Equity Research

June 16, 2016

BSE Sensex: 26726

InterGlobe Aviation
(Rs1,011 – BUY)
Target price Rs1,268

SpiceJet
(Rs66 – HOLD)
Target price Rs64

Jet Airways
(Rs561 – ADD)
Target price Rs621

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INDIA

Aviation

Flying high amid good times

Reason for Report: Sector thematic and initiating coverage

India's aviation sector is set to undergo a strong growth period, which should benefit all the incumbent players, particularly on a benign crude price outlook. Our supply-demand model for domestic air traffic implies 14% growth in passengers as evidenced from firm aircraft orders and latest delivery schedules. With yield management becoming the singular strategy lever for Indian Low-Cost Carriers (LCCs), cost structures assume high importance and structural asymmetries will decide the competitive edge for the airlines. However, much of these asymmetries in cost structure are inherited from the fleet strategy adopted by various airlines, hence normally have a long-lasting impact on their balance sheets. High operating leverage proves fatal in a cyclical downturn where balance sheet strength is vital. At the comfort of hindsight, bulk orders have benefitted IndiGo with valuable incentives, which have given it the structural advantage of lower rentals, while single fleet focus and strong balance sheet have lent IndiGo asymmetrical advantages on maintenance costs, redelivery expenses and supplementary rentals. That the other airlines have missed the plot thus far is a given, but the current growth phase of domestic aviation and low crude price outlook provide opportunity for them to shore up their balance sheet.

- **Our domestic supply-demand model shows an implied annual growth rate of only 14**%. This is the implied growth rate based on the capacity addition programs of domestic airlines. Our model accounts for all the operating airlines in India along with their planned capacity additions, hence reflects competition. We believe, barring an uneconomical way of short-term operating lease/wet lease, the capacity addition options are fairly limited. Another constraint will be that PLFs typically tend to be stable or modestly increasing at the aggregate level, thanks to the modern-day yield management practices. Therefore, when we arrive at an average industry growth of 14% with increasing PLFs and factoring all the capacity additions, it is but the implied growth rate of the system. This implied growth rate of 14% is low considering that the average annual growth rate of passenger-traffic in India has been more than 18-20%% since 2000 excluding the three periods of: 1) 2001-02 in the wake of terrorist attacks in the US (9/11) and the subsequent global crisis, 2) the great 2009 financial recession, and 3) 2012, when Kingfisher Airlines went bankrupt. Fare corrections on account of lower crude prices have already played out with ~5%/15% dip in fares in FY15/FY16 respectively. As such, we believe that the fares are likely to stabilise with increasing oil outlook. In the near term, there is still sufficient room left among the metro cities of (~45mn excess capacity remain) within the top airports which share 90% of the cumulative traffic among themselves.
- **Cost asymmetries and balance sheet are the defining stock selection parameters.** There are cost asymmetries favourably disposed towards IndiGo in the form of incentives and maintenance costs which dictate our positive construct for IndiGo. The advantage of the fleet of fuel efficient next generation aircraft will also accrue to this cost differential in times ahead. These have led to IndiGo having the strongest balance sheet among all the Indian airlines and it will continue to benefit from these structural advantages. Any kind of catching up by the peers will necessarily have to be a slow affair.

Valuation Summary

Company	Mcap (Rs bn)	Reco	CMP (Rs)	TP (Rs)	Revenue (Rs mn)		EBITDAR (Rs mn)		EPS% CAGR (FY16-18)
					FY17E	FY18E	FY17E	FY18E	
IndiGo	364	BUY	1,011	1,268	205,627	243,776	68,691	86,594	26.9
SpiceJet	40	HOLD	66	64	59,272	72,414	15,675	20,086	36.3
Jet Air	64	ADD	561	621	240,198	255,894	40,074	43,111	(16.3)

Source: Company, data I-Sec research

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COMPANIES

Oversupply –is it a pressing concern?

Our supply model suggests otherwise

Due to yield management techniques prevalent among airlines across the world, the air traffic demand growth is best analysed through the prism of available ASKs which can be mapped through the upcoming orderbook of the individual airlines in India. We have projected the upcoming orderbook of all domestic airlines based on their orderbook, estimated retirements and company guidance.

