

Indian Aviation: A Review of 2009 and Outlook for 2010



Prepared by CAPA India's
Research & Intelligence Unit

We understand Indian Aviation

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INTRODUCTION

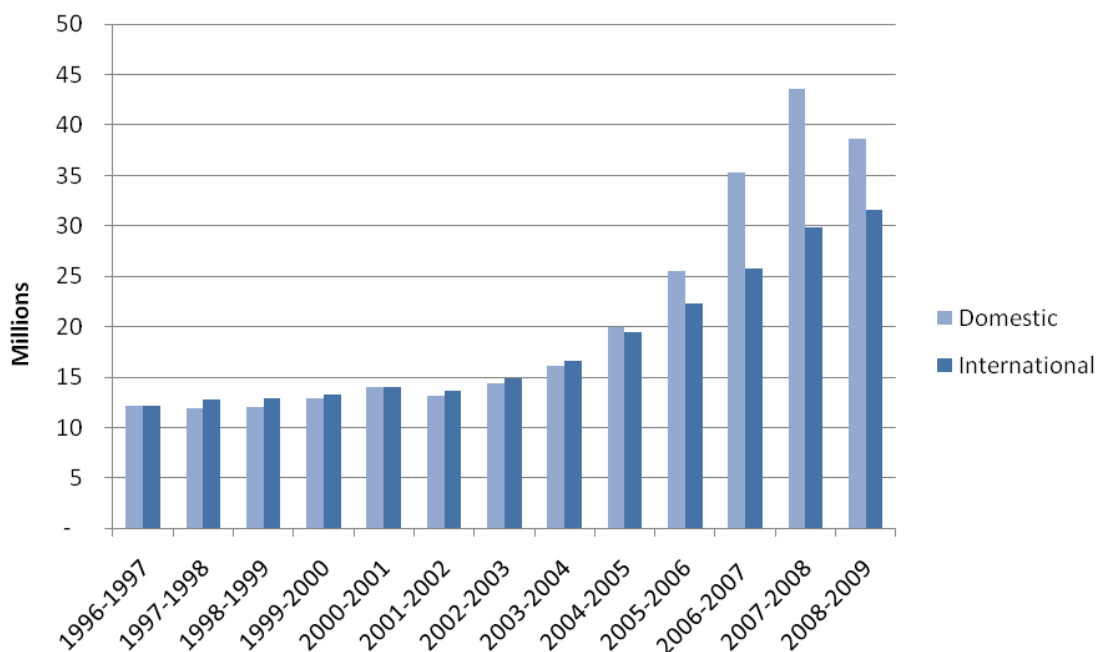
Civil aviation in India is now entering a new phase of development after two decades during which the sector has witnessed both stagnation and unprecedented growth. The industry has experienced some of the natural growing pains of a sunrise sector, but numerous lessons have been learned and are being acted upon. Despite the recent growth, less than 2% of Indians travel by air in any given year, highlighting that we have barely arrived at the threshold of the growth potential of Indian aviation.

Recent History of Domestic Aviation

- **Pre-1993:** Aviation was traditionally viewed as an elite activity, and one in which socialist governments could not be seen to allocate resources. The two government airlines Air India (long haul international) and Indian Airlines (domestic and shorthaul international) were the only Indian carriers. Both carriers operated with relatively old aircraft and inefficient work practices, from airports which were functional at best. There was no focus on developing traffic and the market grew at uninspiring single digit rates.
- **1993-1995:** The first steps in domestic aviation deregulation were taken allowing private airline entry, first as air taxis and then as scheduled operators. However, the government was still focused on protecting the state-owned carriers, and a slew of under-capitalised and underprepared start-ups entered and then mostly exited the market. Only Jet Airways and Air Sahara survived beyond the initial couple of years.
- **1995-2003:** After the “failure” of the deregulation experiment, the industry fell into dormancy. No new carriers entered the market and Air India and Indian Airlines continued to be starved of capital. Despite the fact that the broader economy performed well during this period, aviation continued to show limited growth. Aviation was largely untouched by the economic reform agenda of the governments in power as there was little strategic direction for the sector.
- **2003-2006:** This was a period of unprecedented change. With the arrival of Ministers of Civil Aviation on both sides of parliament that recognised the importance of aviation for the development of business, trade and tourism, and who had a vision for delivering a vibrant and modern sector, the industry saw dramatic reforms across the aviation value chain. Developments included:
 - Domestic open skies policy which saw market entry by several carriers;
 - The arrival of the low cost airline model in India with the launch of Air Deccan, and subsequently SpiceJet, IndiGo and Go Air;
 - Announcement of the airport modernisation plan, including the privatisation of Delhi and Mumbai, upgradation of 35 non-metros and encouragement of Greenfield development;
 - Placement of orders for 111 new aircraft for Air India and Indian Airlines;
 - Liberalisation of the international sector with some private carriers permitted to operate overseas; greater access for foreign carriers and opening up of international routes for non-metro airports;
 - Increased foreign direct investment caps in certain sectors of the industry.

Traffic started to accelerate at double digit rates, both domestic and international, levels never before seen in India, highlighting a latent demand for travel.

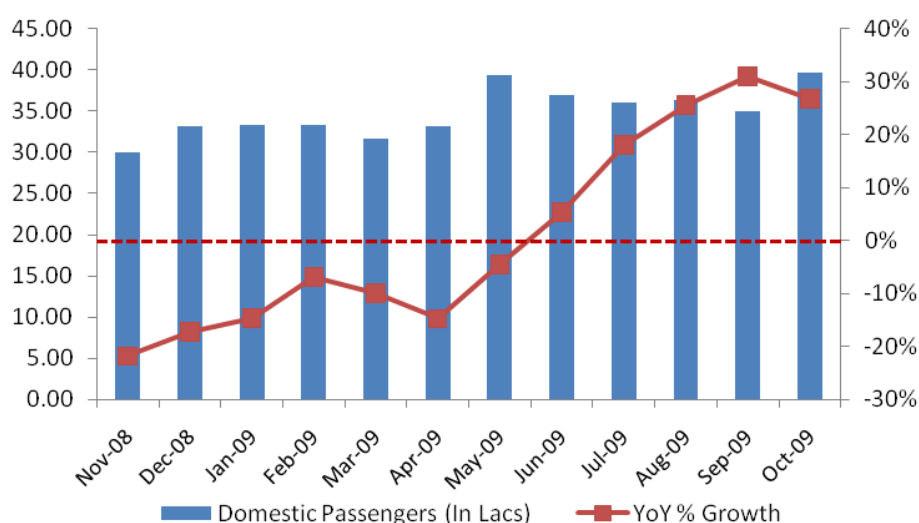
India Annual Domestic & International Passenger Numbers 96/97 – 08/09



