



Aircraft Values Book



Issue 8A February 2008

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Airbus and Boeing had much to celebrate over the recent festivities. Boeing went on to smash its previous record orders for 2006 with 1,413 net orders in 2007. The 737 and 787 were the stars of 2007 for Boeing, with 846 sales for the 737 and 369 for the 787. Airbus had a rather good year as well. It actually grossed more orders than Boeing, but also had more cancellations, netting 1,341 orders for the year! Airbus' top seller of the year was unsurprisingly the A320 family with orders for 913 examples.

So far IBA has looked at recent events with a decidedly positive spin, but are there any losers on the trading market? IBA still can not get too excited over the MD-80 series aircraft values, not with fuel prices the way they are anyway. IBA would also suspect that values of earlier JT9D-7R4 and CF6-80A powered non ER Boeing 767-200s have had their little reprieve and that a decline is back on the cards.

At the time of going to press, sadly enough, continuous delays with fasteners and software mean that the first flight of the 787 has not occurred and is postponed apparently to the second quarter of 2008, and that you won't be able to fly in one until 2009. That has not stopped IBA from publishing its opinions on values of 787 aircraft. This delay also opens up another whole new debate. Could it have some effect on what are already strong Boeing 767-300ER and Airbus A330 values?

Embraer and Bombardier are expected to face intense competition from three new manufacturers over the next ten years. It is still too early to know if the impact of the newcomers will be limited or completely change the dynamics of the airframe manufacturing industry.

The overall scenario on aircraft values does look very rosy, but investors are wondering if we have reached the peak and when is the next downturn likely to happen. There are two schools of thoughts, people who think that there will be no downturn as we have entered a super-cycle and those who believe that the slowdown of the US economy will have the same impact as it did since the dawn of the jet age.

Irrespective of which way the market moves, IBA will be here to provide you with the most accurate values for the changing market conditions.

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Aircraft Values Book

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ISTAT Definitions

All the data contained in this publication is in accordance with ISTAT definitions, which are included below.

Base Value is the Appraiser's opinion of the underlying economic value of an aircraft in an open, unrestricted, stable market environment with a reasonable balance of supply and demand, and assumes full consideration of its "highest and best use". An aircraft's Base Value is founded in the historical trend of values and in the projection of value trends and presumes an arm's-length, cash transaction between willing, able and knowledgeable parties, acting prudently, with an absence of duress and with a reasonable period of time available for marketing.

In most cases, the Base Value of an aircraft assumes its physical condition is average for an aircraft of its type and age, and its maintenance time status is at mid-life, mid-time (or benefiting from an above-average maintenance status if it is new or nearly new, as the case may be).

Market Value (or **Current Market Value** if the value pertains to the time of the analysis) is the Appraiser's opinion of the most likely trading price that may be generated for an aircraft under the market circumstances that are perceived to exist at the time in question. Market Value assumes that the aircraft is valued for its highest, best use, that the parties to the hypothetical sale transaction are willing, able, prudent and knowledgeable, and under no unusual pressure for a prompt sale, and that the transaction would be negotiated in an open and unrestricted market on an arm's-length basis, for cash or equivalent consideration, and given an adequate amount of time for effective exposure to prospective buyers.

Fair Market Value is synonymous with Market Value, and likewise Current Fair Market Value is synonymous with Current Market Value because the criteria typically used in those documents that employ the term "Fair" reflect the same criteria set forth in the above definition of Market Value.

The Aircraft Values Book contains Current Fair Market Values and Base Values for various aircraft based on the current "standard specification" as discussed in the Methodology section below.

Aircraft Values Book Methodology

The Aircraft Values Book has been constructed around the following criteria:

Scope: Modern technology western-built passenger aircraft with an entry into service date of post-1980 or within 18 months of publication of the Aircraft Values Book.

Method: Determination of values includes account of replacement price, age, market condition, depreciation based on resale history and useful economic life. Aircraft are considered within the market segment to which they belong and compared with the competitor aircraft in the segment.

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Assumptions:

- average annual new price escalation (inflation) for forecasting of 2.5%
- current / balanced market condition with balance achieved at levels perceived appropriate for today's market
- each aircraft type depreciates over a fixed economic lifetime
- standard / mid-time maintenance condition
- good /average physical condition
- typical utilisation
- configured for typical passenger service
- standard / average specification unless otherwise indicated

NB: Depreciation matrices are validated semi-annually against the latest available data.

Standard / Average Specification

When an aircraft is new to the market the values are based on the initial ("basic") specification as published by the manufacturer. This specification will include items such as aircraft weights, engine manufacturer and model, seating configuration and avionics fit to name a few. However, as production and orders develop, airlines and lessors will select various options. It is usual, as the aircraft program matures, for the level of specification typically ordered to become more advanced. IBA considers the most typical ("standard") level of specification recently ordered to be that which is most relevant for determining the aircraft values in this book.

For aircraft that are no longer in production, the level of specification most prevalent in the market, across the whole of the type's fleet, is considered to represent the "standard" level of specification and IBA's values are based upon this standard. Aircraft with inferior or superior levels of specification when compared to the "standard specification" aircraft will attract negative or positive value adjustments to the values shown, as appropriate.

