



IATA ECONOMIC BRIEFING

NEW AIRCRAFT ORDERS

FEBRUARY 2007

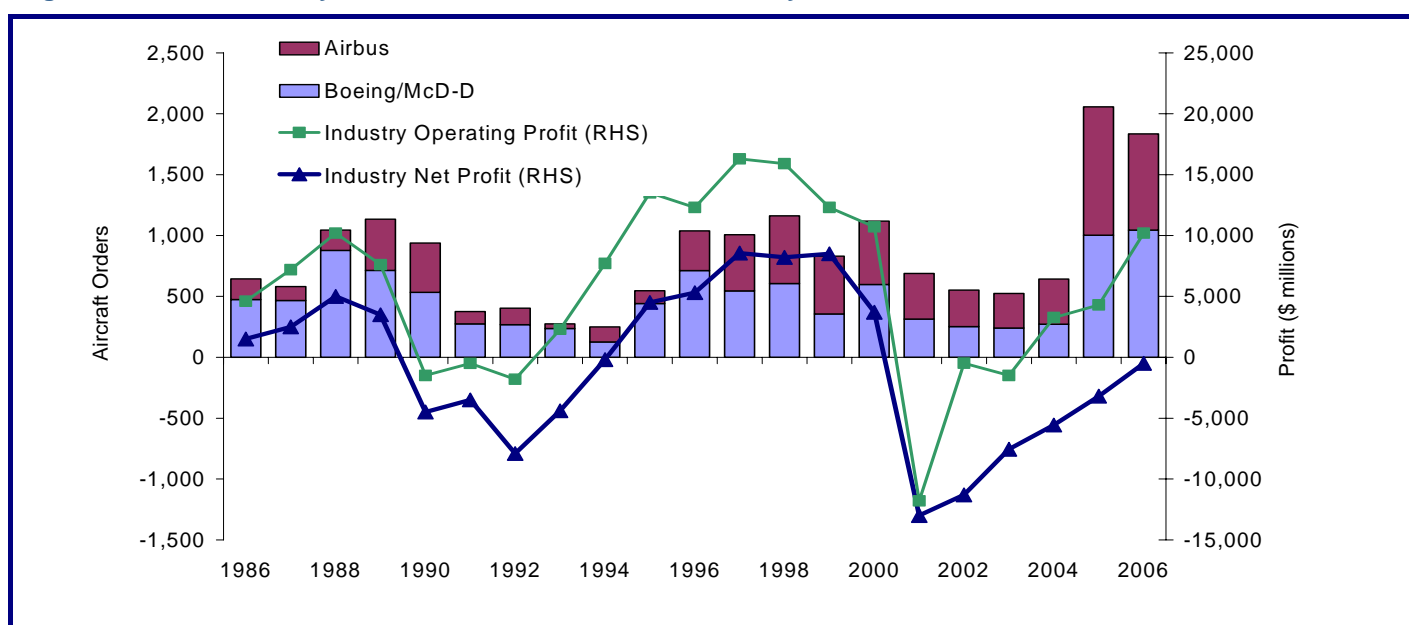
KEY POINTS

- New aircraft orders remained very high in 2006. The total of **1,834 new orders** for Boeing and Airbus commercial planes was down slightly from 2,057 in 2005 but still represented the second highest total in history.
- The high level of new orders is driven by four key factors:
 - The **rapid development of large aviation markets in Asia** and, on a smaller scale, the Middle East. IATA's passenger forecasts project within Asia routes to be the largest air travel market by 2010, with an additional 222 million passengers between 2005 and 2010. Asia Pacific airlines accounted for over a third of new orders in 2006, with Chinese airlines alone accounting for 15%.
 - Further expansion in the LCC sector. The LCC sector now accounts for around 30% of the market on domestic US and intra-EU routes, but is also rapidly growing in other areas, including Asia where it now has a 6% market share. **LCC airlines accounted for around 28% of total new orders in 2006.**
 - The improvement in the industry's operating profits to an estimated \$10.2 billion in 2006. An improvement in underlying operating profitability (though net losses of \$0.5 billion are estimated in 2006) has **improved confidence** and has seen several of the major network airlines order or tender for new aircraft to expand and replace their fleet. Leasing companies are also increasing their orders, including on a speculative basis.
 - High fuel prices. The increase in fuel costs, which now account for over 25% an airline's operating costs, provides an additional incentive to **replace older aircraft with new, more fuel-efficient planes.** For example, it is estimated that over 200 older McDonnell-Douglas aircraft were taken out of operation in 2006.
- Large numbers of new orders represent strong confidence in the future prospects of the global airline industry. However, they also increase the risk of excess capacity in some areas or routes, as new capacity is delivered at a faster rate than demand growth. This has occurred in previous cycles and has been a key factor in keeping airline returns on invested capital well below its cost of capital level.
- **Airlines have so far managed capacity well in this cycle**, increasing average passenger load factors by 1.8 percentage points between 2004 and 2006. However, with significant new orders in 2005 and 2006 and rapid capacity growth already in some areas (such as the 15% increase among Middle Eastern airlines in 2006) there is a risk that this could quickly change.