- **2006-07:** During this period, traffic continued to accelerate further, to levels approaching 40% in 2007. However it was at this stage that the realities hit home – although traffic was buoyant, yields were being slashed through overcapacity and fragmentation of the industry, and costs were increasing because of the poor state of airport infrastructure and a shortage of human resources.
 - The bullish fleet orders placed by Indian carriers saw capacity being introduced at the rate of 6 to 6.5 aircraft a month, whereas the actual growth in demand was closer to 3 aircraft equivalents;
 - Aside from the mis-match between supply and demand, the rate of growth was simply too great for the industry to handle from a management and capital perspective.
 - In a fragmented market, with multiple start-ups chasing market share, loss-leader pricing was widespread and Air Deccan in particular was responsible for setting fares well below cost as it fought to retain its first mover market share;
 - The rapid increase in capacity at a time when the airport modernisation program was yet to deliver upgraded infrastructure, meant that airports and airways were highly congested, increasing airline operating costs;
 - With the inadequate surface access and airport (and airways) infrastructure, airlines were unable to secure a significant competitive edge over other means of travel, thereby excluding huge parts of the still-untapped leisure market;

- In a period of global boom, demand for skilled personnel such as pilots and engineers also outstripped supply leading to a sharp escalation in wages, and in some cases grounding of aircraft due a shortage of staff;
 - Balance sheets were stretched as a result of the aggressive fleet induction programs, combined with the mounting operational losses.
- **2008-09:** The fragility of the sector - which had overextended itself by growing at rates that it could not manage, in an environment that was not conducive to efficient operations – was exposed during the fuel price spike of mid-2008 when oil reached close to US\$150/barrel. In India, this situation was exacerbated by the taxation structure which increases the costs of fuel by up to 60% vis a vis international benchmarks. As costs spiralled upwards, carriers were forced to raise fares, and with a simultaneous slowdown in the Indian economy, there was resulting decline in traffic of around 10-12% year-on-year.
- **2009-10 and beyond:** After the dramatic changes of the last five years, we are starting to see the emergence of a more favourable environment:
 - India's GDP growth slowed from over 9% in 2007/08 to 6.1% in 2008/09. However, given the contraction globally, this was a relatively a good result. The economy appears to be recovering earlier than expected, with GDP growth of 7.9% in the last quarter, ahead of expectations. The World Bank projects annual growth of 8.0% per annum from 2011 to 2014.
 - Domestic traffic is also showing a return to growth. After 12 consecutive months of year-on-year declines in domestic traffic, July 2009 saw a return to positive territory, which has continued since then. This is partly due to the impact of a lower base resulting from last year's decline, however discussions with the industry indicate a discernible increase in demand as business and consumer confidence increases, although yields continue to remain depressed.

India Monthly Domestic Passenger Numbers Last 12 Months



- The operating environment is improving, with airports and airspace gradually being upgraded, and ground access being developed, which will not only enhance the passenger experience, but should allow airlines to achieve faster turnarounds and higher aircraft utilisation.

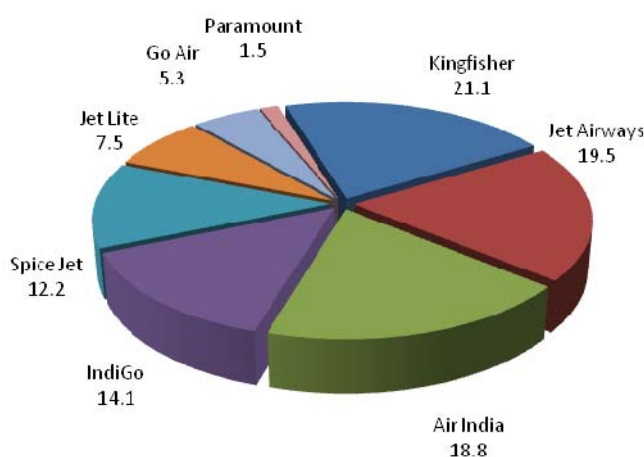
AIRLINES

The airline landscape in India has been transformed in recent years. In 2003 there were just 4 carriers – Air India, Indian Airlines, Jet Airways and Air Sahara - all operating full service models. And private carriers in those days were limited to operating domestic routes only. Today, there are effectively 7 airlines operating 11 different brands.

- Air India + Air India Express
- Jet Airways + Jet Konnect + JetLite
- Kingfisher Airlines + Kingfisher Red
- IndiGo
- SpiceJet
- Go Air
- Paramount

On the domestic front, the 3 large airline groups – Air India, Jet Airways (+ JetLite) and Kingfisher Airlines command a 67% market share.

Domestic Market Share November 2009



In the 4 years to March 2010, it is estimated that Indian carriers will have accumulated operational losses of in excess of INR260 billion, of which the three large airline groups (Air India, Jet Airways and Kingfisher Airlines) account for almost INR230 billion. CAPA estimates that the losses for the current financial year will in the order of INR65-70 billion.

The most significant recent strategic development in the Indian domestic market is that it is rapidly turning low cost. An operating model which did not exist in the Indian market until 6 years ago, could account for almost 70% of domestic capacity within the next 2-3 quarters. This is due to the decision taken by carriers such as Jet Airways and Kingfisher Airlines to reconfigure the majority of their domestic aircraft to operate all-economy, no-frills service. Air India is also planning to follow suit. There has been a clear recognition that there is a limited market for full service travel, particularly business class, beyond the key metro routes. Full service may in future be restricted to just a handful of services, or may even disappear entirely. It is driven by a decisive change in the demographic profile of the Indian domestic traveller. Whereas 5 years ago, approximately 80% of air travel in India was for business, today that figure is less than half.

This means that 2010/11 could be a very different year in Indian aviation, with Jet Airways, Kingfisher Airlines and Air India possibly being the largest LCCs in the market. The transition to lower cost operations, should allow the big 3 carriers to develop a more competitive cost structure, which is essential for their survival. Jet Airways and Kingfisher are both faced with a cash crunch and are urgently seeking to raise capital. De-leveraging their balance sheets is a primary objective. The 3 large airline groups – Air India, Jet Airways and Kingfisher Airlines – have a combined debt of approximately USD10 billion. They will require capital raising of a further USD10-12 billion over the next 2-3 years to finance aircraft deliveries. In the short term, the carriers will need to increase equity by USD1.2 billion over the next 3-6 months.

Air India: There is a clear recognition at all levels that Air India is in need of desperate restructuring and much is in fact underway in this regard. The restructuring plan is in the process of being implemented and 9 committees have been established to execute this process. The Air India management is working closely with the Committee of Secretaries, which is chaired by the Cabinet Secretary. Progress is further being reviewed by the Prime Minister's Principal Secretary.

