

HSH Nordbank Market Commentary

Airlines and Disease: How an increasingly Aggressive International Response to Health Threats Could Impact the Airline Industry

Disruptions to Air Travel Due to Disease Outbreaks May be More Likely in the Future

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The current H1N1 Swine Flu crisis is a reminder that airlines are in many ways on the “front line” when it comes to disease control. Epidemiologists have long worried about “jet spread” -- the fact that modern air travel significantly increases both the ability of diseases to travel around the world as well as the speed with which they do so. As with the SARS epidemic earlier in this decade, governments initially responded to H1N1 flu by imposing quarantines and other measures to monitor travelers. Until SARS, the aviation industry had not experienced a significant health scare affecting operations. However, since SARS, the World Health Organization (WHO) and the international community have made significant progress toward increasing global cooperation in monitoring, reporting, and containing disease outbreaks. These efforts culminated with the WHO increasing its pandemic alert as the H1N1 virus initially spread within Mexico and ultimately to other countries. While the WHO has received some criticism for the fact that the new pandemic alert system focuses more on spread than on virulence (which takes longer to ascertain) it seems likely that airlines will have to prepare themselves for a world in which health authorities are more vigilant and more willing to place limits on travel or to impose quarantines in the event of an epidemic. Fortunately, serious disruption to travel appears likely to be rare and most of the increased vigilance will take the form of minor inconveniences such as temperature checks at airports. Also, most disease outbreaks have a finite life and efforts at containment are likely to be relatively short lived. Nevertheless, airlines will probably need to be more prepared for temporary disruptions due to disease control measures or scares in the future.

Effects of Future Health Scares on Airlines will Vary Depending on the Ability to Contain the Disease and on the Level of Fear

The WHO's new pandemic alert system appears to have successfully focused attention on the H1N1 flu fairly early in its spread which galvanized global efforts to contain the disease. The fact the global health community has increased its vigilance raises the likelihood that diseases will be caught early, before they have a chance to spread widely. If a disease outbreak is recognized early, it is more likely authorities will view containment as achievable and that restrictions or even bans on air travel will form a significant part of containment efforts. However, in a containment scenario, the impact would likely be geographically limited to areas where the disease exists and air travel outside of those regions might be relatively unaffected.

To the extent a disease can not be contained because it has already crossed

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borders, air travel may see somewhat less of an immediate impact as authorities decide bans on travel will not contain the spread of disease. Even so, fear on the part of travelers or actions taken by governments in an abundance of caution, such as quarantines, could have a significant impact on air travel. The more passengers fear either catching the disease or being quarantined the more they are likely to postpone or cancel their trip.

Fear over catching the disease will also likely be correlated with fears of the severity of the disease. A mild flu would not likely significantly impact global travel for long while a more serious disease with a high death rate could have a major impact on the willingness of individuals to travel. While the current WHO pandemic alert system focuses more on the novelty and spread of a disease than on its virulence, improved efforts at tracking virulence and informing the public will, over time, hopefully limit fears or shorten the time period during which the health community has greatest uncertainty over the effects of a new disease.

However, even in the case of a mild disease, demand for international travel could be impacted more significantly than domestic travel to the extent countries adopt highly visible quarantine efforts as travelers seek to avoid the risk of quarantine far from home. With Hong Kong and China stung by their experience with SARS and imposing seemingly harsher quarantine rules than elsewhere, it is possible international travel to or from Asia could be more affected than most in the event of a disease outbreak.

What the SARS Experience Tells Us About Potential Effects of Disease Scares

The SARS outbreak in 2003 is the only recent large scale disease threat the world has experienced that had a significant impact on air travel. As such, it offers a glimpse of the potential impact a disease scare could have on the industry. Nevertheless, there are some important differences to note in comparing SARS with the current flu outbreak. First, SARS appears to have been more localized than the current outbreak and was less able to be transmitted person-to-person. This increased the effectiveness and desirability of travel restrictions. Also, the mortality rate of those who came down with SARS appears to have been much higher than with the current flu outbreak, significantly increasing the public's fear of SARS. It is also important to note that the SARS outbreak occurred during the Iraq War and it is very difficult to fully isolate the effect of SARS on air travel as a result. Overall, the SARS epidemic was fairly brief in duration although the impact was quite sharp. Air traffic in Asia saw up to a 40% decline during SARS with the global decline more muted at a maximum decline of about 20%. The maximum impact on traffic occurred about 3 months after the onset of SARS and World air traffic largely recovered within 3-4 months of the onset and fully recovered within 6 months.

