



RANDY'S JOURNAL



Forecast: Hot

BEIJING – Since my last trip to China, some things have changed, and some haven't. The Sichuan dishes are just as spicy – and as good - as I remember them. No change there. But the Beijing skyline is boasting a couple of new skyscrapers just since my visit last winter.

This week I'm here to present the new Boeing [Current Market Outlook](#) (CMO) to journalists. Needless to say, this visit comes at an exciting time in China. They're on a great ride right now, as the China of today is a place of both change and growth. The aviation industry is no exception.

You'd be hard pressed to find anyone who says the air travel market for Greater China is going to do anything but [continue to grow](#) at phenomenal, unprecedented rates. China's thriving economy is the driving force. The 20-year China economic Gross Domestic Product (GDP) forecast of 6.6% per year is the highest in the world - and more than double the world GDP forecast.

Consequently, we forecast that air travel will expand significantly, led by an average annual growth in domestic air travel of 8.8%. This incredible growth will nearly quadruple China's airplane fleet over the next 20 years.



My China market overview presentation is part of the 2007 Current Market Outlook. The complete Boeing CMO book is now available for download (3MB PDF) [here](#), or by clicking the image above.

May 2010

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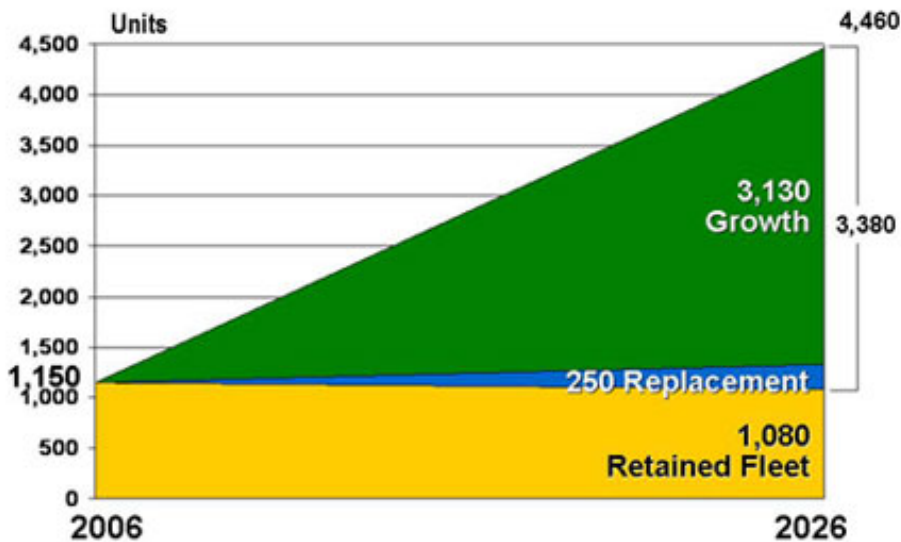
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China's airplane fleet



Chinese airlines will need nearly 3,400 new airplanes over the next 20 years. China's fleet will grow from 1,150 today to 4,460 airplanes by 2026, nearly quadrupling in size. There will be nearly 3,400 new airplanes added to the fleet, both passenger and freighter airplanes. Of these, more than 3,100 will be for growth, while 250 will be for replacement of the passenger fleet.

About three-quarters of these deliveries to Chinese airlines over the next 20 years will be made up of regional jets (330) and other single-aisle airplanes (2,200). These airplanes will make up 47% of China's delivery dollars (\$9 billion and \$150 billion, respectively).

Another 22% of China's deliveries, 750 units, will be intermediate-sized twin-aisle airplanes, which represents 46% of total delivery dollars (\$157 billion). The single-aisle and twin-aisle market segments combined will make up 90 percent of China's total delivery dollars.

Just 3% of deliveries, 90 airplanes, will be of the 747-size and larger category. These airplanes make up the remaining 7% of the delivery dollars for China (\$24 billion).

