



Special Report

Impact of low oil prices on the aviation market

(July 2016)

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Introduction

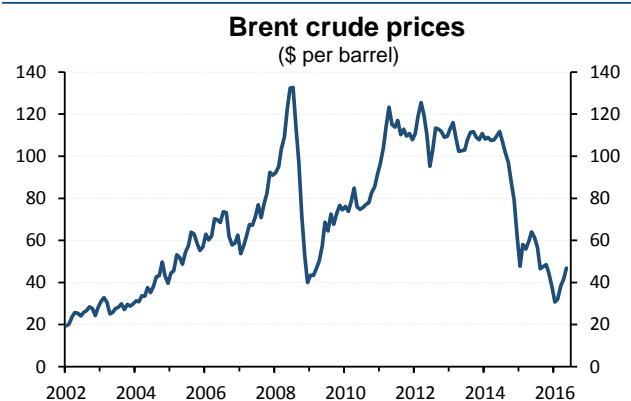
Under the current low fuel price environment, continuing to operate older, less efficient airplanes becomes more economical given lower operating costs. But the notion that this could deter airlines from placing orders for new aircraft – particularly new, fuel-efficient types – is highly improbable.

For one thing, the airline industry is unlikely to give up on orders of new, fuel-efficient aircraft given the unpredictability of the oil market and the risk of fuel prices rising again. And in addition to lower fuel costs, new technology aircraft also promise lower emissions, maintenance savings and better passenger experience. But more importantly, most of the new aircraft on order are intended for future growth requirements – not replacement. Older aircraft may stay in service longer to help meet strong traffic demand – supplementing, but not reducing, new aircraft orders.

Oil prices weaken after decade-long rise

Oil prices had generally trended upwards in the ten years prior to 2014. The price of oil rose from around \$30 per barrel in early 2000, to a peak of around \$130 by mid-2008. And despite a short-lived dip during the global financial crisis, the price of oil quickly returned to its rising trend. But in the second half of 2014, oil prices began to weaken markedly, and by January 2016 prices had reached their lowest level in 12 years.

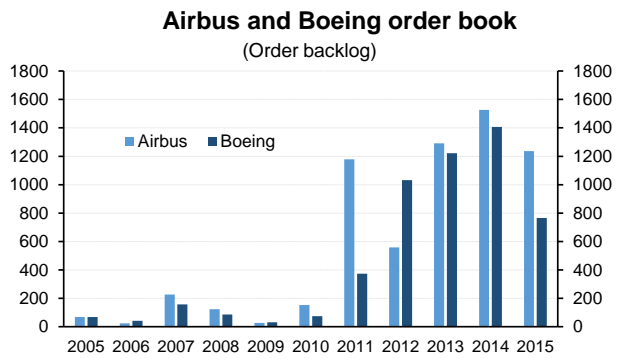
Although the long-term trend in oil prices is uncertain, oil markets are expected to remain relatively weak in the near-term. Market fundamentals have supported the recent downward pressure on prices – an over-supplied oil market and weak global demand. This is expected to keep oil prices depressed for some time. After averaging some \$52 per barrel in 2015, Brent crude is expected to average \$43 this year, according to the US Energy Information Administration.



Source: US Energy Information Administration

High oil prices boosted demand for fuel-efficient aircraft

Aircraft manufacturers have developed new technology aircraft to meet customers' demands for more fuel-efficient planes, after years of high oil prices. Although acquisition costs are higher, the new aircraft offer enhanced efficiency and reduced fuel costs. High demand for new fuel-efficient planes have boosted the order books of manufacturers to record levels in recent years.



Source: Ascend (Flightglobal)
Note: orders of passenger aircraft.

With fuel costs representing some 30% of airline costs, new aircraft are offering huge savings. Boeing's fuel-saving fleet consist of the in-service B787 Dreamliner, which offers 20% more fuel-savings over the B767 model it replaced. Additionally, the new fleet include upgraded versions of its single-aisle B737 and twin-aisle B777 – known as the B737max and B777X. Similarly, Airbus recently introduced its new, fuel-efficient wide-body – the A350XWB. Airbus also upgraded its single-aisle A320 family aircraft with *neo* versions, or new engine option. The new aircraft offer 15%-20% more fuel-savings than their previous counterparts.