Current Flu Scare Appears to be Waning Although it Could be Back Next Year

Flu is seasonal and generally disappears during the Summer which should limit

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the impact of the current H1N1 flu scare in the Northern Hemisphere. The H1N1 strain also appears to be relatively less virulent so far which appears to be limiting overall fear and effects on global air travel. To date, only Mexico appears severely affected from a travel perspective although there are signs of some softening of demand elsewhere in May attributable to flu concerns, particularly in North America. The key question is whether the H1N1 strain will reappear in the Northern Hemisphere next winter and whether it will become more virulent. If so, there is likely to be a second wave of efforts to contain its spread in the fall. In the meantime, the medical community will closely track the disease in the Southern Hemisphere's winter and appears hopeful that at least a partially effective vaccine may be developed in time.

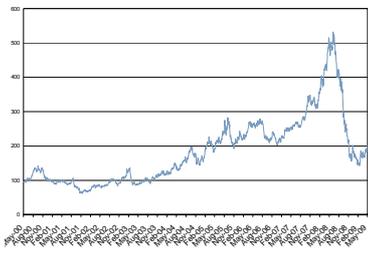
What Can Airlines Do?

Going forward, airlines will probably need to work more closely with health authorities to try to coordinate responses across jurisdictions when a disease outbreak occurs. This would increase the predictability of government responses to any given health crisis and limit the risk travelers could face unnecessary quarantines which should improve demand for travel during an outbreak. Over time, authorities will probably improve the way they track the virulence of disease strains which will hopefully limit the number of false alarms. It is also possible that air filter technologies in aircraft will improve, even beyond current high standards, to reduce the risk of disease spread on aircraft which might further allay fears on the part of the traveling public. In the meantime, significant disruption to air travel because of disease would appear to be a rare event. However, the fact the global health community has increased its vigilance against disease represents one more reason for airlines to maintain a reasonable cash cushion to manage through unexpected significant short-term declines in demand.

By Daniel W. Stone

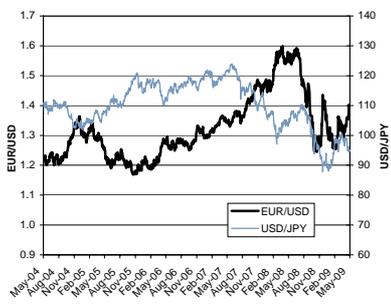
General Aviation News

Jet Fuel Price Index



Source: HSH Nordbank; Base year 1991 = 100; Average of the spot markets US Golf, US West coast, Mediterranean, Rotterdam, Far East Singapore.

Currencies



Source: Bloomberg

World

Premium traffic down again in March

According to the latest figures of International Air Transport Association IATA, passenger numbers traveling on premium tickets was down 19.2% in March compared to March 2008. Previous month's decline was 21.1%. Economy travel decreased by 8.2%. Premium travel markets connected to the Asia Pacific region remained the weakest. The number of premium tickets for the North and Mid Pacific routes fell by 29.3%, premium travel from Europe to Far East dropped 20.1%. Within Far East the fall was 29.2%, North Atlantic premium travel fell by 16.8% and within Europe premium passenger numbers show a decline of 22.9%. The revenues from premium tickets have been hit much more than passenger numbers because of price pressures. IATA estimates that premium revenues on international markets during March and the first quarter as a whole were down 35%-40%.

First A320 assembled in China

The first A320 aircraft assembled outside Europe has successfully completed its first flight. It will be delivered to Dragon Aviation Leasing in June from the Airbus Delivery Center in Tianjin and will be operated by Sichuan Airlines. The Airbus Final Assembly Line China (FALC) started work in August 2008. Eleven A319/320 aircraft are scheduled for delivery in Tianjin in this year and the production rate at the FALC will be ramped up to four aircraft per month by the end of 2011. The A320 FALC is a joint venture between Airbus (51%) and a Chinese consortium (49%) comprising Tianjin Free Trade Zone (TJFTZ) and China Aviation Industry Corporation (AVIC).

Airline News

U.S. / Americas

Aerolineas Argentinas to buy 20 jets from Embraer

Brazilian aircraft maker Embraer closed a deal for the sale of 20 jets to Argentina's Austral Linea Aereas, a subsidiary of government-controlled Aerolineas Argentinas. The beginning of the delivery of the E-190 jets, which can carry as many as 96 passengers, is expected in the first half of 2010, Embraer said in a statement. The deal is valued at about 700 million US-dollars. Brazil's national development bank BNDES has agreed to finance 85 percent of the purchase price, or some 585 million US-dollars; a Brazilian foreign-trade fund will insure the loan. Argentina's President, Cristina Fernandez, says the aircraft will be the first new jets for Aerolineas Argentinas in 16 years. Argentina's congress ap-

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proved the nationalization of Aerolíneas Argentinas from Spain's Grupo Marsans in December. Austral plans to use the airplanes to increase frequencies on domestic routes and possibly open new markets for parent airline Aerolíneas.

