

Indian Aviation Overview and Outlook 2020

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Our philosophy is simple: to present our clients and business partners with an unrivalled depth of expertise delivered by skilled and experienced professionals.

**Consulting &
Advisory Services**

- International reputation as the leading specialist aviation consultant in South Asia, with the experience almost 450 assignments around the world.

**Market Research
& Intelligence**

- CAPA has published over 7,000 reports for the global aviation community, across the industry value chain. We maintain a dedicated India-based research desk, conducting quantitative and qualitative studies on key industry verticals.

CAPA AeroPark

- World class multi-disciplinary aviation education & training campus bringing together the world's best training providers. First phase to open in early 2011.

**Aerospace &
Helicopter City**

- Co-developer of aerospace research and manufacturing enclave at 2,800 acre SEZ in Gujarat which will include an industry cluster focused on general aviation and helicopters.

CAPA Ventures

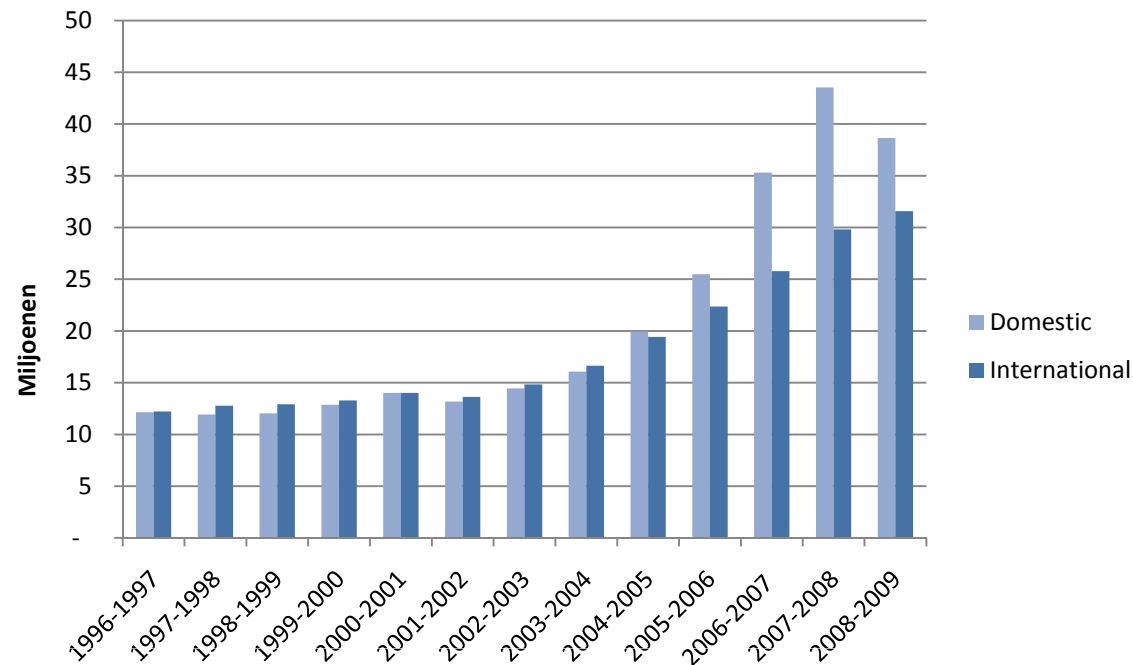
- Assists aviation and tourism related ventures with raising debt or equity funding, through our extensive network of local and international investors.

Global Clients

- The Centre's client base spans more than 600 of the leading aviation companies right around the world, including virtually every blue chip organisation in the industry, such as Airbus, Air France-KLM, Boeing, Deutsche Bank, Emirates, Rolls Royce, Singapore Airlines, Virgin Group etc.

Indian
Aviation

- **Rapid Growth:** Indian aviation has experienced a revolution in the last 5 years. Domestic traffic has tripled, international traffic has doubled.
- **Slowdown:** Recent slowdown was almost inevitable, in fact almost desirable, as the infrastructure was struggling to keep pace.
- **Losses:** But despite this market expansion, the industry has accumulated losses of US\$4 billion during this period. What went wrong?