Market Reference Data Definitions

Information regarding general characteristics of the aircraft is given for comparison purposes at the beginning of each section. Every effort has been made to convey correct technical information and whenever possible, the values shown in the Aircraft Values Book have been sourced from the manufacturer.

Six market reference charts have been included which have been used as the partial basis for IBA's opinion on aircraft value. These charts detail current and historical demand based on airframe and engine type as well as geographical placement of the airlines and aircraft. The effective date for all data in this issue (Issue 8A of the Aircraft Values Book) is January 8th, 2008 and has been sourced from BACK Aviation with permission.

IBA Aircraft Values Book

Orderbook History

Net orders and cancellations are shown from the year of program launch to the most recent year of production except where noted. Net orders represents the total number of firm orders placed with the manufacturer in a given year minus the cancellations in that same year. Cancellations show the number of aircraft orders cancelled by airlines and lessors in the year in which they were cancelled and can include orders which have been switched to another type (e.g. 5 x ERJ 135s which have been switched to 5 x ERJ 145s will be displayed as 5 cancellations on the ERJ 135 chart and 5 new orders on the ERJ 145 chart).

Delivery Stream Based on Current Orders & Manufacture Rates

Scheduled and delivered aircraft are shown from the year of first delivery through confirmed deliveries and also include an element of planned manufacture rates, when known. If an aircraft is currently out of production, the delivery month and year of the last aircraft has been noted on the summary page at the beginning of the section and is further highlighted in red in the values section for that aircraft type.

Operator Demand for Aircraft Type

This chart illustrates the overall acceptance by airlines on a geographical basis and to provide a picture of the “end-user” demand of an aircraft type. For aircraft types with a wider geographical spread, there is greater opportunity for secondary market trading and sustained demand, both of which may support higher values in the future.

Geographic Distribution

Similar to the Operator Demand chart, this graph shows the geographic spread of the passenger configured aircraft currently operating throughout the world regions. Also included is the quantity currently in storage & on order, broken down by geographic location. From this chart, a greater geographic spread indicates greater opportunity for secondary market trading, and a high proportion of stored aircraft usually indicates a depressed market or a change of aircraft role.

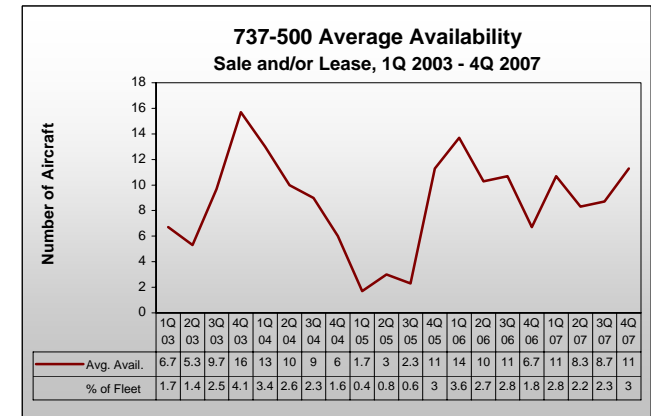
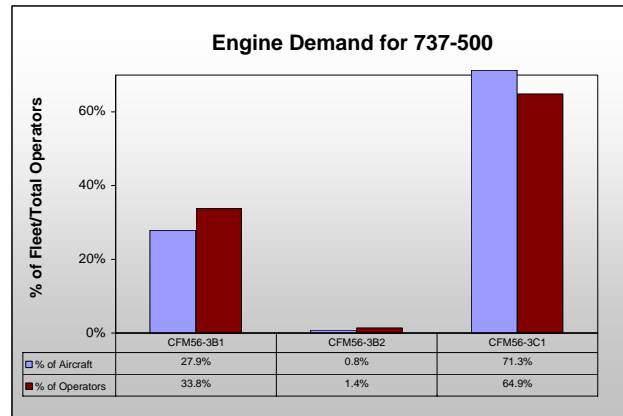
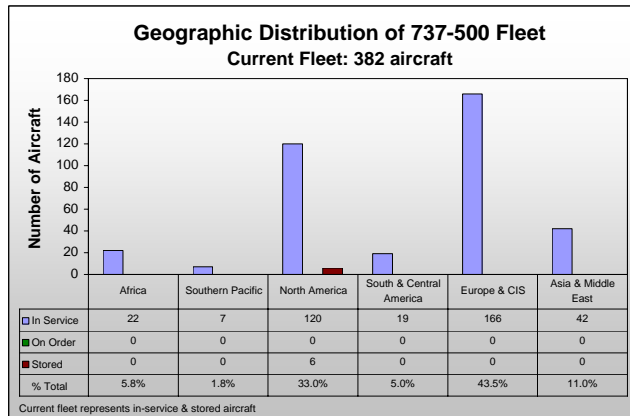
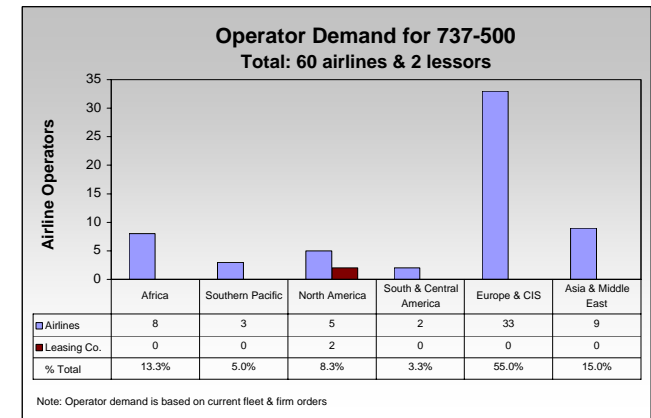
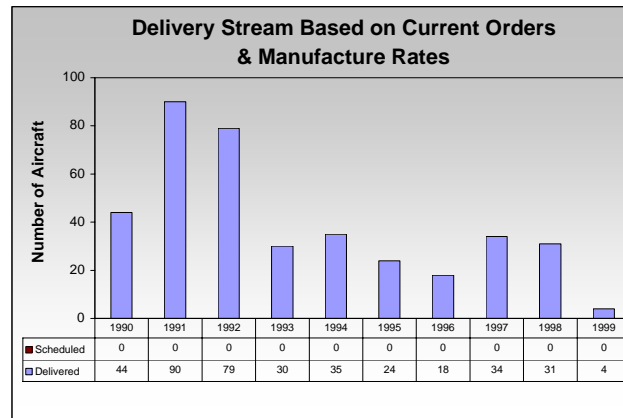
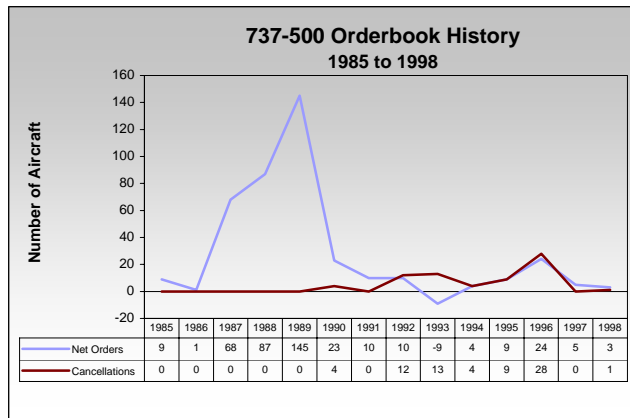
Engine Demand