Delta and Air France-KLM sign transatlantic joint venture

Delta and Air France-KLM, partners in the SkyTeam alliance, finalized a deal to operate as one airline over the North Atlantic, seeking to boost their 25 percent share of the world's busiest market. The carriers have operated as code-sharing partners on flights between Europe and the United States since 1997, but the deal marks a deepening of their partnership and goes further than either in sharing prices and capacity planning. The pact between Delta and Air France-KLM has won antitrust clearing and involves sharing revenues and costs on 200 transatlantic flights and some 50,000 seats a day. Combining the operations should reduce service redundancies and let the carriers more easily tailor capacity to passenger loads. Air France-KLM, the airline with the world's highest revenue and Delta, the leader in terms of passengers, forecast annual revenue for the 50-50 venture of 12 billion US-dollars. Both airlines denied it would lead to higher ticket prices and pointed to annual savings of about 150 million US-dollars each. Air France and KLM merged in 2004 and Delta bought Northwest last year, paving the way for the four-way partnership.

Europe

Lufthansa offer accepted by over 85% of AUA-shareholders

On expiry of the acceptance term on 11 May 2009, the public takeover offer to the shareholders of Austrian Airlines (AUA) was accepted by over 85% of the shareholders (not included in this figures are the shares held by AUA). They will receive 4.49 euros per share. With 85%, the minimum acceptance threshold in the takeover bid was reached. For the other shareholders, who had not accepted the offer, the acceptance term is extended for three months. The public offer is still subject to suspensive conditions of anti-trust immunity and approval of the European Commission of 500 million euros in restructuring aid to be granted to AUA by the Republic of Austria.

In the meantime, the European Commission has cleared the proposed acquisition of British Midland (bmi) by Lufthansa. The transaction would not significantly impede effective competition. Both parties are members of Star Alliance and already cooperate with each other.

Greece's Aegean Airlines accepted as future Star Alliance member

Greek carrier Aegean Airlines will join the Star Alliance, which currently has 21 full members, including UAL Corp's United, Germany's Lufthansa, Air Canada and Continental. The Chief Executive Board of Star Alliance accepted the membership application of Aegean Airlines, which expects to become a full member by 2010. By joining the alliance, Aegean will be able to cooperate with other major carriers on route scheduling and gain access to new markets. Pub-

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licly listed Aegean Airlines began operations some 10 years ago and now operates a fleet of 31 aircraft covering a total of 47 domestic and international routes on 200 daily flights. Aegean currently serves 23 Greek and 24 international destinations. In 2008, the private airline became the largest Greek airline in terms of passenger numbers. Aegean could now face stiffer domestic competition after Greece's government reached a deal in March to sell ailing state carrier Olympic Airlines to an investment group.

Asia Pacific & Middle East

New cargo airline in India – start of Deccan 360

Deccan 360, a new Indian cargo airline, will launch its service operations starting 18 May 2009 with a Hong Kong-Delhi-Chennai-Hong Kong route. It will offer domestic as well as international freight service with an A310 freighter. Two more A310 freighters are ordered along with six small feeder ATR-42. They want to operate a hub-and-spoke-model. The company is part of the new logistics company Deccan Express Logistics and is founded by Capt. Gopinath who launched India's first low cost carrier, Air Deccan.

Hainan Airlines gets capital injection of 440 million US-dollar

Hainan Airlines, China's fourth-largest carrier, has just been granted a capital injection worth three billion yuan (440 million US-dollars) from the local Hainan provincial government and its parent company HNA Group. Hainan Airlines said it would issue three billion yuan of new shares to its two largest shareholders in exchange for government aid. The provincial government and HNA Group each will provide 1.5 billion yuan. The airline will use two billion yuan to pay back loans, while the rest of the money will be used to cover operating costs. After the share issue of 595.24 million new shares at 5.04 yuan each, Hainan Airlines' debt-to-asset ratio will fall to 76.1% from 82.8%. The injection follows similar infusions of state funds to China Eastern Airlines, China Southern Airlines and Shanghai Airlines to help carriers weather the aviation market's downturn amid the global financial crisis. China Eastern has received a total of 9 billion yuan in government funding; China Southern has received 3 billion yuan and Shanghai Airlines 1 billion yuan.

Upcoming Events

| 2009 | Organization/Company | Event/Announcement |
|-------------|----------------------|--|
| June | | |
| 1 | Frontier Airlines | Full Year Results |
| 2 | Ryanair | Full Year Results |
| 7-9 | IATA | Annual General Meeting |
| 8 | ACE Aviation | Results of Q1 |
| 11 | IEA | Monthly Oil Market Report |
| 15-21 | Paris Air Show | in Le Bourget |
| 18-21 | IATA | 124 th Schedules Conference |

Source: HSH Nordbank, Bloomberg

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