The fear of oversupply is not well placed considering that in a market which has grown on an average of 18-20% (barring three extraordinary years of 2001-02, 2009 and 2012); the supply side of booked aircraft order only can accommodate 14% CAGR. The investment argument in such a scenario is thus favourable to the incumbent airlines.

We have made a supply model of the planned capacity additions of all domestic airlines in India over the next four years, factoring the orders placed, probable delays, replacements and resultant average domestic seats for the period between FY17-FY20. We believe that yield management will ensure that most of the large airlines will operate along the 85% level of PLFs. However, some of the new and marginal airlines will not be able to garner such PLFs, simply due to the exorbitant high passenger growth required for them in order to achieve the same. The result of the exercise is the implied passenger growth of all airlines and also the total domestic passenger growth model. This implied passenger growth comes to 14% for FY17-20E.

In other words, only 14% passenger growth is required to manage PLFs of entire industry given the fleet addition plans.

This implied growth rate of 14% is low considering that the average annual growth rate of passenger-traffic in India has been more than 20% since 2000 excluding the three years of 2001-02 in the wake of terrorist attacks in the US (9/11), 2009 financial recession, and 2012 when Kingfisher went bankrupt.

Domestic seat capacity supply model implies passenger growth rate of 14%

This is the implied growth rate based on the capacity addition programs of domestic airlines. This model accounts for all the operating airlines with their planned capacity additions, hence reflects competition. Barring a perilous way of short-term operating lease/wet lease, the capacity addition options should be largely in line with the airline's plan. Additionally, PLFs typically tend to be stable or modestly increasing at an aggregate level, thanks to the aggressive yield management practices adopted by the airline industry. These boundary conditions of rational capacity addition, passenger growth and PLF levels are the bedrocks of our India domestic air traffic model.

Table 1: Domestic air traffic supply model

System	FY16	FY17E	FY18E	FY19E	FY20E
Passenger growth		**15.5**	**13.0**	**14.1**	**14.7**
Passengers carried	85,197,675	98,363,142	111,189,886	126,879,624	145,505,253
Avg km per passenger	950	954	956	956	956
RPK (mn)	80,938	93,838	106,298	121,297	139,103
Departure/plane	1,980	2,000	2,030	2,040	2,050
Effective seats (FY)	56,044	64,504	70,043	78,812	90,916
Avg km per seat	881	890	885	881	881
ASK (mn)	97,761	114,817	125,836	141,644	164,199
PLF (%)	**82.8**	**81.7**	**84.5**	**85.6**	**84.7**

Source: I-Sec research

- **Increase in IndiGo's market share from 36.9% to 41.1% by FY20.** This is largely driven by IndiGo's capacity increase. However, the implied passenger growth is an average 18% for IndiGo between FY17-FY20. This is very much possible because, even then, IndiGo's PLFs would remain in the 80-88% range.

Based on respective supply order, IndiGo, SpiceJet and Go Air will increase market share at the expense of Air India and Jet Air. The new players are unlikely to cut through competition

Table 2: Indigo supply model

System	FY16	FY17E	FY18E	FY19E	FY20E
Passenger growth		**25.0**	**15.0**	**15.0**	**15.0**
Passengers carried	31,453,451	39,316,814	45,214,336	51,996,486	59,795,959
Market Share	36.9	40.0	40.7	41.0	41.1
Avg. km per passenger	1,028	1,028	1,028	1,028	1,028
RPK (mn)	32,318	40,398	46,458	53,426	61,440
Departure/plane	2,510	2,510	2,510	2,510	2,510
Effective seats (FY)	16,895	22,093	24,043	26,847	30,609
Avg. km per seat	906	906	906	906	906
ASK (mn)	38,420	50,241	54,674	61,052	69,607
PLF (%)	**84.1**	**80.4**	**85.0**	**87.5**	**88.3**

Source: Company Data, I-Sec research

- **New entrants would struggle; exits would lead to further consolidation.** The combined market share of the new players would remain low. To give a perspective, the combined market share of Air India Express, Air Alliance, Vistara, True Jet, Pegasus, Air Costa and Air Asia would only manage to increase only by 1% between FY17 and FY20E. Although Air India Express and Air Alliance are not new, we have clubbed them in the group considering their low market share. This is the maximum market share they are able to reach with a passenger growth at 20% CAGR between FY17E-FY20E. Their PLFs would remain low, but increase in line with the growth in traffic. Any exits by any of the players or weakening of position would further provide opportunity for consolidation of the industry. So, one wonders whether IndiGo has any such exits factored in with their big orderbook.