However, the restructuring of Air India is an extremely challenging exercise. The carrier will accumulate debt of INR310 billion over the next 2-3 years (consisting of INR160 billion for working capital and INR150 billion for aircraft acquisition). Of this, around INR100 billion is expected to be raised this year, with the balance over the next 12-24 months. The total interest servicing obligation over the next 3 years will be around INR90 billion, a challenging requirement in the current low yield environment. Air India is planning to reduce annual losses from INR50 billion to INR13-18 billion over the next 12-18 months. The plan is to achieve this through an increase in revenue of INR20 billion with the balance through cost reduction. With the strengthening of the market in Q3 and expectations of continued recovery, this should benefit Air India and assist with its revenue growth plans.

Air India will continue to have cash deficits for the next 5-7 years which could cumulatively amount to USD4-5 billion. Air India is expected to receive an infusion of INR20 billion from the government prior to 31 March 2010, a further INR20 billion in the next financial year and a further INR10 billion thereafter. Receipt of funds is linked to achieving specific milestones laid out in the restructuring plan.

However the latter will be difficult to achieve, especially in the category of labour, where union resistance has already been encountered. In order to generate momentum, the carrier needs to achieve a few quick wins, and one area in which there has been a marked improvement is on-time performance. There has also been a discernible enhancement in onboard and ground services, however the situation remains very precarious. Losses for Q1 2009/10 are expected to be around INR14-15 billion. Massive restructuring will be required in order to achieve the desired financial targets as the current operating margins of -20% are far below industry benchmarks even in the current environment.

Plans to suspend loss making routes (most of the UK and US services fall into this category), will release up to 25% of the fleet, leaving Air India as largely a domestic and regional international carrier. The carrier intends to defer the delivery of 5 A320s and 6 B777-300ERs, and to return up to 48 leased aircraft. A further 6 B747s will be sold to the government and 19 other aircraft (including 11 A320s) will be disposed via auction on the open market, however in the current environment receipts are likely to be depressed. Air India had placed an order for 50 B777s and B787s which are well suited to long-haul routes, however the airline lacks a suitable aircraft in its fleet for medium-haul operations for services to Singapore, Hong Kong or even Europe. Operating B777s on such routes could be extremely challenging to make viable, especially due to the fact that Air India has suffered from having weak commercial capabilities. However, any decision to withdraw from US/UK routes would call into question the current fleet delivery plans. Air India may need to re-look at strategic fleet planning and acquisition post 2011.

Air India is expected to introduce its low cost subsidiary, Air India Express, on domestic routes in 2010/11, with up to 30% of capacity to be under this brand. Air India Express is also expected to take on additional Gulf routes.

Air India and Indian are still behind schedule with respect to achieving operations under a single carrier code, a pre-requisite to induction into the Star Alliance. The continuing delays to its accession to the global alliance mean that it is a possible that Jet Airways may be considered for Star Alliance membership.

Air India's interest burden and staff costs account for INR70 billion per annum, equivalent to more than 50% of revenue. It will be virtually impossible for the carrier to make much of a dent in these costs in the short term, which means that reducing losses over the next 3-5 years will be extremely difficult. These are compounded by the fact that the internal challenges are massive. The current Chairman and Managing Director has clearly identified the issues at the airline and has a vision and commitment to restructuring the airline, but he is faced with an almost impossible task due to the absence of a depth of talent at senior and middle management levels. He requires the support of a more capable team. While the Ministry of Civil Aviation and the Prime Minister's Office are both very supportive of Air India's turnaround, there are too many player involved, and continued political interference which inhibits the airline from taking the necessary business decisions to develop a viable business model.

Continued weakness at Air India could assist Jet Airways and Kingfisher Airlines, especially Jet if Air India cancels some of its key international European and North American routes.

CAPA believes that Air India's restructuring should also consider all ownership options, which include continuing under government control as at present, privatisation or even closure. However whichever option is pursued, it should only be done after a well thought plan has been reviewed and has the support of all stakeholders.

Jet Airways: Jet has seen a strong recovery in Q3 in both domestic and international operations, which should see it achieve a profitable result for the quarter. After a rapid ramp-up which was not supported by a robust sales, marketing and distribution strategy, Jet Airways is starting to see some stabilisation of its international operations, which now account for 62% of revenue. International load factor in Q3 is expected to be above 80%, with a particularly strong December. We expect the international operations to be consistently profitable during the 2010/11 financial year.

In the short to medium term, the carrier will continue to expand regional international routes to the Gulf and SAARC destinations using surplus B737 aircraft from the domestic fleet. However, further afield, the airline is also evaluating new destinations in the US such as Chicago and Los Angeles. The carrier's next phase of long-haul expansion is expected to commence from the Summer 2011 schedule, although it could possibly be brought forward to Winter 2010/11 if there is a faster than expected recovery in traffic.

On the domestic front, approximately 65% of capacity is operated under the Jet Konnect all-economy brand, which is resulting in an improved cost structure and higher loads. CAPA believes that Jet Airways may exit the full service model on most domestic and regional international routes in 2010/11, which would be operated by Jet Konnect, leaving Jet Airways and its full service model on longer international routes and handful of key metro domestic city pairs. This strategy will allow it to compete more effectively against the standalone LCCs such as IndiGo and SpiceJet.

Despite the fact that domestic aircraft have been withdrawn for deployment on regional international routes, domestic capacity has been maintained as a result of the increased seat density arising from reconfiguration of 2/3 of its aircraft to all-economy layouts (a 145-seat, two class B737 converts to 189 seats in all-economy).

Jet Airways and JetLite have a combined 47 aircraft on order (5 x A330s; 3 x B777s; 10 x B787s and 29 x B737s), with options for a further 10 B737s and 10 B787s. There have been some deferrals negotiated with manufacturers. CAPA expects that 2010 will see Jet Airways focus on strengthening its operations.

Jet Airways currently has USD3.5 billion in debt and desperately needs to de-leverage its balance sheet and reduce the interest servicing obligations. It has received conditional approval to raise USD400 million through Qualified Institutional Placements (QIPs), for which it is expected to achieve a price of INR350-400 per share.

Kingfisher Airlines: Kingfisher Airlines has seen an improvement in its operational performance over the last 2-3 quarters. The carrier's domestic operations are expected to break-even in Q3. The impact of rightsizing capacity in line with demand has had a beneficial impact, however the interest burden on its

debt continues to be a major challenge. The fact that a number of aircraft are grounded, especially its A340 fleet, is a further financial commitment. Yields also remain under pressure, hence it is important that the carrier restructures its cost base to a more manageable level. The increasing transfer of aircraft to the low cost Kingfisher Red brand is helping, but there may be a need to go a step further and transform domestic entirely to a single class configuration. Further right-sizing of the capacity deployment in the domestic market is also possible.

