5%
Boeing 737-300	48	50	50	50	55	55	↑	10%
Boeing 737-400	67	69	69	69	71	71	↑	3%
Boeing 737-700	204	209	209	209	223	223	↑	7%
Boeing 737-800	283	287	287	287	287	287	-	0%

Values \for Narrow Body Aircrafts

A320

- Free fall in values appears to have stopped and market is firming
- New aircraft - pricing very wide – USD 40-48 m
- 2005 vintage – Expected to firm up to USD 20-23m
- 2000 vintage – USD 12-16m and rising
- 1995 vintage – USD 8-10m and rising

737-800

- Huge debate on relative difference between A320 and 737 rates lease rates
- New – $ 44-47m but some are higher
- 2005 vintage – USD 25-27m
- 2000 vintage –USD 18-19m – off lease – USD 12-15m

Source: AviaAM Leasing Website (link), IBA Aircraft Valuation & Global Market Overview 2014