Table 3: Air Asia supply model

System	FY16	FY17E	FY18E	FY19E	FY20E
Passenger growth		**20.0**	**20.0**	**20.0**	**20.0**
Passengers carried	1,705,808	2,046,970	2,456,364	2,947,636	3,537,163
Market share	2.0	2.1	2.2	2.3	2.4
Avg. km per passenger	1,104	1,104	1,104	1,104	1,104
RPK (mn)	1,883	2,260	2,712	3,254	3,905
Departure/plane	2,500	2,500	2,500	2,500	2,500
Effective seats (FY)	899	1,260	1,440	1,620	1,980
Avg. km per seat	1,045	1,045	1,045	1,045	1,045
ASK (mn)	2,348	3,292	3,762	4,232	5,172
PLF (%)	**80.2**	**68.7**	**72.1**	**76.9**	**75.5**

Source: Company data, I-Sec research

Table 4: Vistara supply model

System	FY16	FY17E	FY18E	FY19E	FY20E
Passenger growth		**20.0**	**20.0**	**20.0**	**20.0**
Passengers carried	1,422,611	1,707,133	2,048,560	2,458,272	2,949,926
Market share	1.67	1.74	1.84	1.94	2.03
Avg. km per passenger	1,028	1,028	1,028	1,028	1,028
RPK (mn)	1,462	1,755	2,106	2,527	3,033
Departure/plane	2,350	2,000	2,000	2,000	2,000
Effective seats (FY)	888	1,332	1,406	1,628	1,998
Avg. km per seat	1,010	1,010	1,010	1,010	1,010
ASK (mn)	2,108	2,691	2,840	3,289	4,036
PLF (%)	**69.4**	**65.2**	**74.1**	**76.8**	**75.1**

Source: Company data, I-Sec research

- **Maximum decline in market share likely for Air India followed by Jet.** A slower growth in capacity will drive this lower market share for 'Air India and Jet. This is a missed opportunity for Air India/Jet who has not been able to manage their fleet inventory with long delays in orders and a higher share of wide body

aircraft. To give a sense, Jet has had to lease 10 aircraft to Turkish Airways/Etihad. However, it is not the missed opportunity from a strategy point of view, but more from the poor financial condition of these carriers. These airlines are big enough to take significantly more time to turnaround and as such it is in their best interest to focus on deleveraging rather than capacity expansion.

Table 5: Air India supply model

System	FY16	FY17E	FY18E	FY19E	FY20E
Passenger growth		**3.0**	**8.0**	**5.0**	**4.0**
Passengers carried	12,742,163	13,124,428	14,174,382	14,883,101	15,478,425
Market share	15.0	13.3	12.7	11.7	10.6
Avg. km per passenger	961	961	961	961	961
RPK (mn)	12,245	12,613	13,622	14,303	14,875
Departure/plane	1,085	1,085	1,085	1,085	1,085
Effective seats (FY)	12,299	12,430	12,839	13,437	13,825
Avg. km per seat	1,159	1,159	1,159	1,159	1,159
ASK (mn)	15,470	15,634	16,150	16,902	17,389
PLF (%)	**79.2**	**80.7**	**84.3**	**84.6**	**85.5**

Source: Company data, I-Sec research

Table 6: Jet Airways supply model

System	FY16	FY17E	FY18E	FY19E	FY20E
Passenger growth		**8.0**	**3.0**	**12.0**	**15.0**
Passengers carried	15,961,308	17,238,213	17,755,359	19,886,002	22,868,902
Market share	18.7	17.5	16.0	15.7	15.7
Avg. km per passenger	864	864	864	864	864
RPK (mn)	13,783	14,885	15,332	17,172	19,747
Departure/plane	1,825	1,825	1,825	1,825	1,825
Effective seats (FY)	12,877	13,412	13,443	15,268	18,275
Avg. km per seat	728	728	728	728	728
ASK (mn)	17,109	17,819	17,860	20,286	24,280
PLF (%)	**80.6**	**83.5**	**85.8**	**84.6**	**81.3**

Source: Company data, I-Sec research

- **SpiceJet and GoAir to have modest growth in market share.** These two airlines are likely to increase their fleet size on the back of orders made earlier, albeit on a small scale compared to IndiGo..