The carrier has always had strong international ambitions, although in the short term it is more likely to concentrate on the regional international market using its A320 and A321 fleet, rather than further longhaul expansion using A330s. However, the airline is expected to launch Delhi-London service prior to the end of this fiscal year in order to avoid losing its slots at Heathrow Airport. Kingfisher Airlines may need to re-consider its fleet composition, particularly for its longhaul operations to North America. The A340-500 which it ordered is unlikely to be competitive and this may lead it to consider the B777 as an alternative.

The key objectives for the airline are to reduce its interest burden, raise further equity and strengthen its senior management, particularly in the commercial and strategic planning divisions. Kingfisher needs to raise funds within the next 3-6 months and reduce losses during the last two quarters of this financial year in order to prepare for a turnaround next year. CAPA expects that the promoters will also infuse substantial fresh capital within the next 3-6 months, which will be supported by a diversified range of instruments such as QIPs, Global Depository Receipts and a rights issue, expected to generate a combined raising of USD400-500 million. This will deleverage the balance sheet to an extent that will permit debt to be increased further. It is believed that a number of lenders have agreed to commit further debt after the increase in equity has been completed. CAPA expects that 2010/11 will be a defining period for Kingfisher Airlines.

IndiGo: Amongst the national carriers, IndiGo is the only carrier that has reported profits in 2008/09, however it is unclear as to what extent this is due to the contribution of sale and leaseback revenue to their profit and loss. Nevertheless, IndiGo continues to maintain a strong operational performance and is developing a reputation for consistency and reliability. The carrier has focused on costs, systems and processes. It has enjoyed an exceptional Q3 and its passenger load factor for the month of December may touch 90%, with a yield slightly higher than SpiceJet at INR3,300-3,400. It is expected to deliver a profit for the current financial year but may face challenges next year due to the increased low cost competition from Jet Airways and Kingfisher Airlines, who will be able to leverage their brand strengths in the no-frills segment. However, IndiGo has the advantage of reportedly being debt free and it has arguably the lowest cost structure in the industry. The carrier is planning to expand its fleet by 6 aircraft in 2010/11.

SpiceJet: SpiceJet had a profitable Q1 in 2009/10, although this was negated by losses in the second quarter. The airline has achieved a very robust performance in Q3 with a passenger load factor of 80% and higher, and an average fare of just under INR3,300. Subject to a good result in Q4 (ie. a load factor of around 78% and an average fare of close to INR3,000), SpiceJet could achieve break-even for the current 09/10 financial year.

The airline is however expected to deliver consistent profitability in 2010/11. SpiceJet becomes eligible to commence international operations from May 2010 when it completes 5 years of domestic service. The carrier has indicated plans to take-up this opportunity, however it may be better advised to concentrate on stabilising its domestic operations first before embarking on international which can be extremely complex and place additional pressure on management. Internal challenges continue at the carrier, particularly at the Board level, and management is not as strong as some of its competitors, with some gaps in execution having been observed. SpiceJet is likely to be a key player in the expected consolidation in the industry, and has been driving this agenda.

Go Air: Go Air has consciously pursued a conservative growth strategy, an approach which certainly helped in limiting losses during the fuel price spike and the economic downturn during the 2008/09 financial year. However, the corollary of this is that the airline's capacity share, and consequently market share, is significantly less than that of the other independent LCCs.

Substantial improvements in the airline's operations have been seen over the last 12 months. At the start of FY 2008/09, Go Air's market share stood at 4.6%. The carrier then significantly downsized its operations in line with its flexible capacity deployment strategy, which saw its market share decline to 1.8% within 6 months. Go Air then resumed its growth phase and since Jun-09 its market share has been consistently above 5%. According to DGCA data, performance integrity has been strong with good on-time performance and the lowest flight cancellations of any carrier during the Jun-Dec 09 period. Inflight and ground service delivery have also seen notable improvements. However, whilst Go's cost of sale has reduced considerably, it still remains the highest amongst the independent LCCs. Average yield per passenger has strengthened but remains approximately INR100 below that of SpiceJet or IndiGo. Nevertheless, the combination of improved operations, higher fares and lower distribution costs is expected to have resulted in moderate profitability in Q3 for Go Air.

In line with the Indian airline sector in general, a renewed focus is required on strengthening organisational capability to prepare for long term growth.

CAPA Experience: Airlines

- CAPA India maintains a dedicated airline research team in New Delhi and overseas.
- CAPA's global research and intelligence unit provides coverage of airline data and analysis for Asia Pacific, Middle East, Europe and the Americas. Our research is relied upon by many of the world's leading airlines and lessors.
- CAPA releases an annual Asia Pacific Aviation Outlook and recently published a ground breaking Low Cost Airline Report, providing one of the most comprehensive reviews of the business model.
- We have completed engagements for global airlines on a range of strategic issues, and in India have been involved in airline start-up business planning; advising flag carriers on aircraft selection and acquisition; market research and route studies for international airlines operating to India.

AIRPORTS

India's airports have suffered from decades of neglect and underinvestment. When the Naresh Chandra Committee presented its report to the Ministry of Civil Aviation in November 2003, it remarked frankly that the country's "passenger airports are for the most part an embarrassment".

The inadequacy of the state of airport infrastructure was exposed as air traffic expanded dramatically from 2004 onwards, pushing several metro airports to well beyond their design capacity. Congestion in the terminals, on the runways and in the air, resulted in a deteriorating passenger experience and an increasingly inefficient (and costly) operating environment for the airlines. Recognising the potential for airport infrastructure constraints to stifle the aviation industry, in 2005 the Government of India announced a USD10 billion airport upgrade and modernisation programme over 5 years to 2010. A further USD20 billion of investment is expected in the following 10 years. Acknowledging that it possesses neither the expertise nor the capital to carry out such an undertaking by itself, the government has invited private sector participation in the process, with JV operators now in place at Delhi, Mumbai, Bangalore, Hyderabad and Cochin. All other airports remain under the control of the state-owned Airports Authority of India (AAI).

Airports Authority of India: The Airports Authority of India, which until the late 1990s held responsibility for all airports in the country, has in recent years experienced a significant change in its role. Five of the largest airports in the country – Delhi, Mumbai, Bangalore, Hyderabad and Cochin – accounting for more than 60% of traffic have been transferred to a PPP model and are led by private consortia. This has had a negative impact on the AAI's revenues, further compounding the impact of the recent decline in traffic. Of the 89 operational airports which remain under the AAI's control, only 7 are profitable and are having to support the other loss making facilities. This comes at a time when the government has committed to a very highly capital intensive investment program to upgrade and modernise the non-metro airports across the country. In fact, INR124 billion has been allocated for spending in the 11th 5 Year Plan. There is consequently an emerging shortfall between revenue and expenditure that is potentially a serious issue for the airport operator.

The AAI had planned to issue tax free bonds as a capital raising measure, however this approach has been rejected by the Ministry of Finance. The authority is therefore expected to turn to debt instruments and will approach banks to raise approximately INR6 billion over the next few months. As the AAI is a AAA rated entity with cash reserves of around INR50 billion this should be achievable.