We've witnessed some incredible dynamics in this marketplace, especially in the last several years. Take a look at the charts below:

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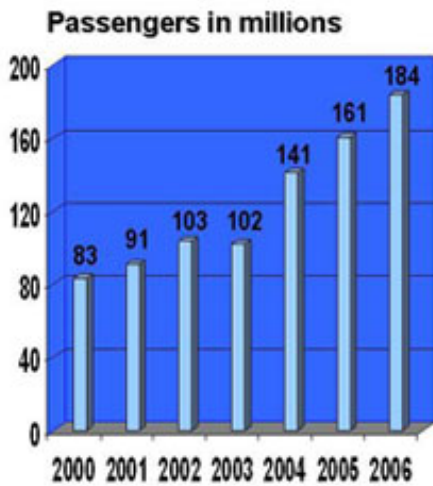
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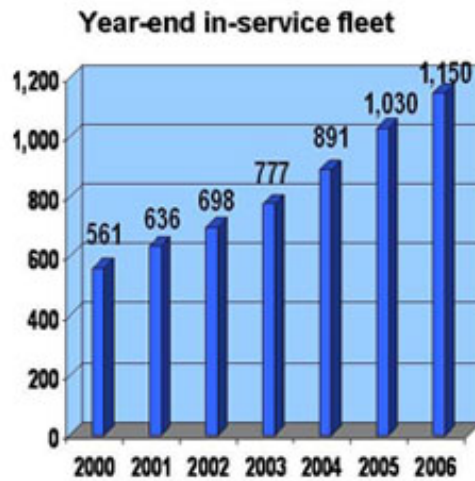
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Source: ICAO

Includes Hong Kong and Macau



Source: Airclaims

The number of Chinese passengers traveling by air has more than doubled since 2000. China's commercial airplane fleet has also doubled in size since 2000 - and new aircraft will continue to be required to match the increase in travelers as well as expanded airport facilities and infrastructure.

Something I've been talking about here is one of the positive results of the China market's [rapid growth](#): China has the largest and youngest fleet in the Asia-Pacific region. At the end of 2006, 1,150 airplanes were active and in service in the China fleet. The average age of the in-service fleet was 7.6 years - more than 2½ years younger in age than the Asia-Pacific fleet average. Consequently, the airlines of China make up one of the most capable, fuel efficient, and environmentally progressive fleets in the world.

By the way, as of August 2007, China's fleet includes 709 Boeing airplanes. With [China Southern's](#) announcement for 55 737's earlier this month, Chinese airlines have an additional 323 Boeing jets on order.



Meeting the press in Beijing.

Next stop for me is Shanghai, and beyond, to meet with both airlines and media.

Along the way I also hope to catch up with some of the many friends I've had the pleasure to make since my first trip to China back in 1991.

Finally, I have to note that on this year's trip I find myself deeply missing my former colleague, Randy Baseler. Randy and I enjoyed traveling to China together many times. I think it's safe to say we never met a "dumpling" that we didn't like!

COMMENTS (6)

Saj (London, UK):

In light of the view that just 3% of airplanes are for the 747-sized and larger, its no surprise the A380 has all but "flopped" as a seller in China.

With more people demanding point to point routes, the growth in twin engine jets like the 787 Dreamliner will continue - this will be facilitated by more smaller airports serving large and small cities alike where frequencies will be order of the day.

With fragmentation a continual process, that 3% demand for VLA's will likely get smaller as time goes on.

Posted on [September 19, 2007 11:19](#)

grant (Nanaimo, Canada):

The ability to train/acquire qualified pilots for all these aircraft will be an interesting task. Each airliner generally requires 4 or 5 crews to operate it day-in day-out all year long.

The flight simulators and flight training centers required to support this much growth may prove to be a bottle-neck...

Posted on [September 19, 2007 21:18](#)

Kinbin (Taipei, Taiwan):

The supporting infrastructure, both soft (like pilots, ground crew etc.), and hard (runways, customs, warehouses, control towers etc.) will indeed be a major challenge. As the size of the aircraft goes up, the infrastructure challenges go up. It's no coincidence that large wide body aircraft growth takes up a small proportion to the total.

The difficulties are further compounded by language skills, where English is the lingua franca of the global aviation community but not the local society. Manuals are in English; Cockpit comms in English; Ground control tower comms in English. Translations will be a nightmare.

The chinese look at the chart and say, "yeah, I want a piece of the pie". So they turn to the "Made in China" solution.