Table 7: SpiceJet growth model

System	FY16	FY17E	FY18E	FY19E	FY20E
Passenger growth		**15.0**	**20.0**	**20.0**	**20.0**
Passengers carried	10,670,866	12,271,496	14,725,795	17,670,954	21,205,145
Market share	12.5	12.5	13.2	13.9	14.6
Avg. km per passenger	874	874	874	874	874
RPK (mn)	9,326	10,725	12,870	15,444	18,533
Departure/plane	2,100	2,100	2,100	2,100	2,100
Effective seats (FY)	5,775	6,567	8,220	10,160	12,780
Avg. km per seat	836	836	836	836	836
ASK (mn)	10,139	11,530	14,432	17,837	22,437
PLF (%)	**92.0**	**93.0**	**89.2**	**86.6**	**82.6**

Source: Company data, I-Sec research

Table 8: GoAir's growth trajectory

System	FY16	FY17E	FY18E	FY19E	FY20E
Passenger growth		**16.0**	**22.0**	**18.0**	**18.0**
Passengers carried	7,160,189	8,305,819	10,133,099	11,957,057	14,109,328
Market share	8.4	8.4	9.1	9.4	9.7
Avg. km per passenger	945	945	945	945	945
RPK (mn)	6,766	7,849	9,576	11,299	13,333
Departure/plane	2,500	2,500	2,500	2,500	2,500
Effective seats (FY)	3,420	3,960	4,860	5,580	6,660
Avg. km per seat	946	946	946	946	946
ASK (mn)	8,088	9,365	11,494	13,197	15,751
PLF (%)	**83.7**	**83.8**	**83.3**	**85.6**	**84.7**

Source: Company data, I-Sec research

Airport capacity growth to lag demand

Congestion and much required capacity expansion are evident, particularly in metro airports. We have detailed the traffic-capacity status of major airports in India as per 2015. The capacity underlined is based on peak hour capacity status of these airports. Clearly, there is a sense of traffic overload in cities like Mumbai, Hyderabad, Pune and Goa. However, the continuing growth if projected will not spare any major airports from acute capacity shortage. So, apparently, the growth will come in non-metro routes in future.

While the growth in airports will lag demand, there is still available capacity in the system. Though the paucity in the top metros is a given, it also presents a strong possible price hike to accommodate the traffic growth.

Despite the fact that bulk of the future growth will come out from the non-metros, one must not forget that capacities do catch up in time. Additionally, in the near term, there is still sufficient room left among the metro cities of ~45mn within the top 90% cumulative traffic share cities of India as shown in table 15.

Yet, how to deal with capacity shortage? Herein lies the importance of the ubiquitous yield management of airlines which would have to come into picture to allay the traffic growth in congested airports. The tariffs at major airport has increased not only because of the organic growth in GDP per capita and the increasing number of air travelling demographics, but also because of significant low fares over the last two years. Needless to say, if at there is congestion and the demand for air travel exceeds the available air slots, the balancing act will be to increase the fares in metros. **We believe that average fare hike is on the cards in metro routes. We have factored ~2-3% growth in average fares for airlines.**

Table 9: Indian Airport Traffic growth history

Year	Passenger (mn)			Passenger growth (%)		
	Int'l	Domestic	Total	Int'l	Domestic	Total
2007-08	30	87	**117**	15.2	23.3	21.1
2008-09	32	77	**109**	5.9	(11.2)	(6.9)
2009-10	34	89	**124**	9.0	15.5	13.6
2010-11	38	106	**143**	10.2	18.1	15.9
2011-12	41	122	**162**	7.6	15.2	13.2
2012-13	43	116	**159**	5.5	(4.2)	(1.8)
2013-14	47	122	**169**	8.3	5.1	6.0
2014-15	51	139	**190**	9.0	13.9	12.5
2015-16	55	169	**224**	7.7	21.2	17.6