However, beyond the immediate funding gap, the AAI needs to look more closely at developing a strategy to re-invent itself in light of the change environment. At a corporate level, the authority needs to be restructured to develop a more commercial approach, competing more effectively for traffic vis a vis the private airports. Not only will this be beneficial for the AAI's financial position, but it is also consistent with the policy objective of distributing traffic to smaller cities and reducing the concentration on the key metros. The AAI should also focus on developing other commercial opportunities. For example there is huge upside in the potential for growing non-aeronautical revenue,

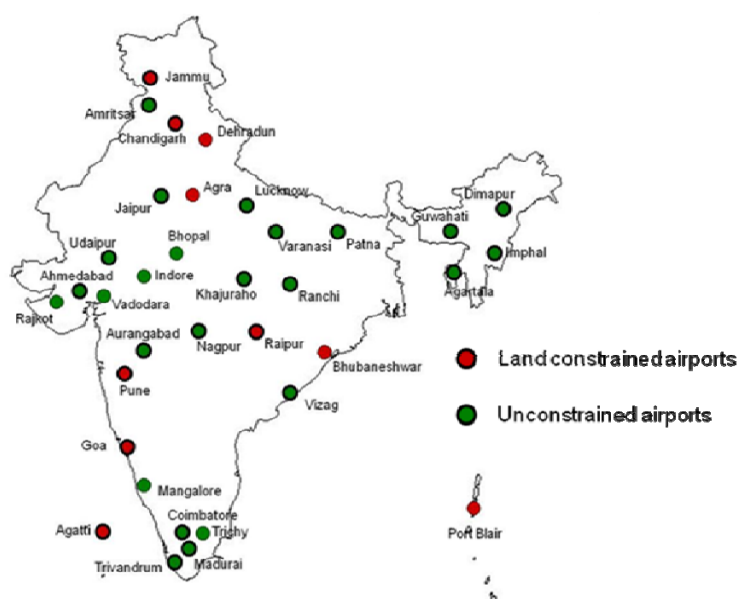
such as duty free, domestic retail and food and beverage. Furthermore, at the level of each individual airport there needs to be a business plan prepared and followed.

In an effort to increase the commercial focus of the AAI, corporatisation of the authority has been discussed, however progress has been slow. More likely in the short term is a hiving off of the air traffic management responsibilities into a corporatised unit, separate from the airport operator. As a first step towards this development, the AAI has appointed a new Board Member for Air Traffic Control.

Non-Metro Airports: The government had identified 35 non-metro airports for upgrade and modernisation with initial plans to complete all work by 2009. However, due to the slowdown in traffic over the last year and issues related to fund raising, completion has been delayed. It is now expected that work at 8-9 airports will be completed by March 2010, and at a further 4-5 airports by the end of 2010. The target is to have modernisation of all 35 airports completed by 2012.

It was also earlier intended that private sector participation would be invited in terminal operations and landside commercial development. However, it has subsequently been decided that terminal and cargo operations will be retained by the Airports Authority of India and only landside development will be opened to external parties. Tender documents for 10 of these non-metro airports are expected to be issued shortly.

Non-Metro Airports Identified for Upgrade and Modernisation



Source: CAPA

Greenfield Airports: The Greenfield airport projects most likely to progress to the tender stage in the near future are Navi Mumbai and Mopa in Goa, with Request for Proposal documents expected to be issued by March 2010. Navi Mumbai, which will be the second airport in Mumbai, is critical to ensure that sufficient capacity is available to serve India's commercial and financial capital. The current airport

in the city will reach capacity within the next 5-7 years, with no opportunity for further expansion thereafter due to physical constraints.

Navi Mumbai airport is expected to be operational by 2014-15, although the City and Industrial Corporation which is responsible for the development of Navi Mumbai, is pushing for completion a year earlier. The airport will have a capacity of 10 million passengers per annum at the time of opening, increasing to 65 million by 2030. Presently, 57% of the required land for the airport has been acquired, with the balance in the process of being transferred. The process will involve the resettlement of 3,000 families. A key obstacle to the development of the airport has been environmental considerations due to the fact that the proposed site falls within a coastal protection zone. An Environmental Impact Assessment is to be carried out by the Indian Institute of Technology Bombay.

Other Airports: In addition to the 35 non-metro airports already identified, the AAI plans to modernise a further 13 airports and operationalise another 32 facilities which are currently not being utilised. Meanwhile, the upgrade of Kolkata and Chennai airport by the AAI continues, although costs have exceeded initial budgets. CAPA expects that a greenfield airport project may be announced for Chennai during the next financial year, which raises questions about the investment currently being ploughed into the existing airport.

Private Airports: The private operators of Delhi and Mumbai Airports are currently focused on achieving their deliverable targets for the Phase 1 of their upgrade projects - however the very high revenue shares which they have committed to the government (46% in the case of Delhi and 37% in Mumbai) is hurting their financial position, given the traffic slowdown at a time of high capital expenditure. The structural shift in the industry towards low cost airlines will also have significant implications for the business models and infrastructure requirements for the airport operators.

CAPA Experience: Airports

- CAPA India maintains a dedicated airport research team in New Delhi and overseas.
- We are currently engaged by two of the largest airport operators in India to provide strategic advisory services to their Boards.
- We have also successfully completed a number of international searches for Indian infrastructure companies seeking to partner with global airport operators.
- CAPA India published a report on the ground handling sector in 2009 and will release a study on airport retail in 2010.
- CAPA's global research and intelligence group is responsible for some of the leading industry resources including Airport Investor Monthly, the Global Airport Privatisation Report and the Low Cost Airport & Terminal Report.

ANCILLARY AVIATION SERVICES

Air Traffic Control: The Airports Authority of India manages one of the largest airspaces in the world, including a large oceanic component, for a total of 6 million square kilometres. The dramatic growth in traffic over the last 5 years led to serious air congestion. The AAI has been investing in increased automation and improved ground infrastructure, although several hundred million dollars of further

equipment is required to upgrade India's CNS/ATC systems, a process which is linked to the induction of the satellite-based system GAGAN, developed in collaboration with the Indian Space Research Organisation.

The AAI will initially have a V-SAT network covering 8 major airports, which will be extended to all airports progressively. Separately, the AAI has connected 80 airports in the country through the digital satellite communication network, to prevent a failure of voice communication systems between pilots and the ATC.

In March 2007, a special committee was set up under the chairmanship of Ajay Prasad, the former secretary of the Ministry of Civil Aviation. This was established to make recommendations for the development of a masterplan for India's air navigation services. A report was submitted to the Ministry of Civil Aviation in March 2008.