Benefits of new technology aircraft extend beyond fuel-efficiency

Although high oil prices have greatly contributed towards the growing trend in fuel-efficiency in the aviation market, other factors have influenced demand for new technology aircraft. For one thing, the recent drop in oil prices has significantly improved the profitability of airlines, and by opting for fuel-efficient aircraft, further reductions in operating costs could push profitability to even higher levels. Additionally, there are a number of factors – other than oil prices – that impact the decision to acquire new technology aircraft:

- **Maintenance costs:** new technology aircraft promise higher reliability and lower maintenance costs.

- **Environmental factors:** new technology aircraft reduce carbon emissions and curtail noise. Some governments have introduced regulatory requirements to clamp down on emissions from aviation.
- **Passenger comfort:** new technology aircraft offer passengers a more comfortable flying experience.
- **Fleet expansion and replacement:** obviously, airlines acquire new aircraft to expand their existing fleet or to replace retired aircraft. But with many older models now out-of-production, manufacturers may only have new technology aircraft to offer.
- **Long-term strategy:** investment in fleet is influenced by the long-term outlook, not by short-term movements in oil prices.
- **Cost of financing:** at lower interest rates, the prospects of acquiring new aircraft improve given decreased financing costs.

Lower fuel prices make used aircraft more competitive

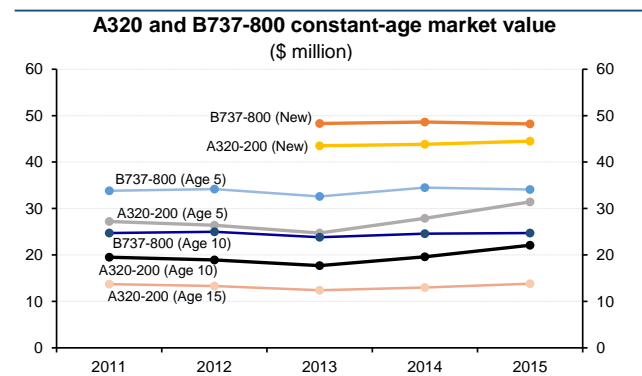
Amid the prolonged slump in oil prices, airlines are able to keep flying less-efficient planes economically and hold-off on acquiring new, more fuel-efficient models. New-technology aircraft offer better fuel-efficiency, but with a higher ownership cost. And given current fuel prices, the higher cost of ownership is perceived to more than offset the efficiency gains.

Airlines may therefore be encouraged to extend the use of old aircraft or invest in used planes – as long as oil prices remain low:

- Delay retirement of vintage aircraft:** retirement of vintage aircraft types, particularly those with four engines (A340 and B747-400) but also B757s and B767s, accelerated during the high fuel price environment (2010-2014). However, due to the recent decline in oil prices, the potential lives of some of these older aircraft have been extended for several more years. United Airlines, for example, recently decided to refurbish all 21 of its B767 aircraft that had originally been slated for retirement, while Delta Airlines extended the use of 15 of its B757 aircraft.
- Investments in used aircraft:** Because of lower oil prices, airlines are increasingly incented to buy, lease or re-invest in second-hand aircraft. In other words, current fuel prices make it more attractive to retain and acquire used airplanes instead of growing the fleet with new aircraft. United Airlines, for example, is leasing in some 38 used A319 aircraft, while Southwest Airlines is leasing in more than 20 used B737-700 aircraft.

Lower fuel prices have had some impact on the market to lease second-hand planes – especially mid-life aircraft. Some lessors that focus on mid-life aircraft have been reporting significant extensions or re-leases. Aircastle, for example, recently leased five 15-year-old Boeing 737-700s to Southwest Airlines for 10 years — a term that airlines would probably not have considered for older aircraft when fuel prices were higher. There has also been reports of extensions for older aircraft; Aercap extended leases of several A340 and B747-400 aircraft by several more years – aircraft which were expected to be scrapped.

This seems to have provided support for market values and lease rates of used aircraft. Aircraft appraiser ‘Ascend’ notes that there has been some recent improvement in values of mid-life aircraft, though it points out that lease rates have seen a more pronounced increase than values. It expects that airlines may be willing to pay higher rentals in return for extra capacity in the near-term, but are hesitant to take on longer-term residual value risk. The biggest improvements have been in rentals of mid-life A320s and B737 family aircraft, as aircraft availability for popular types is drying up.