Source: DGCA, I-Sec research

Table 10: Traffic Profile of Bangalore Airports

	Capacity is 20mn passengers per annum. The master plan envisages the construction of a new integrated passenger terminal, equipped with world-class technology to accommodate up to over 50mn pax per annum.								
	(Mn)	**FY08**	**FY09**	**FY10**	**FY11**	**FY12**	**FY13**	**FY14**	**FY15**	**FY16**
Bangalore International Airport Limited – BIAL	Domestic	8.6	7.1	8.0	9.4	10.3	9.5	10.2	12.5	15.6
	International	1.6	1.6	1.9	2.2	2.4	2.5	2.6	2.9	3.4
	Total Passengers	**10.1**	**8.8**	**9.9**	**11.6**	**12.7**	**12.0**	**12.9**	**15.4**	**19.0**
	YoY (%)	24.9	(13.6)	13.5	16.6	9.6	-5.5	7.3	19.7	23.1
	Passenger Traffic Share in %									
	Domestic	84.7	81.3	80.5	80.8	81.5	79.1	79.5	81.0	82.3
	International	15.3	18.7	19.5	19.2	18.5	20.9	20.5	19.0	17.7
	% of Passenger Traffic in comparison with all Airports									
	Domestic	9.9	9.2	8.9	8.9	8.5	8.2	8.4	9.0	9.2
	International	5.2	5.2	5.6	5.9	5.8	5.8	5.7	5.8	6.1
	Total	**8.7**	**8.0**	**8.0**	**8.1**	**7.8**	**7.5**	**7.6**	**8.1**	**8.5**

Source: Association of private airport operators, I-Sec research

Table 11: Traffic Profile of Mumbai Airport

Mumbai International Aiport Limited	Capacity to handle 40 million passengers per annum and one million tons of cargo annually.								
	(Mn)	**FY08**	**FY09**	**FY10**	**FY11**	**FY12**	**FY13**	**FY14**	**FY15**	**FY16**
	Domestic	17.9	15.3	17.4	20.0	21.0	20.3	21.9	25.2	30.0
	International	8.0	8.1	8.2	9.1	9.7	9.9	10.3	11.4	11.6
	Total Passengers	**25.9**	**23.4**	**25.6**	**29.1**	**30.7**	**30.2**	**32.2**	**36.6**	**41.7**
	% YoY chg	16.2	(9.4)	9.2	13.5	5.8	(1.7)	6.7	13.7	13.7
	Passenger Traffic Share in %									
	Domestic	69.1	65.4	67.8	68.8	68.4	67.1	67.9	68.8	72.1
	International	30.9	34.6	32.2	31.2	31.6	32.9	32.1	31.2	27.8
	% of Passenger Traffic in comparison with all Airports									
	Domestic	20.5	19.8	19.4	18.9	17.3	17.4	17.9	18.1	17.8
	International	26.8	25.7	24.0	23.9	23.8	23.1	22.2	22.5	21.2
	Total	**22.1**	**21.5**	**20.7**	**20.3**	**18.9**	**19.0**	**19.1**	**19.3**	**18.6**

Source: Association of private airport operators, I-Sec research

Table 12: Traffic Profile of Hyderabad

GMR Hyderabad International Airport Limited	Capacity is 12mn passengers per annum. The Project has the flexibility to increase capacity to accommodate over 40 MPPA and shall be developed in a phased manner**.**								
	(mn)	**FY08**	**FY09**	**FY10**	**FY11**	**FY12**	**FY13**	**FY14**	**FY15**	**FY16**
	Domestic	5.5	4.6	4.8	5.8	6.7	6.2	6.4	7.8	9.2
	International	1.4	1.6	1.7	1.9	1.9	2.2	2.4	2.7	3.2
	Total Passengers	**7.0**	**6.2**	**6.5**	**7.6**	**8.6**	**8.3**	**8.7**	**10.5**	**12.4**
	% YoY chg	21.5	(11.0)	4.8	17.2	12.7	(3.5)	5.2	20.4	19.1
	Passenger Traffic Share in %									
	Domestic	79.3	74.8	73.7	75.4	77.9	74.1	72.8	74.0	74.4
	International	20.7	25.2	26.3	24.6	22.1	25.9	27.2	26.0	25.6
	% of Passenger Traffic in comparison with all Airports									
	Domestic	6.0	6.0	5.4	5.5	5.5	5.3	5.2	5.6	5.4
	International	4.8	5.0	5.0	4.9	4.7	5.0	5.1	5.4	5.8
	Total	**6.0**	**5.7**	**5.3**	**5.3**	**5.3**	**5.2**	**5.2**	**5.5**	**5.5**