However, a key challenge has been a shortage of air traffic controllers. Potential recruits, that are required to have engineering degrees, have been able to command higher salaries in other professions. Consequently, as at October 2009, India had 1640 controllers against a sanctioned strength of 2162, with the greatest shortage being in the Southern region. Amendments to the Aircraft Act of 1934 enacted two years ago allow for the licensing of air traffic controllers. This is a positive step in terms of increasing quality, however it may increase the mobility of Indian controllers as their licences could open up employment opportunities overseas. Compensation packages for controllers may therefore need to be reviewed if these continuing shortages are to be addressed.

General Aviation: This has been a neglected sector of the aviation industry but one which could have significant positive economic benefits. The general aviation industry in India is at a nascent stage, however strong GDP growth and rising wealth are stimulating demand. Furthermore, the long distances and poor state of surface infrastructure in India make this an ideal market for air travel, particularly to smaller and more remote destinations where scheduled services do not operate. The expansion of all-economy services and gradual removal of business class could further drive demand for private aviation from the senior corporate segment. Non-scheduled passenger traffic has more than doubled in just the last 4 years.

Demand is largely from the corporate sector, however there is increasing take-up related to luxury travel, and demand for helicopters exists for elections, tourist and pilgrimage destinations, offshore oil and gas platforms, city-airport transfers, aerial surveying in the resources sector, washing of power lines etc.

Strong growth has been witnessed over the last few years, in fact India has the fourth highest number of firm business jet orders in the world, and almost double the size of the current fleet. In the next 5 years, India will have one of the ten largest business jet fleets globally. Industry sources suggest that the helicopter fleet could triple within 5 years from just over 200 rotorcraft today. A key driver will be the availability of helipads and landing facilities. The new greenfield airport policy announced in April 2008, included a streamlined process for approval of new private airports and helipads.

With the Indian economy set for strong and sustained long term growth, we can expect to see the general aviation sector in India undergoing a dramatic transformation in a very short period of time, however some key challenges remain:

- Absence of dedicated general aviation terminals, heliports and fixed based operations;
- Restricted timings at key metro airports and lower priority clearance relative to commercial traffic;
- Lack of hangar space and parking bays;
- Limited maintenance facilities;
- High import duties and a cumbersome import approval process;
- Obtaining permission to operate at civil enclaves can be a lengthy process;
- Severe shortage of skilled pilots and engineers.

CAPA Experience: General Aviation

- CAPA India maintains a dedicated general aviation research team in New Delhi.
- Our CAPA Aircraft Advisory division offers India's first professional end-to-end business jet and helicopter acquisition and sales service.
- CAPA is co-developer of the Aerospace & Helicopter City at the GVIC Special Economic Zone promoted by the State Government of Gujarat and the Korea Land Corporation

Training and Education: The critical role of skilled human resources in supporting the growth of the industry is often overlooked. CAPA's research has revealed great concern amongst both operators and suppliers that skills shortages could constrain the sector. India today faces not only insufficient training capacity, but the quality of that which is currently available is in many cases questionable. This not only has implications for the efficiency of operations and the quality of the customer experience, but more importantly for safety.

The demand for training is derived not only from the growth of the industry, but also from the need to enhance the capabilities of existing staff. Regulatory change and greater harmonisation with FAA and EASA standards will also generate a need to upgrade skills.

During the peak of the traffic boom, pilot shortages resulted in aircraft being grounded, whilst salaries in all areas increased sharply. The current slowdown has relieved pressure in some areas but this is a temporary phenomenon. With traffic returning, it will not be long before the industry again faces a crunch with respect to pilots, engineers, cabin crew, air traffic controllers and management. There is also a critical need for qualified people within the regulatory bodies – it was the shortage of aircraft inspectors within the DGCA, amongst other issues, that nearly cost India its Category 1 status with the FAA.

Global training providers have recognised the need in the Indian market, however many have found the regulatory environment to be unwelcoming or the difficulties of doing business in India too challenging. However, we detect an increasing recognition amongst senior government officials of the importance of training for the long term health of the industry and a commitment to supporting initiatives in this area.

Developing in-country capabilities and reducing reliance on offshore training will not only be more cost effective, but can also contribute to the development of a globally competitive ancillary support sector and a vibrant aerospace industry with potentially long term economic benefits to the nation.

CAPA Experience: Training & Education

- CAPA is currently preparing the Masterplan for the CAPA AeroPark, planned as world class aviation and training campus to be developed in India for multiple disciplines.
- We have conducted extensive research into the training infrastructure in India and will be releasing a dedicated report in 2010.

MRO: In theory India has the potential to be a highly competitive global location for MRO services. With one of the world's largest pools of English speaking engineers, at comparatively lower cost to Western benchmarks, there is a clear opportunity here. The demographic dividend which India enjoys of a very young population and which will continue to feed the working age cohort for several decades to come, means that wages are likely to stay competitive for much longer into the future than say in the case of China.

Numerous projects have been proposed by global companies – if all had come to fruition there would have been overcapacity in the market, however the reality in fact is that very little has seen the light of day. The sector has been thwarted in part by an unwelcoming taxation structure, an absence of high quality training institutions to develop the skills base and the global economic slowdown. Projects which have been announced in the past (although several of these have now been cancelled or are on hold) include:

- Air India is planning four MROs 1) airframe JV with Boeing at Nagpur 2) airframe JV with EADS at Delhi 3) GE engine overhaul at Mumbai 4) components MRO, possibly with Boeing.
- Jet Airways / Bangalore International Airport;
- Kingfisher Airlines / Bangalore International Airport;
- Lufthansa Technik / GMR (Lufthansa Technik has withdrawn but replaced by Malaysia Airlines Engineering);
- HAL-TIMCO narrowbody airframe MRO;
- Thales avionics maintenance centre at Gurgaon;
- Taneja Aerospace Aviation Limited at Pune;
- Air Works for narrowbodies and turboprops at Hosur;
- Sabena Technics / Taneja Aerospace for components at Hosur;
- Airbus / HAL for airframe at Nashik;
- Pratt & Whitney / HAL for engines at the old Bangalore Airport;
- Indamer at Mumbai;
- Cochin Airport;
- HAMCO, Hyderabad (appears to have been shelved);
- Duke Aviation, Nagpur.

Amongst the above, the most likely ones to proceed are the Air India MROs (although there is no haste observed with the construction of the Nagpur facility); the GMR-Malaysia Airlines JV in Hyderabad, which may enter into an agreement to maintain Jet's B737 fleet, which would provide the base load demand; and the HAL-TIMCO narrowbody aircraft MRO. Most of the others appear unlikely to go ahead at this stage. Major opportunities exist in the MRO sector for general aviation which is currently significantly underserved, not only for maintenance, but also for interior refurbishment and reconfigurations. Currently, most aircraft have to be sent overseas for such services.

CAPA Experience: MRO

- CAPA India maintains a dedicated MRO research team in New Delhi.
- We will be publishing a report on the MRO industry in India in 2010.