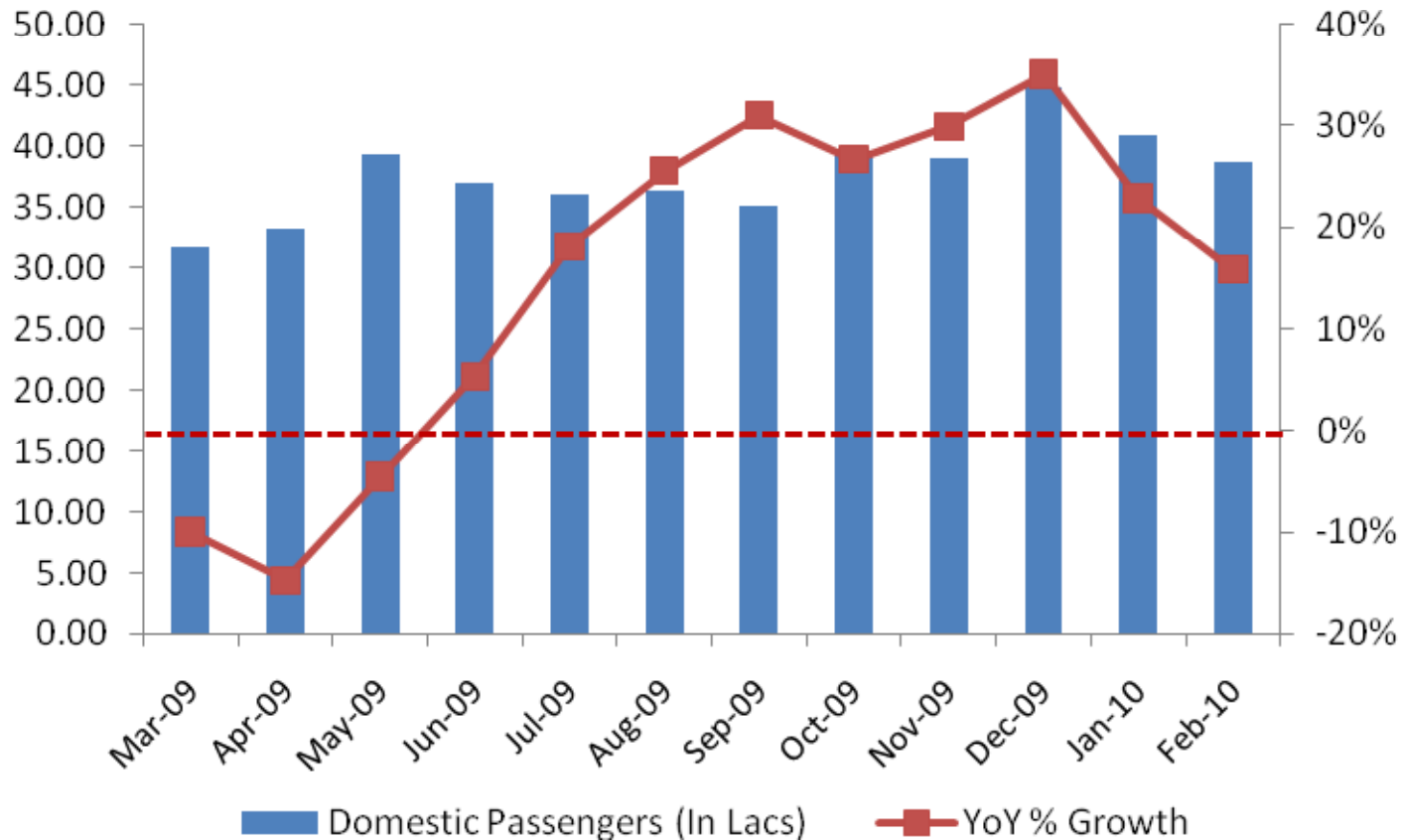


What went
Wrong?

- Too much capacity introduced too fast:
 - Aircraft were inducted at a rate of 6-6.5 per month
 - 3 would have been more appropriate to absorb demand growth
- The aviation system was too weak to handle this capacity expansion:
 - Airport and ATC infrastructure could not cope;
 - Congestion and delays increased airline costs;
 - Passenger experience deteriorated;
 - High structural costs were amplified;
 - Human resource shortages became a problem.
- Airlines discounted heavily to sell excess capacity – euphoria about traffic growth masked the fundamental imbalance in the sector.
 - This was ruthlessly exposed by the fuel price shock in 2008.
- Financial stress led to consolidation, but did not go well:
 - Air India/Indian merger is good on paper, but poorly executed
 - Sahara and Deccan have been expensive for Jet and Kingfisher

Indian
Aviation

- Domestic Traffic has recovered sharply in the last few months, posting strong double digit growth for the last 8 months.



World Aviation

- Today less than 2% of Indian fly domestically each year, and only 0.5% internationally.
- With a population only slightly larger than India, China's domestic air traffic is 5 times the size. Australia with a population of just 21 million, not much more than say Mumbai, generates more domestic passengers than the whole of India.