Source: Association of private airport operators, I-Sec research

Table 13: Traffic Profile of Cochin

Cochin International Airport	Capacity is 9 million passengers per annum (MPPA) (will increase to 13 million with new terminal on 2016-2017 and potential to increase to 20 million by 2020)								
	(mn)	**FY08**	**FY09**	**FY10**	**FY11**	**FY12**	**FY13**	**FY14**	**FY15**	**FY16**
	Domestic	1.6	1.4	1.7	2.0	2.1	2.0	2.1	2.7	3.1
	International	1.8	2.0	2.2	2.4	2.6	2.9	3.3	3.8	4.7
	Total Passengers	**3.3**	**3.4**	**3.9**	**4.3**	**4.7**	**4.9**	**5.4**	**6.5**	**7.8**
	% YoY chg	30.3	0.7	17.3	10.1	8.7	3.3	10.4	19.7	21.0
	Passenger Traffic Share in %									
	Domestic	47.0	40.2	43.4	45.7	45.2	40.2	39.3	41.7	39.9
	International	53.0	59.8	56.6	54.3	54.8	59.8	60.7	58.3	60.0
	% of Passenger Traffic in comparison with all Airports									
	Domestic	1.8	1.7	1.9	1.9	1.8	1.7	1.7	1.9	1.8
	International	5.9	6.4	6.5	6.2	6.3	6.8	7.0	7.4	8.5
	Total	**2.9**	**3.1**	**3.2**	**3.0**	**2.9**	**3.1**	**3.2**	**3.4**	**3.5**

Source: Association of private airport operators, I-Sec research

Table 14: Delhi Airport Traffic Profile

Delhi International Airport	Capacity is 60 million passengers per annum (MPPA) (potential to increase to 100 million by 2020)								
	(mn)	**FY08**	**FY09**	**FY10**	**FY11**	**FY12**	**FY13**	**FY14**	**FY15**	**FY16**
	Domestic	16.8	15.1	17.8	20.7	25.1	22.8	24.2	27.5	34.3
	International	7.2	7.8	8.3	9.3	10.8	11.6	12.7	13.5	14.2
	Total Passengers	**24.0**	**22.9**	**26.1**	**29.9**	**35.9**	**34.4**	**36.9**	**41.0**	**48.4**
	% YoY chg	17.4	(4.6)	14.1	14.6	19.8	(4.2)	7.3	11.1	18.1
	Passenger Traffic Share in %									
	Domestic	70.0	65.9	68.2	69.0	70.0	66.3	65.6	67.0	70.9
	International	30.0	34.1	31.8	31.0	30.0	33.7	34.4	33.0	29.2
	% of Passenger Traffic in comparison with all Airports									
	Domestic	19.3	19.5	19.9	19.6	20.7	19.6	19.8	19.7	20.3
	International	24.2	24.7	24.2	24.5	26.3	26.9	27.2	26.6	25.9
	Total	**20.5**	**21.0**	**21.1**	**20.9**	**22.1**	**21.6**	**21.8**	**21.6**	**21.6**

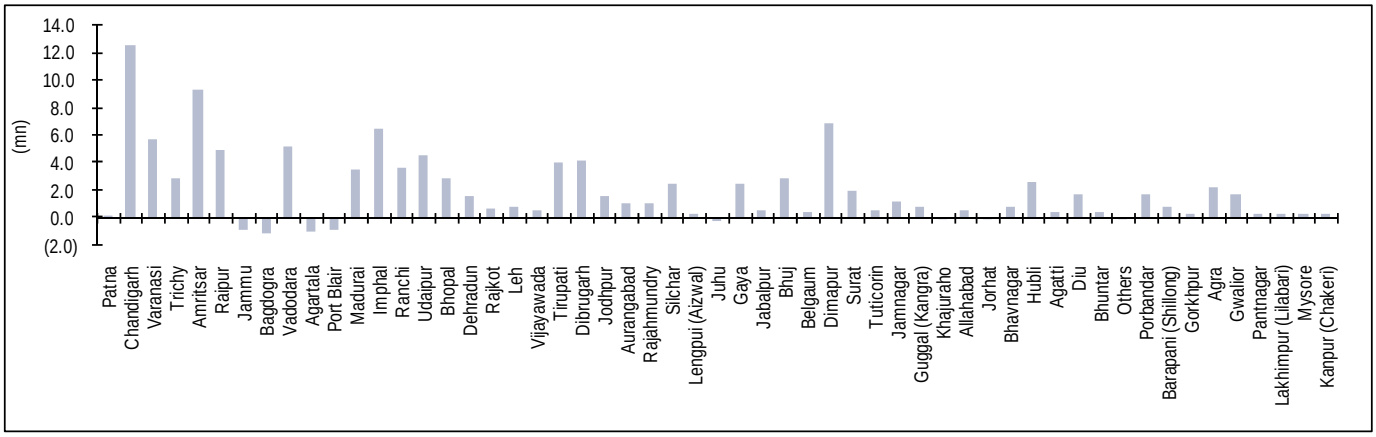
Source: Association of private airport operators, I-Sec research