Building the ARJ21 jet ain't difficult since they leverage on technology transfer brought about by offsets over the past 2 decades. Sustainment and airworthiness has always and will continue to be the major issue, with parts shortages, logistics bottlenecks, slow repair approvals and shady customs all in the melting pot.

The marketability of the ARJ21 regional jet to Chinese airlines remains to be seen, as well as the proportion that it will take up in the forecast. I am not referring to exports since it will be part of trade credit offsets and not direct sales.

So, if it ends up being a "dud" like the MD Trunkliner, it will be another field day for Boeing and Airbus, and the slug-match continues.

Posted on [September 20, 2007 17:42](#)

Everett (Beijing, China):

Many Chinese people have never took airplane before 1990. They went travelling by train before 1990, because they hadn't enough money to buy tickets. But now, we have enough money to take airplane. So, China market will certainly has a very good outlook. But I hope that Boeing and Airbus can tell people that air travel is safe. Because many Chinese think that it is dangerous to take airplane, they know that it is not comfortable to go travelling by train or bus, but they just fear an air disaster.

Posted on [September 21, 2007 06:41](#)

Norman (Long Beach, California, United States):

I think the future for Boeing is very bright in China as the economy develops and more people fly.

The large order for the B737's is an attribute to the reliability and economy of the aircraft.

If the B787 is any indication I think Boeing will do fine in China as the top three airlines Air China, China Eastern, and China Southern, as well as others have ordered the plane and without out a doubt will order more as demand increases.

Though only 3% of the aircraft forecast, ninety planes calls for aircraft as big as the B747 or larger this is still good news as this could mean the potential for thirty B747-8/I and possibly as many as ninety or more Y3 ten-eleven abreast super twinjets (hopefully) as they replace B777-300 and B747-400.

As with the need for over 3,000 small to middle sized aircraft, Boeing for the long term future forecast 2016-2026 can develop a single aisle Y1 that can be an ultra efficient B737 replacement and an economical twin aisle six abreast version of the Y1 that can serve as a replacement of the B757 and B767-200 airliner.

There is no doubt that there is a large regional jet (70-115 seat) demand in China and the Superjet 100 in which Boeing is a part of can supply hundreds of these jets to the market.

Chris C (South Africa):

Simply amazing to read about the airplane demand emanating from China. The monetary value of USD \$340-Billion is mind-boggling, let alone trying to picture some 3,400 more airplanes in China's fleet! I do feel the concern raised by the other fellow commenter regarding pilot-shortage issues is pertinent. There are only so many pilots that can be trained per year, and bearing in mind, experience levels are going to decrease as younger pilots join the airlines, hence the need for even more tighter pilot training schemes, with safety and proficiency being even more paramount.

Being a commercial pilot myself, I understand the requirements for pilots, and I feel more and more low-time pilots are going to find themselves flying these airplanes, which in turn leads to a greater need to focus on safety and tighter training schedules. The question is really just how many professional pilots can this industry train safely every year and will it be enough to satisfy the world, let alone China?

Separately, I see that Airbus has recently confirmed that they intend to build the A350XWB's fuselage frames from composite materials, in a move to try and make the A350 even more competitive to the phenomenally advanced and super-efficient Boeing 787 Dreamliner. The A350XWB, however, still lacks many technological revolutions that the 787 offers (such as engine chevrons, bleed-less engines etc), causing many to question whether the 'new' A350 will ever be on par, yet alone better than the current 787 models.

No doubt the now sixth re-design of the A350 will be a fierce competitor to the current next-generation Boeing 777s, with current being the operative word. Give Boeing some time, and the all-new Boeing 777-8x; -9x will blow the larger A350 models away. Airbus is in a precarious position. Their largest A350-1000 offering already seats some 15 less passengers than the massive 777-300ER, as well as is only able to squeak past the -300ERs range. Further, the 777 offers the widest cabin cross-section of any twin-engine airplane, so it offers even more flexibility than the A350XWB. Their A350-900 is a 777-200ER replacement airplane, but it will face stiff competition from Boeing's yet-to-be-launched 787-10, whilst the A350-800 is comfortably seen off by the 787-9.

Posted on [September 22, 2007 06:04](#)

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