	Population	Domestic Traffic	Trips per Capita	GDP per capita
Australia	21 million	50 million	2.38	\$38,100
USA	307 million	650 million	2.12	\$46,900
Malaysia	26 million	14 million	0.54	\$15,200
Brazil	199 million	~50 million	0.25	\$10,200
China	1,339 million	198 million	0.15	\$6,000
India	1,166 million	39 million	0.03	\$2,900

Source: CIA World Fact Book; FAA, DGCA India, CAAC, Malaysia Ministry of Transport, BTRE Australia, ANAC Brazil.

- Several forecasts project that India will have the fastest growth rate in the world in air traffic over the next 20 years (close to 10% per annum).
- CAPA believes that the growth in traffic and aircraft movements over the next decade may be even stronger and more sustained than anticipated.
- Ad hoc responses will not suffice. Long term planning in line with a clear vision is imperative.

2007			2012			2017			2027		
Rank	Country	Passengers (millions)	Rank	Country	Passengers (millions)	Rank	Country	Passengers (millions)	Rank	Country	Passengers (millions)
1	United States	1,450	1	United States	1,552	1	United States	1,790	1	United States	2,345
2	China	297	2	China	497	2	China	792	2	China	1,708
3	United Kingdom	243	3	United Kingdom	282	3	United Kingdom	324	3	India	581
4	Spain	210	4	Spain	251	4	Spain	294	4	United Kingdom	409
5	Japan	204	5	Japan	228	5	India	274	5	Brazil	407
6	Germany	186	6	Germany	218	6	Japan	259	6	Spain	370
7	France	140	7	India	176	7	Germany	252	7	Japan	330
8	Italy	129	8	France	168	8	Brazil	224	8	Germany	311
9	Brazil	120	9	Brazil	165	9	France	192	9	France	242
10	Canada	101	10	Italy	154	10	Italy	180	10	Italy	233
11	Australia	101	11	Australia	131	11	Australia	154	11	Australia	209
12	India	100	12	Canada	125	12	Canada	147	12	Mexico	206
13	Mexico	85	13	Mexico	109	13	Mexico	137	13	Canada	195
14	Turkey	67	14	Turkey	92	14	Russian Federation	112	14	Russian Federation	178
15	Korea, Republic of	65	15	Russian Federation	84	15	Turkey	112	15	Turkey	157
16	Thailand	57	16	Korea, Republic of	78	16	UAE	95	16	UAE	152
17	Indonesia	56	17	Indonesia	71	17	Korea, Republic of	92	17	Indonesia	148
18	Russian Federation	52	18	UAE	70	18	Indonesia	92	18	Korea, Republic of	126
19	Netherlands	51	19	Thailand	70	19	Thailand	86	19	Thailand	125
20	Hong Kong	47	20	Hong Kong	61	20	Hong Kong	76	20	Hong Kong	113



Key Issues

- **Rationalisation:** Large 3 airlines – Air India, Jet, Kingfisher - have a combined fleet of 330 aircraft. Rationalisation required.
- **Air India lacks direction:** Air India's weakness is likely to continue with no clear recovery plan, which could benefit Jet Airways and Kingfisher.
- **Jet/Kingfisher under pressure:** But Jet/Kingfisher have huge debt and stretched balance sheets - they cannot exploit market to full potential. Longhaul expansion will be limited.
- **Competition from Gulf:** ME carriers continue to make in-roads.
- **Domestic:** However domestic operations should be profitable in 2010/11.
- **Consolidation:** Without consolidation, India's network airlines will not be able to expand profitably.
- **Alliances:** Carriers may join alliances to compete, but this may curb growth.
- **Investors:** Investors are concerned and raising capital is challenging.
- **Positioning:** Jet/Kingfisher will need further restructuring and greater differentiation between full service and low cost operations. Lack of clarity in service model strategy will benefit LCCs.

Key Issues

- LCC model has thrived in India – approaching 70% domestic share.
- Significant further growth potential , but requires reforms:
 - Foreign airline investment;
 - Greater freedom to operate overseas;
 - Sales taxation on fuel.
- Foreign airline investment rules may be eased within next year;
- Cross-border JV activity likely to be seen;
- Ownership changes for several carriers expected;
- Consolidation inevitable in 2010/11;
- International skies likely to liberalise further;
- Indian carriers must be granted a level playing field when this happens.

Pre 2004/05

- Prior to 2004/05, airports and airspace suffered from decades of neglect.
- Naresh Chandra Committee of 2003 stated that the country's *"passenger airports are for the most part an embarrassment"*.
- Privatisation appeared on the agenda in 1996 but no progress;
- One exception was Cochin – despite its success, private participation took several years to be invited again.
- Lack of world class infrastructure meant growth could not be supported when it started in 2004.