Table 15: Traffic versus capacity status of 90% traffic of Indian airports

Airport	Pax (mn)	Share (%)	Capacity	Post expansion	Current excess capacity	Cumulative Share
Delhi	48.40	21.6	60.0	100	11.6	21.6
Mumbai	41.67	18.6	40.0		(1.7)	40.3
Bangalore	18.96	8.5	20.0	50	1.0	48.8
Chennai	15.22	6.8	23.0	30	7.8	55.6
Kolkata	12.42	5.6	24.0		11.6	61.1
Hyderabad	12.36	5.5	12.0	50	(0.4)	66.6
Cochin	7.75	3.5	13.0	20	5.3	70.1
Ahmedabad	6.48	2.9	14.0		7.5	73.0
Pune	5.42	2.4	3.9	12	(1.5)	75.4
Goa	5.38	2.4	4.9	13	(0.5)	77.8
Trivandrum	3.47	1.6	14.0		10.5	79.4
Lucknow	3.24	1.4	3.0	6	(0.2)	80.8
Jaipur	2.89	1.3	8.8		5.9	82.1
Guwahati	2.78	1.2	5.5		2.7	83.4
Srinagar	2.31	1.0	8.3		6.0	84.4
Calicut	2.31	1.0	6.6		4.3	85.4
Bhubaneswar	1.89	0.8	3.5		1.6	86.3
Visakhapatnam	1.80	0.8	6.1	12	4.3	87.1
Indore	1.69	0.8	6.1		4.4	87.8
Coimbatore	1.69	0.8	5.5	11	3.8	88.6
Mangalore	1.67	0.7	4.4		2.7	89.4
Nagpur	1.60	0.7	9.6		8.0	90.1

Source: DGCA, I-Sec research

Chart 1: Excess capacity in non-metro airports



Source: DGCA, I-Sec research

Supply side constraints can put upward pressure on yields

Airports which together constitute 90% of the domestic travellers' currently operate at 70% capacity utilisation. Even from this perspective, the possible growth available from the infrastructure is at best ~14% for the next three years. This reiterates a strong underlining case for price hike in the future assuming continuous robust demand.

We build in 2%/3% increase in average fares over FY17/18E

Route Map of domestic airlines- is there untapped cities left?

We have made a route map table for the major domestic airlines in India as shown in table 16. ***The yellow shaded cells indicate cities with more than 10,000 passengers per month (Based on March 16). While most of these cities are covered by Jet/Air India, there are several cities yet to be covered for IndiGo, SpiceJet and GoAir. This is especially positive for IndiGo, which will tap these markets as it aggressively ramps up its capacity. We have also indicated the cities which are capable of handling an A320 (relevant for IndiGo and GoAir). Airports which are big enough to host an A320 will also be capable to host a B737 (relevant for SpiceJet and Jet Airways).***