- Based on a close analysis of the current order and fleet levels there are positive signs, but also some risks:
 - The **delivery schedule will be reasonably well managed.** Indeed, new aircraft deliveries as a percentage of the current fleet will still be less than the peaks reached in previous cycles in 1991 and 1999.
 - Deliveries will be focused on the fastest growing markets – in particular, China and India – where there is great potential for demand growth to absorb new capacity additions. However, **the large number of deliveries set for Asia is a major challenge.** There is a strong possibility that some (though still a relatively small number) of the current orders planned for these routes will need to be deferred or even cancelled.
 - In several cases, new aircraft will still be used to replace older, less-efficient aircraft and to rationalise capacity. More than 2,000 aircraft in the current fleet (11.2% of the total) are over 25 years old.
- As such, the risk of excess capacity on an industry wide basis is low, but does exist in some areas – not least on a regional (e.g. Asia, Middle East) and individual route (e.g. Europe – Asia) basis. The major challenge for airlines over the next five years is to continue to match planned capacity increases to achievable rather than optimistic demand growth projections, **helping to support profit as well as volume growth.**

AIRCRAFT ORDERS REMAIN STRONG IN 2006

- New orders for commercial aircraft totalled 1,834 in 2006, down slightly from the level in 2005 but still the second highest total in history. Boeing enjoyed a strong year, with orders actually increasing to 1,044 from 1,002 in 2005, dominated by new orders for the 737 but also including a further increase in orders for the new 787 programme. However, Airbus saw orders decline to 790 from 1,055 in 2005, with orders affected by delays and problems in the A350 and A380 programmes. Embraer is estimated to have net new orders of around 180 in 2006, taking its backlog to 463, but Bombardier had only a handful of new orders and a current backlog of 93 as it restructures towards its new c-series aircraft programme.
- The continued strength in new orders has been supported by, though not driven by, an improvement in operating profitability. As with previous cycles, new order levels have increased as operating profitability has improved (see Figure 1). Yet, with the industry still facing net losses in 2005 and 2006, the sharp increase in new orders suggests there are more structural factors – such as the rapid growth of Asian markets, the expansion of the LCC sector and high fuel costs increasing replacement demand – that are the key drivers of the current trend in new orders.