Based on the current fleet as well as the future orderbook, demand for each engine variant for a given airframe is detailed as well as the number of airlines operating a given engine. These two charts combine to develop a profile of proliferation and acceptance of a given engine type. It may indicate a situation whereby a large population of a given engine is spread over a low number of operators and therefore may generate few re-marketing possibilities. If that were the case, a discount to the values may be appropriate and therefore reflected in the aircraft value page.

Historic Availability

Aircraft that have been listed for sale and/or lease are summarised in this chart to give an indication of movement in the second-hand market for each type. Values for availability are given as an average per month over the quarter. For example, if the following availability were reported in each of month 1, 2 & 3 – 12 aircraft, 0 aircraft & 7 aircraft – an average of 6.3 aircraft $((12+0+7)/3)$ would be reported for that quarter.

Boeing 737-500 Market Reference Data



Boeing 737-500

Current Market Value & Base Values

Valid for January Build Aircraft Only
 Values in US Dollars (millions)
 Annual inflation of 2.5% assumed

Year of Delivery	CMV	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1999	13.064	11.99	11.00	10.06	9.17	8.33	7.53	6.76	6.03	5.32	4.64	3.98	3.34	2.72	2.11		
1998	12.208	11.15	10.24	9.37	8.54	7.76	7.01	6.29	5.59	4.93	4.28	3.65	3.04	2.44			
1997	11.456	10.41	9.57	8.76	7.99	7.26	6.55	5.87	5.21	4.58	3.96	3.36	2.77	2.19			
1996	10.755	9.78	8.99	8.23	7.51	6.82	6.15	5.51	4.88	4.28	3.68	3.10	2.53				
1995	10.137	9.22	8.48	7.77	7.09	6.43	5.80	5.19	4.59	4.00	3.43	2.87	2.32				
1994	9.591	8.72	8.03	7.36	6.72	6.09	5.49	4.90	4.32	3.76	3.21	2.66	2.12				
1993	9.104	8.28	7.62	6.99	6.38	5.79	5.21	4.64	4.08	3.54	3.00	2.46					
1992	8.673	7.88	7.26	6.66	6.08	5.51	4.95	4.41	3.87	3.34	2.81	2.29					
1991	8.277	7.52	6.94	6.36	5.80	5.26	4.72	4.19	3.66	3.14	2.63	2.12					
1990	8.029	7.20	6.64	6.09	5.55	5.02	4.50	3.99	3.47	2.97	2.46						

Comments

After periods of virtually zero oversupply, some S7 aircraft have come onto the market. IBA is confident these aircraft will be placed, as demand for the aircraft has remained strong.

