

# The Impact of Critical Events on Air Travel Capacity

The annual trend in world air travel capacity is steadily increasing at 3.1% per year. The growth in the past 20 years was only impacted in 2001 by the World Trade Centre (WTC) event in the US. In the last decade, the world capacity steadily grew at an average of 2.6% per year.



Over the past 30 years there have been many events of differing magnitude that have impacted air travel. This report evaluates those major events that have occurred at a country, regional and global level in the aim to understand and predict the impact on air travel capacity of future events.

Each event can be categorized according to its magnitude based on a High, Medium and

Low rating and for each category the impact on capacity can be identified.

## **Event scale**

### **Classification**

#### **Recovery period**

Low

Singular localized event – earthquake, tropical storms

up to 3 months (Country)

Medium

Multiple event – widespread virus, extreme natural disaster

3–12 months (Regional)

High

## Global event – global financial shocks, WTC attacks

12–36 months (Global)

For a localized event, the recovery in capacity is relatively quick seeing recovery within 3 months as the impact is felt mainly on the national carrier or major carriers into that country/city. Other non-domicile carriers may reduce capacity or frequency of operations for a short while whilst the recovery takes place, but demand quickly recovers and capacity returns to pre-event levels.

Events	Event scale	Recovery period
Volcanic Eruption US-May 1980	Low	up to 3 months
Volcanic Eruption Columbia-Nov 1985	Low	up to 3 months
Earthquake Armenia-Dec 1988	Low	up to 3 months
Earthquake Iran-Jun 1990	Low	up to 3 months
Cyclone and Flooding Bangladesh-Apr 1991	Low	up to 3 months
Flood North Korea-Aug 1995	Low	up to 3 months
Drought India-May 2000	Low	up to 3 months
WTC Attack US-Sep 2001	High	12-36 months
First SARS alerts Hong Kong-March 2003	Medium	3-12 months
SARS China-Jan 2004	Medium	3-12 months
Second SARS China-Jan 2005	Medium	3-12 months
Earthquake China-May 2008	Low	up to 3 months
Swine Flu Mexico-Apr 2009	Low	up to 3 months
Volcanic Ash Iceland-Apr 2010	Low	up to 3 months
Quake, Tsunami and nuclear plant explosion Japan-March 2011	Medium	3-12months

For the regionalized events such as SARS and the March 2011 Japanese Earthquake and following Tsunami are categorized as a medium level event and see a recovery in capacity between 3 to 12 months. These events impact not only the domicile carriers operating to and within the country, but also the non-domicile as demand to travel to that region declines for a sustained period of time.

For the major global events such as financial shocks and the World Trade Centre attacks in September 2001 have a much wider reaching impact. These high impact events impact all major carriers due to sharp reduction in air travel demand and thus capacity is drastically reduced in order to maintain profitability. Due to the global nature of the event, demand takes much longer to recover and capacity takes between 12 and 36 months to recover back to pre-event levels.

### Analysis

#### WTC Attack in US (Sep 2001)

The events of September 11th 2001 had a huge impact on global capacity which took 3 years for capacity to recover.

#### SARS in China (2003–2005)

Although the Chinese trend is closely aligned to the global trend, the Chinese trend is more exposed to external shocks due to the impact of the Chinese economy on a global scale. SARS had an impact on both, regional and global capacity. The recovery after the first SARS alerts in 2003 took 4 months, the subsequent SARS events in 2004 and 2005 recovery was much faster at 1 month.

#### Swine Flu Mexico (Apr 2009)

The Mexican Swine Flu event had little impact on global capacity, but this event did impact capacity in Mexico. It took almost 8 months to recover.

Icelandic Volcanic eruption (April 2010)

The Icelandic volcanic ash eruption had little impact on global capacity and little impact is visible in the regional capacity.



Quake, Tsunami and nuclear plant explosion in Japan (March 2011)

The 9.0 magnitude earthquake and following tsunami that struck Japan on 11th March 2011 caused widespread disruption leading to a reduction in capacity to the region. It has disrupted Japan's export-led economy causing difficulties for many of the country's largest exporters, such as car makers and electronics companies. We have classified the Japanese earthquake as a medium level event, whereby we are expecting a recovery 3–12 months post the event.

Fuel prices impact on world capacity

The jet fuel price has been dramatically impacted over the last decade by geopolitical disruptions and fluctuating world oil prices. Today refiners must deal with low marketing and transport profit margins, and the increasing capital and operating costs of environmental compliance.

Jet fuel is a major influencing factor accounting for approximately 30% of some airlines costs. This high fuel price over the past 10 years although having an influencing impact on capacity growth, whereby the average growth rate has softened from 3.1% over the last 30 years to 2.6% over the past 10 years, has had no significant impact on global capacity.

The impact of financial crises on global capacity

Over the past 13 years, the Asian Financial Crisis in 1997, the WTC Attack in 2001 and the Banking Crisis in 2008/09 have had a significant impact on the global GDP. Of these events, only the events of September 11th 2001 and the recent banking crisis have had a significant impact on global capacity, impacting the capacity trend for approximately 2 years. The Asian financial crisis of 1998 although it had a regional impact, did not significantly affect the global capacity growth due to its more localized influence.

## **Conclusion**

Global capacity growth is very resilient and regionalized events such as natural disasters, conflicts and fuel price spikes have a minimal impact on capacity. Only wider global events such as major financial shocks and the events of September 11th 2001 have had a significant impact on the global airline industry to stem the growth for a significant period of time. But even this is short lived and global capacity growth soon recovers.

Fuel price shocks have historically had little impact on global capacity, with the shocks being absorbed through airlines hedging practices, but due to its increasing price, fuel has now become one of the largest costs items for airlines and will continue to add increasing pressure to air capacity growth over the coming years.

(Excerpt from “World Crisis Analysis Whitepaper”)

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