Figure 1: Airline Industry New Aircraft Orders and Profitability

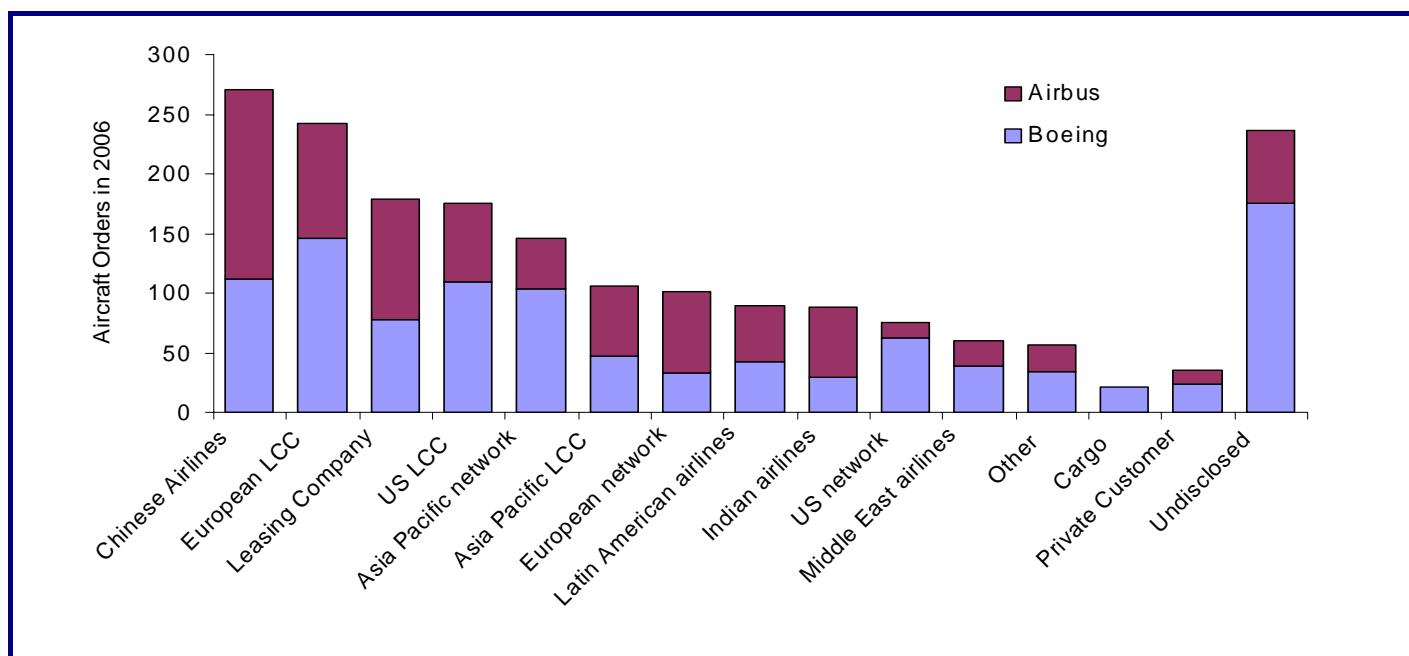


Source: Boeing; Airbus; IATA

- The rapid growth of Asian markets is reflected in their high share of new orders at Boeing and Airbus in 2006 (see Figure 2). Of the 1,834 new orders for Boeing and Airbus in 2006, 611 were from Asia Pacific airlines (33%), including 271 for Chinese airlines (15%). Indeed, the Asia total may be even higher if some of the 236 orders that were undisclosed and the 179 orders from leasing companies are destined for Asian markets. New orders from Asia are high, but it is also expected to be the fastest growing region for passenger demand over the next five years. IATA's passenger forecasts, based on a survey of airline expectations (see: www.iata.org/economics), project 222 million additional passengers on within Asia routes between 2005 and 2010, taking it to a total of 678 million passengers (27% of the global total).
- The Low Cost Carrier (LCC) sector is also a major source of new orders, from established carriers such as Ryanair and Southwest to new start-ups in India and other parts of Asia. LCCs accounted for 523 new orders in 2006 (28% of the total), with European LCCs accounting for nearly half of this amount. LCCs now account for around 30% of capacity on domestic US and intra-European routes but are also expanding in several other areas, including Latin America and Asia.
- Nevertheless, the improvement in underlying profitability has also boosted the outlook for network carriers and they are increasingly placing or considering new orders as part of fleet expansion or replacement strategies.

Network airlines accounted for over 500 of the new orders in 2006, and will also be associated with several of the 179 orders placed by leasing companies. Middle Eastern airlines placed only 60 direct new orders in 2006, though may also be a key destination for leasing companies orders due to strong demand growth in the region. The Middle East also has a large backlog of previous orders, mainly placed in 2003 and 2004.

Figure 2: Boeing and Airbus New Orders in 2006, by airline region and category



Source: Boeing; Airbus

- High fuel prices have also influenced the level of new orders, with older aircraft increasingly replaced by newer, more fuel-efficient models, including new aircraft models such as the 787, A350 and A380. For example, it is estimated that around 200 older McDonnell-Douglas aircraft were taken out of service in 2006. New aircraft are more cost-efficient and can help to boost an airline's reputation for quality of service among customers. Structural changes and capacity management can also result in changes in the type of aircraft ordered, with the popularity of regional jets increasing for many thin-volume routes.