GOVERNMENT & REGULATION

The current government, after setting a blistering pace in aviation sector reform during the first half of its term, lost momentum in the last couple of years of its first administration, during which more could have been achieved. The first three years of Civil Aviation Minister, Praful Patel's tenure were remarkable, and the speed and direction of change was unlike anything that India has seen before.

Genuine deregulation of the domestic skies; liberal bilateral agreements with all key markets, including open skies with the US; modernisation of Delhi / Mumbai airports; fleet purchase orders and a merger of the national carriers; allowing domestic airlines to fly overseas; open skies in cargo and many other initiatives created a solid platform for further growth and for the development of a world class aviation industry in India.

This initial burst ideally needed to be strengthened by further reforms and policy initiatives. Instead, the pace slackened and several important issues have been left unaddressed, in particular:

- the New Civil Aviation Policy;
- Foreign Direct Investment regulations in the airline sector;
- abolition of the 5 year/20 aircraft rule to allow more private airlines to fly international;
- city side development of non-metro airports;
- postponement of the ground handling policy;
- under investment in ATM and CNS infrastructure;
- under-resourcing of the DGCA.

Restructuring of the Ministry and DGCA: As aviation becomes an increasingly important sector of the Indian economy, consideration must be given to developing an aviation policy and governance framework that is aligned with the needs of the industry. The focus should be on creating an environment that is equitable, efficient, transparent and in the national interest, and strengthening the technical and policy framework. The institutional and regulatory environment needs to be sculpted to support the growth of the industry from 2010 onwards. The current Director General is indeed proceeding strategically and quickly to bring Indian regulations in line with international standards, with a key focus on safety.

At present the Ministry of Civil Aviation is responsible for both policy formulation and regulation. A possible alternative model to follow would be the UK Civil Aviation Authority which is funded by the key stakeholders in the industry, is responsible for both technical and economic regulation, and rather than being a civil service department, is run independently by the leading specialists in their field. Such an approach would relieve the Ministry of Civil Aviation of its regulatory responsibilities, allowing it to focus on policy development to facilitate long term growth, and setting a vision for the sector with a 10-15 year Masterplan. A consultant has been appointed to study the available options and is due to submit its report shortly.

The Ministry is currently pre-occupied with the restructuring and turnaround of Air India, developing a viable model for the Airports Authority of India and conducting an in-depth review of the bilateral agreements.

Renewed Focus on Safety: There is a clear desire by the DGCA to modernise itself and overhaul the regulatory framework to support the Indian aviation sector of today. Significant steps have already been taken – in fact, the measures implemented which resulted in India clearing the FAA audit in Sep-09, were remarkable and are recognised globally as a clear indication of a committed and highly capable regulator. However, CAPA believes that more attention and resources are still required in order to build a robust safety network and more importantly a safety culture.

The Directorate General of Civil Aviation needs to be adequately resourced and trained to focus on technical regulation, with a strengthened capability in managing safety and air worthiness, and the ability to act in an independent and transparent manner. Indian aviation must have safety as a paramount objective. Apart from being an ideal in its own right, it is essential for the long term growth and reputation of the industry, the country can ill afford a mishap at this nascent stage of its development.

Airports Economic Regulatory Authority: In order to build a modern, world class airport system in India, almost USD30 billion of investment will need to have been committed in the 15 years through to 2020. The government acknowledges the important role of the private sector, but in order to attract its participation, the first prerequisite is an economic regulatory framework which provides clarity and certainty to investors on the commercial potential of any specific airport operation. The absence of a clear set of guidelines for airport operators ensures that their revenue models remain subject to national debate and controversy. Resources are allocated inappropriately, further reducing investor confidence in future projects, denying India access to critical expertise and capital. The end result would be under-construction – and, ultimately, continued suppression of economic expansion and consumer benefits.

The government first stated its intention to establish the Airport Economic Regulatory Authority (AERA) more than 3 years ago. AERA is to act as an economic regulator for all airports with traffic of more than 1.5 million passengers per annum. There are 11 airports in India which exceed this threshold, representing 85% of passengers handled nationally. AERA's scope is to set aeronautical charges on a 5

year cycle, taking into account the economic viability of an airport, in line with ICAO principles of transparency, cost-relatedness, non-discrimination and user consultation.

This will be based on a determination of the costs of delivering aeronautical services in an efficient manner and to a desired level of service, including both capital expenditure and operating activities. The regulator will also determine whether User Development and Airport Development Fees are appropriate and will monitor service and quality standards.

The relevant bill was finally passed in both houses of parliament in late 2008 and the Chairman was finally appointed in August 2009. AERA will take about one year to be fully operational (Price Waterhouse Coopers has been appointed to assist with this process) and this is most critical for the sector as major decisions will have to be taken during this time.

Bilaterals: The Ministry of Civil Aviation has entered into increasingly liberal bilateral air services agreements with key markets over the last 5 years, including an Open Skies Agreement with the USA. Between 2004 and 2009, capacity entitlements have increased by 85% while international traffic has more than doubled from 14.5 million to 30 million passengers per annum. This has demonstrated a positive approach by the government to place national interests with respect to connectivity (and consequent positive implications for trade and tourism) ahead of those of any individual airline.

However, the government is now coming under pressure from a number of Indian carriers to re-look at the bilateral regime and either freeze or even roll-back some of the access granted to foreign carriers. There is a sense amongst some carriers that the very open access accorded to international airlines, particularly those from the Gulf, is creating a very challenging competitive environment. Carriers such as Emirates for example, operate 183 weekly frequencies across 10 Indian cities.

Nevertheless, in recent weeks, Qatar has been granted an additional 10,000 weekly seats, Nepal 30,000 and Kenya Airways has been offered an additional point of call in Ahmedabad. Emirates is expected to be granted additional capacity in 2010/11, whilst Etihad is also understood to be seeking more entitlements. This reflects a trend that is expected to continue whereby Gulf carriers will continue to request more seats. In the last 12 months the Ministry of Civil Aviation has pursued a self-imposed restriction whereby it has limited the level of additional access granted to foreign carriers in light of the difficulties faced by Indian airlines. However, in 2010/11 the Ministry will come under greater pressure from other government departments to ease this policy and CAPA believes that they will not be in a position to resist. Air services bilaterals are increasingly tied up with broader trade and economic cooperation talks. The additional seats granted to Qatar Airways for example resulted from an initiative led by the Ministry of External Affairs and the Prime Minister's Office.

CAPA Experience: Government & Regulation

- CAPA publishes the Regulatory Affairs Review, which was developed in conjunction with IATA, covering global developments in aviation law and regulation.
- Our Founder and Executive Chairman was formerly at ICAO and IATA and is immediate Past President of the Aviation Law Association of Australia & New Zealand.
- CAPA has been invited to submit policy papers to the Ministry of Civil Aviation on a diverse range of issues such as domestic airline policy, air traffic management, merchant airport and the Airports Economic Regulation Authority.
- We have supported the Ministry in relation to its presentations to the ICAO Council and the Prime Minister's Coordination Council.
- CAPA has been asked to present to the Parliamentary Standing Committee on Aviation, Tourism & Culture on issues related to the redefinition of the Aircraft Act 1934.