Post 2004/05

- In 2005, the first UPA government announced a US\$9 billion airport upgrade and modernisation program, consisting of:
 - Delhi & Mumbai airports on PPP basis;
 - Greenfield airports at Bangalore & Hyderabad;
 - Modernisation of existing Kolkata & Chennai airports by AAI;
 - Upgrade of 35 non-metro airports by AAI;
 - Operationalisation and upgrade of 45 smaller airports by AAI;
 - Greenfield airports at locations such as Navi Mumbai, Mopa, Pune.

- Airport modernisation was a highlight of the first UPA government.

- US\$20 billion in investment in airports is expected in the next 10 years.

- Delays in establishing economic regulator have created difficulties for investors.

**Air Traffic
Management**

- Airports are only half the story. The other key issue is airspace.
- AAI Masterplan consisting of the following elements:
 - Investing in airport infrastructure;
 - Upgrading CNS/ATM and Met equipment;
 - Enhancing manpower and training infrastructure;
 - Harmonisation with global initiatives.
- Other issues include the environment, implementing a safety culture, civil-military cooperation, building a seamless airspace.
- Need for significant and continuous investment. May require a new operating structure such as corporatisation.

Beyond 2010

- Modernisation of DEL/BOM will continue;
- Bangalore Airport has started planning for expansion and 2nd terminal;
- Non-metro modernisation slower than planned, due to cash crunch;
- Cityside development at non-metros to start in 2010;
- Greenfield airports at Navi Mumbai & Goa expected to proceed in 2010;
- Airport at Chakan, Pune may also be fast-tracked;
- Merchant airport at Durgapur, West Bengal will move ahead;
- AERA will be activated in the coming months
- Navi Mumbai is essential to maintain Mumbai's competitiveness;
- But, for the first time we will have multiple airports in a city, raising issues on how traffic should be distributed.

Future of AAI

- Restructuring of the AAI is critical;
- AAI is also a very complex company with over 120 airports to manage, may need to break into smaller groups that are more viable;
- 60% of traffic is now in private hands resulting in a decline in revenue;
- Proposed corporatisation of ATC will further reduce revenue;
- Capex requirements are high creating a shortfall;
- AAI needs to adopt a more commercial focus to airport charges, traffic development and non-aero revenues;
- Some airports could be handed over to state governments;
- However, this may also lead to greater state-central conflict.



Policy
Framework

- Policy framework must encourage traffic beyond the 10 largest airports;
- Regional airline policy has not succeeded;
- Financial incentives could be considered for stimulating air taxis and GA;
- Alternatives to Route dispersal guidelines could be reviewed.
- Key concern that policies are introduced with little industry consultation.
- Independent and expert regulator is required that keeps in mind industry viability in its thinking.

Lessons

- Airports cannot be built in a vacuum. There needs to be seamless coordination with other state agencies to develop ground transport and logistics.
- Airport planning needs to take greater responsibility for coordination and viability of different airport projects within similar catchments.
- In the next stage of modernisation, the objectives of airport development must be clearer, to ensure that the outcome is better aligned with requirements.

Outlook 2020

- CAPA estimates domestic traffic will reach 160-180 m pax per annum. International will exceed 80 m.
- Investment of up to US\$120 bn in aircraft, airport development and ancillary services such as ATC, MRO, catering, training.
- Commercial fleet likely to touch 1,000 aircraft, up from 380 today.
- Market for up to 1,000 GA aircraft, with estimated investment of US\$4 bn.
- Airport investment of US\$20 billion required for upgrades, greenfields and secondary airports in metros.
- US\$5 bn required for ground handling, cargo and logistics facilities.
- Significant investment opportunities in the MRO sector to support the fleet of over 1,500 aircraft.
- Ancillary services in training, safety, security and ATC will need to be brought up to international standards.

Success
Factors

- **National Agenda:** A long term, structured national plan with appropriate institutional framework – necessary to attract capital.
- **Regulation:** A modern and professional technical regulatory framework in line with global standards such as EASA/FAA.
- **Safety:** Implementation of safety systems and culture.
- **Vision:** Ministry to concentrate on policy and providing strategic leadership.
- **Profile:** Enhanced profile and recognition of aviation within government.
- **Taxation:** Less punitive fiscal regime – particularly sales tax on fuel.
- **HR:** World class education & training infrastructure is essential for safe and efficient aviation.
- **Capital:** Streamlined foreign direct investment regulations.

Thank You
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