NEW ORDERS BY REGION

- The risk for the airline industry is that record new orders placed in 2005 and 2006 could lead to excess capacity, as aircraft are delivered from 2007 onwards at a time when revenue and demand growth has passed its peak for this cycle. Excess capacity places further downward pressure on yields and profits and, as seen in previous airline industry cycles, could threaten the improvement in profitability achieved in recent years. The airline industry does not have a great track record in the timing of new orders and subsequent deliveries. As with all capital-intensive industries, the time scale between order and delivery has often increased the magnitude of the cycle from boom to bust.
- However, a closer analysis of the existing fleet and new orders suggest that there are some positive signs that the airline industry may largely avoid the mistakes of past cycles, and that the record number of new orders will not create significant capacity. Excess capacity may still arise in certain areas or on certain routes, but the industry as a whole is showing signs of improved capacity management.
- Firstly, the delivery schedule is reasonably well managed. The delivery dates for the new orders are fairly well spread, reflecting physical capacity constraints for the manufacturers as well as airlines looking to gradually introduce new aircraft. Based on current firm orders, deliveries are expected to be 5.9% of the current in-use fleet in 2007 and peaking at 6.3% in 2008 (see Table 1). These rates are below the previous peaks of around 7% seen in 1991 and 1999. The delays in delivery dates for new A380 aircraft has also spread the introduction of new capacity on several routes and reduced the risk of a sudden increase in capacity in the next two years.

Table 1: Aircraft Deliveries as a % of the Current Fleet

	Aircraft Firm Deliveries as a % of Jan 2007 In Use Fleet						
	All	2007	2008	2009	2010	2011 or later	TBD*
Africa	14.9%	4.1%	1.4%	2.7%	1.7%	2.9%	2.3%
Asia	58.8%	10.5%	10.8%	10.1%	9.2%	17.2%	1.0%
Australasia	33.0%	2.7%	8.8%	5.3%	4.1%	12.1%	0.0%
Europe	25.1%	6.3%	6.5%	5.1%	3.5%	3.4%	0.3%
Latin America	28.6%	7.2%	6.9%	3.5%	4.1%	5.8%	1.2%
Middle East	37.4%	5.4%	6.9%	5.9%	4.8%	10.7%	3.7%
North America	20.0%	3.7%	4.3%	3.6%	2.8%	5.3%	0.3%
Total	31.0%	5.9%	6.3%	5.3%	4.3%	7.2%	1.9%

Source: Airclaims

*TBD = Delivery Date yet to be decided

- Secondly, a large proportion of the new orders are destined for the fastest growing markets, i.e. China and India. Asia has the highest increase in capacity, with deliveries of over 10% of the existing fleet in each of the next three years. Asian markets do have the potential to deliver demand growth rates to match the expected growth in the number of aircraft though deliveries of this size do represent a major challenge. As such, there is a strong possibility that a (relatively small) proportion of the current orders planned for these routes will need to be deferred or even cancelled. North American and European new orders are lower as a proportion of the existing fleet (see Figures 3a and 3b), but a large amount of the sizeable orders for narrowbody aircraft will be to LCCs who will look to further expand their market share and may engage in further price competition.
- The Middle East is also relatively exposed to the risk of excess capacity, especially with its sizeable backlog of widebody aircraft orders. New capacity for Middle Eastern and Asia Pacific airlines will significantly add to competition on Europe – Asia/Australasia routes, though delays in A380 deliveries will spread the addition of new capacity across a longer period of time. Also, within the current order backlog there are 329 narrowbody orders and 124 widebody orders placed by leasing companies but currently without a contracted airline operator. These aircraft are likely to be eventually placed in the fastest growing markets, but create the risk of adding to short-term excess capacity if they are deployed at the same time on particular routes.