Source: AVITAS BlueBook of Jet Aircraft Values

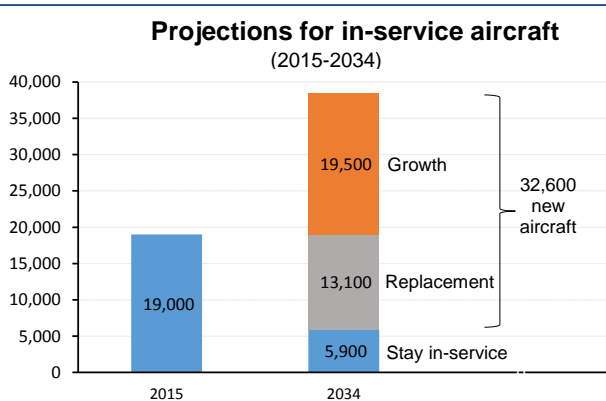
Nevertheless, airlines will only extend contracts of older aircraft until the next major overhaul. At that point, keeping the aircraft will be uneconomical despite lower operating costs. It should also be noted that US carriers – with advanced maintenance capabilities – are more capable of extending the use of old aircraft. This suggests that it may not be as feasible for other carriers to invest in old aircraft.

Any deterring of new aircraft orders likely to be limited and temporary

Some analysts believe that a sustained drop in oil prices could prompt delays and cancellations in orders of new, fuel-efficient aircraft. They suggest that long-term lowering of fuel prices could make airlines reluctant to urgently invest in more fuel-efficient aircraft.

Nevertheless, most in the industry believe that orders will stay in place and any deferrals of new-technology orders will be limited and temporary. Firstly, fleet-planning is a long-term strategy, where the risk of oil prices rising again is taken into consideration. Additionally, airlines will look to acquire new fuel-efficient aircraft for other benefits related to environmental factors, maintenance savings and passenger comfort.

More importantly, whether the decline in fuel prices is brief or long-lasting, orders for new aircraft will reflect growth plans of airlines. According to industry forecasts, around 32,000 new aircraft will be inducted into service in the next 20 years, of which 60% will serve growth requirements – suggesting that most of the new aircraft on order are intended for growth. Used aircraft may provide interim capacity in the short-run, but cannot possibly supply airline's future growth requirements – projections suggest that only around 30% of today's in-service aircraft will remain in operation by 2034.



Source: Airbus (Global Market Forecast 2015-2034)

Lower fuel prices may actually unlock capital for fleet investment

Alternatively, airlines may take advantage of the boost in profits from lower fuel prices to fund new fleet. According to IATA, global airline profits are estimated to have reached a record \$33 billion in 2015, and is projected to rise further to \$36 billion this year on lower fuel prices. Higher profits may better enable airlines to expand, upgrade and modernize their fleet with new aircraft.

Additionally, airlines may benefit from reduced premium prices on new aircraft. Premium prices, which manufacturers' often charge on new aircraft models, might come under downward pressure from lower fuel prices.

Conclusion

For the meantime, the main effect of the oil price decline has been on the used aircraft market. This has been reflected in increased investments in used aircraft, as carriers take advantage of relatively lower operating costs in a low fuel price environment.

But the notion that low fuel prices could deter airlines from placing new aircraft orders is likely to prove misplaced. Continuing to operate used, less-efficient aircraft will only prove economical as long as oil prices remain depressed – and even then, their use will only be extended until the next major overhaul. And while low fuel prices have spurred airlines to keep their current planes in operation longer, they have also prepared for a rise in crude prices by placing record orders for fuel-efficient Airbus and Boeing aircraft. Fleet investment is a long-term and risky activity, and airlines are not assuming that oil prices will stay at current levels indefinitely.

New aircraft offer an enhanced passenger experience, maintenance savings and lower emissions – but more importantly, new aircraft offer airlines the needed capacity to expand. Irrespective of whether the decline in fuel prices is transient or structural, new aircraft are required to satisfy the increasing growth requirements of airlines. Travel demand and passenger traffic is healthy and resilient, and this will require both new aircraft and prolonged flying of older aircraft. □