OUTLOOK 2010

After a turbulent couple of years, 2010 should be a more positive year for Indian aviation, provided that the airline can remain disciplined on costs, capacity and pricing. CAPA projects the following key themes for the year ahead:

- **Domestic Traffic:** Domestic traffic is expected to post expansion of 15% or more in 2010/11 as the industry returns to its long term growth trajectory. This is higher than the expected increase in capacity of just under 10%, which should assist carriers in achieving higher load factors and improved yields. It will be important for airlines to maintain capacity discipline and to keep control of costs, especially since fuel prices remain the great unknown and which continue to remain a constant threat to the industry. Airlines should not allow growth to distract them from focusing on restructuring their operations and profitability;
- **LCCs:** The domestic market may become almost entirely low cost, as Jet Airways and Kingfisher Airlines transition to a largely all-economy model. However, the lead performer in the market is expected to be IndiGo which has maintained the best focus on operational performance and costs;
- **International Traffic:** International traffic (which has remained positive even during the downturn, particularly outbound travel) is expected to grow at 10-12%. Yield in both economy and premium classes are expected to be firmer. Premium volumes and revenue overall are likely to recover faster ex India as opposed to inbound.
- **Financial Performance:** The airline industry will return to profitability, although it will be some time before the accumulated losses of recent years are reversed. The private carriers (ie. excluding Air India) are expected to achieve a combined profit of US\$250-300 million in 2010/11;
- **Yields:** CAPA expects that domestic yields will increase by 5-7% in 2010/11 and possibly by as much as 10% in Q3 of next year, which will be the most profitable. Maintaining yields will be key and it was the loss of focus on this parameter that has contributed to the industry's current difficulties.

- **Air India:** Air India's restructuring is likely to result in industrial action at various levels, which will be a major challenge for the carrier. The airline will continue to post losses. Completion of the merger between Air India and Indian under one code is unlikely to be achieved in 2010, although there will be one balance sheet under NACIL. Weaknesses in the organisation capability will be a key challenge for Air India;
- **Jet Airways:** is expected to achieve a full year profit in 2010/11. The key objective for the airline is to de-leverage the balance sheet and reduce its interest burden. There also needs to be strategic clarity regarding its LCC strategy. The dual Jet Konnect and JetLite brands create operational inefficiencies as well as confusion within the market and it is expected that these will be combined in 2010/11 following the resolution of ongoing legal differences with the Sahara Group. A private equity investor or a public listing may be considered for JetLite in 2010/11;

Jet's management is currently top heavy and there needs to be a re-shuffle to ensure that the key executives remain closer to the frontline. The rapid growth of the last 5-7 years and the attention that has been required for the international expansion, have resulted in management becoming more distant from the daily issues faced by the staff. The current acting CEO, Mr Kardassis, who was instrumental in Jet's early success, is known to be a people's CEO, and this will be an important quality. He will need to move quickly to re-engage the staff.

Furthermore, a new challenge is emerging with the transition to low cost services on domestic routes – the group now operates quite different airlines, one a premium, full service international airline and the other a domestic LCC under the same management team. These are different businesses and require different organisational and management structure. Jet Konnect and JetLite need LCC cultures which the airline does not currently possess, and developing one from within a legacy airline is a major challenge. However, if this can be achieved over time, having separate management teams for full service and low cost business models could prove to be much more effective.

- **Kingfisher Airlines:** is expected to achieve profitability in its domestic operations in 2010/11. The key requirement for the carrier to achieve this will be to maintain discipline in pricing, capacity and costs. Restructuring to reduce its cost base will need to be more aggressive than has been seen to date, and to ensure that this is implemented requires the appointment of a dedicated CEO and COO. At a balance sheet level, the carrier, like its peers, must induct additional equity and reduce the interest burden;
- **SpiceJet:** The LCC is expected to post a full-year profit in 2010/11, although poorly planned or premature international expansion could jeopardise this. With some stability now restored in the market with traffic and yields returning, there is an opportunity for the carrier address some its weaknesses in middle management. The Board also needs to play a more strategic role and this may require the induction of independent directors with specific domain expertise.
- **IndiGo:** IndiGo has a clear leadership position in terms of operational consistency, the lowest cost structure in the industry, a positive brand image, huge supplier credits and is reportedly debt free. However, the challenge in 2010/11 will be to maintain this position and to continue its standards of operational excellence. It will need to retain talent and build upon its corporate

culture as the airline grows further. The airline has shown discipline to date and it will need to continue to do so in the face of intensified competition from the Big 3 airlines who are each turning low cost.

- **Go Air:** Domestic market growth in FY 2010/11 should allow Go Air to achieve stable financial performance in the year ahead. At present, the airline does not plan to induct additional capacity until Q3 of 2010/11, however positive market conditions may see the airline bring this forward.
- **Consolidation:** Consolidation of airline operators is both desirable and inevitable, and market exit is also possible. SpiceJet will be a key player and is likely to be involved in any developments. Jet Airways will be open to opportunities which would allow it to once again dominate the domestic market.
- **Cooperation:** The airlines must continue to lobby the state and central governments to have ATF designated as a declared good in order to reduce the sales tax. This major impost is a significant barrier to industry viability and growth. The Federation of Indian Airlines and the Indian Association of Private Airport Operators must cooperate to reduce the high structural costs faced by the industry.

CAPA Research's Earlier Forecasts & Outcomes

- **Traffic:** In January 2005, CAPA projected that domestic traffic in India would reach 44 million for the FY 2009/10, almost precisely in line with the project result for the current fiscal;
- **Profitability:** In 2005 CAPA had forecast that the industry would enter profitability from 2010 onwards, an outcome which now looks increasingly likely.
- **LCCs:** In May 2006, CAPA projected that LCCs would achieve a market share of 60-70% by 2010, a level which we have now reached.
- **Consolidation:** In 2007, CAPA had stated that the industry was ripe for consolidation, an assessment which was followed by three major mergers over the following 12 months.
- **Recovery:** In March 2009, in the depths of the downturn, CAPA had said that traffic would recover from Q3 and that 2009/10 traffic would reach 2007/08 levels, which the industry is on track to achieve.

CAPA Research

- CAPA continues to constantly monitor the outlook for the Indian aviation sector and over the next 6 months we will be publishing reports on:
 - Low Cost Carriers;
 - Corporatisation of Air Traffic Management;
 - General Aviation;
 - MRO;
 - Information Technology;
 - Fuel Management;
 - Industry preparedness for dealing with environmental issues.