Figure 3a: Narrowbody Aircraft Orders

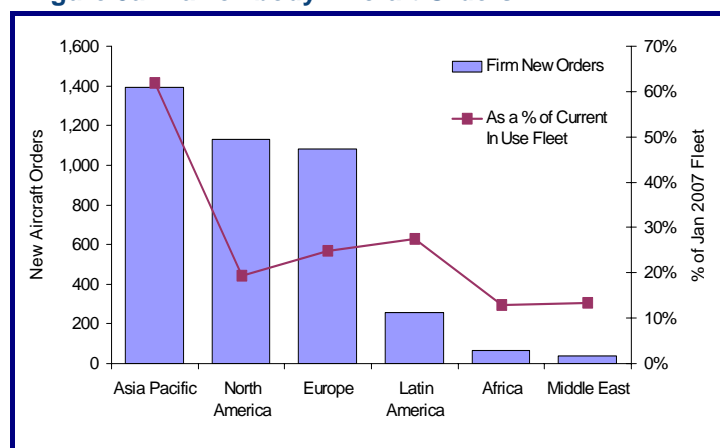
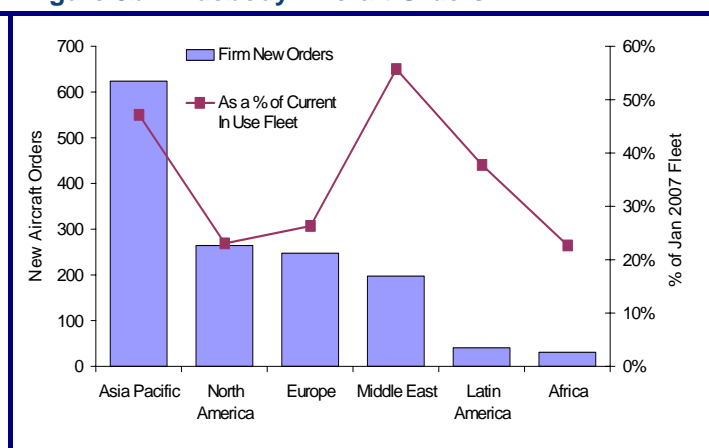


Figure 3b: Widebody Aircraft Orders



Source: Airclaims

- Thirdly, some of the new aircraft will be replacements for older, less cost-efficient aircraft. An analysis of the age of the existing fleet shows that more than 2,000 (11.2% of the total) is over 25 years of age, with another 1,150 between 21 and 25 years old (see Figures 4a and 4b). This creates a significant pool of older aircraft that is

likely to be replaced by new, more fuel-efficient types over the next few years. There is also around 2,300 aircraft that are currently stored and could be brought back into service. However, 1,630 of these aircraft are over 20 years of age and are unlikely to be brought back given their relative cost inefficiency.

Figure 4a: Operational Fleet by Age

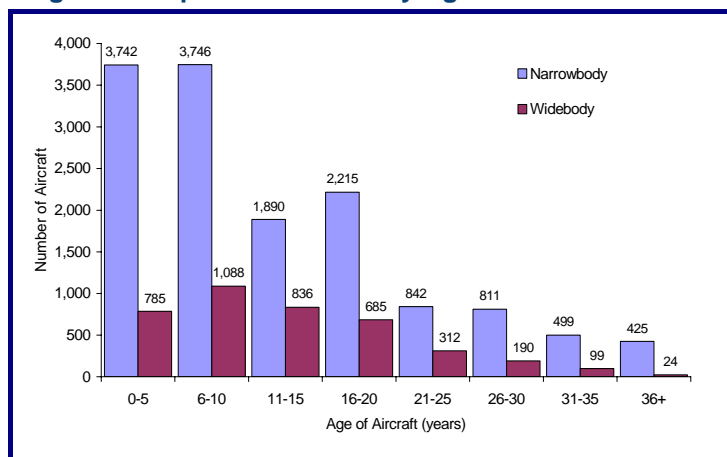
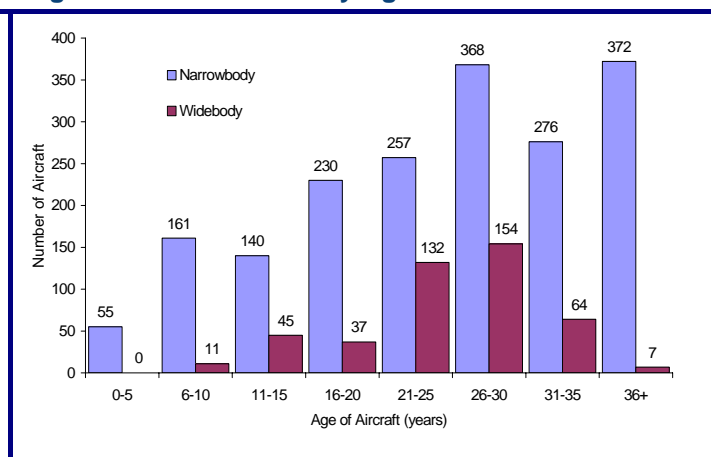


Figure 4b: Stored Fleet by Age



Source: Airclaims

SUMMARY

- A second consecutive year of strong new aircraft orders in 2006 is a positive sign for the industry, reflecting confidence in the future of the industry. They also reflect structural changes in the industry, such as further expansion of LCCs into new regions, along with a strategic response by both the aircraft manufacturers and the airlines to improve their operational cost-efficiency and to promote their reputation for quality of service.
- However, previous airline cycles have seen improvements in profitability eroded as significant new capacity is delivered at a time when demand growth begins to slow (e.g. in the early 1990s). There is a risk that this could occur again over the next few years, offsetting part of the improved financial performance in the airline industry in recent years.
- However, there are some signs that airlines have learnt from past cycles, and that new aircraft deliveries will be relatively well managed. Aircraft deliveries will be targeted on the fastest-growing (though not necessarily most profitable) markets and will also, to some extent, replace older, less-efficient aircraft.
- Nevertheless, several risks of excess capacity remain— not least on a regional (e.g. Asia, Middle East) and individual route (e.g. Europe – Asia) basis. There is a strong possibility that some of the current orders planned for these routes will need to be deferred or even cancelled. In addition, further new orders will be placed in 2007 that will add to the delivery schedules from 2009 onwards. There are currently nearly 4,800 options or letters of intent (equivalent to 26% of the existing fleet) that could be turned in to firm orders over the next few years, though may also be cancelled if signs of excess capacity begin to emerge.
- Airlines have, so far, managed capacity well as demand has increased since 2004, helping to boost load factors and profitability. However, this will be tested as revenue and demand growth slows in the next few years. The major challenge for airlines over the next five years is to continue to match planned capacity increases to achievable rather than optimistic demand growth projections, helping to support profit as well as volume growth.

Mark Smyth
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APPENDIX

➤ Aircraft Orders by Type

	Existing Fleet		Firm orders	Options / Letter of Intent
	In use	Storage		
McD-Douglas	1,754	497	-	-
707, 717, 727	603	359	-	-
737	4,281	375	1,536	1,339
747	894	126	116	64
757, 767	1,810	101	26	30
777	594	8	303	232
787	-	-	443	288
A300, A310	561	65	11	-
A318, A319	931	27	604	395
A320, A321	1,948	22	1,388	685
A330, A340	757	6	283	136
A350	-	-	102	173
A380	-	-	166	45
Bombardier RJs	1,255	100	93	613
Embraer RJs	1,059	7	463	720
BAE RJs	251	112	-	-
Others	1,493	514	111	68
Total	18,192	2,309	5,645	4,788

Source: Airclaims

➤ Aircraft Orders by Region

	Existing Fleet		Firm orders	Delivery Date of Firm Orders					
	In use	Storage		2007	2008	2009	2010	2011 or later	TBD*
Africa	665	187	99	27	9	18	11	19	15
Asia	3,239	229	1,904	340	351	326	299	557	31
Australasia	339	21	112	9	30	18	14	41	0
Europe	5,301	514	1,330	334	342	273	187	180	14
Latin America	1,031	249	295	74	71	36	42	60	12
Middle East	626	78	234	34	43	37	30	67	23
North America	6,987	998	1,394	256	297	250	197	370	24
Unknown	1	33	277	6	9	10	7	11	234
Total	18,192	2,309	5,645	1,080	1,152	968	787	1,305	353

Source: Airclaims

*TBD = Delivery Date yet to be decided