Table 16: Current domestic route map of Indian airlines

Destinations	Jet Airways	Indigo	Spicejet	Go Air	Air India	Vistara	Air Asia	Monthly Traffic
Chandigarh	✓	✓	✓	✓	✓	✓	✓	159,138
Bengaluru	✓	✓	✓	✓	✓	✓	✓	1,380,333
Kochi	✓	✓	✓	✓	✓	✓	✓	280,739
Goa	✓	✓	✓	✓	✓	✓	✓	449,877
Srinagar	✓	✓	✓	✓	✓	✓		191,332
Jammu	✓	✓	✓	✓	✓	✓		101,945
Delhi	✓	✓	✓	✓	✓	✓		3,274,512
Jaipur	✓	✓	✓	✓	✓		✓	244,888
Ahmedabad	✓	✓	✓	✓	✓	✓		502,893
Lucknow	✓	✓	✓	✓	✓	✓		238,786
Bagdogra	✓	✓	✓	✓	✓	✓		108,934
Guwahati	✓	✓	✓	✓	✓	✓		270,479
Kolkata	✓	✓	✓	✓	✓		✓	1,004,200
Hyderabad	✓	✓	✓	✓	✓	✓		867,021
Chennai	✓	✓	✓	✓	✓		✓	978,593
Mumbai	✓	✓	✓	✓	✓	✓		2,613,920
Pune	✓	✓	✓	✓	✓	✓		486,621
Varanasi	✓	✓	✓		✓	✓		150,999
Dehradun	✓	✓	✓		✓			61,628
Udaipur	✓	✓	✓		✓			85,074
Indore	✓	✓	✓		✓			138,973
Patna	✓	✓		✓	✓			153,546
Agartala	✓	✓	✓		✓			81,573
Vizag	✓	✓	✓		✓			163,048
Coimbatore	✓	✓	✓		✓			135,720
Trivandrum	✓	✓	✓		✓			113,244
Kozhikode	✓	✓	✓		✓			31,478
Nagpur	✓	✓		✓	✓			134,060
Port Blair	✓	A320	✓	✓	✓			84,896
Bhubhaneswar		✓		✓	✓	✓		175,873
Leh	✓	A320		✓	✓			23,431
Amritsar	✓	A320	✓		✓			94,142
Baroda	✓	✓			✓			80,586
Bhopal	✓	A320	✓		✓			51,782
Khajuraho	✓		✓		✓			8,780
Imphal	✓	✓			✓			79,673
Raipur	✓	✓			✓			101,443
Vijaywada	✓	A320	✓		✓			39,196
Madurai	✓	A320	✓		✓			60,225
Mangalore	✓	A320	✓		✓			77,597
Aurangabad	✓	A320	✓		✓			25,141
Ranchi		✓		✓	✓			66,925
Jodhpur	✓	A320			✓			24,972
Bhuj	✓	A320			✓			12,105
Rajkot	✓	A320			✓			30,942
Silchar	✓	A320			✓			16,301
Aizawl	✓	A320			✓			13,090
Rajahmundry	✓		✓					19,448
Tiruchirapalli	✓	A320	✓					11,915
Dharamsala			✓		✓			8,360
Allahabad			✓		✓			3,516
Tirupati		A320	✓		✓			36,778
Surat		A320	✓		✓			12,467

Destinations	Jet Airways	Indigo	Spicejet	Go Air	Air India	Vistara	Air Asia	Monthly Traffic
Jabalpur		A320	✓		✓			10,949
Dimapur		✓			✓			9,530
Dibrugarh		✓			✓			26,674
Gorakhpur	✓							5,105
Jorhat	✓	A320						4,342
Belgaum			✓					8,913
Hubli			✓					3,255
Pondicherry			✓					-
Tuticorin			✓					8,264
Mysore			✓					-
Agatti					✓			1,814
Agra					✓			1,382
Dammam					✓			-
Diu					✓			2,717
Durgapur		A320			✓			1,414
Gaya		A320			✓			6,901
Gwalior		A320			✓			1,204
Jamnagar		A320			✓			6,698
Kullu					✓			1,704
Lilabari					✓			738
Pantnagar					✓			1,010
Shillong					✓			1,105
Tezpur					✓			172

Source: Company Data, I-Sec research

Investment in airport infrastructure and look at certain key projects

As per Industry estimates, Rs250-275bn will be invested in the airport sector over 2016-17 to 2020-21. Most investments are likely to be towards Greenfield projects where implementation is more challenging given land acquisition issues and challenges with regards to clearances. Investments are likely to pick up from end of 2017-18 as large Greenfield airports such as Navi Mumbai and Goa airport commence construction.

Navi Mumbai Airport project has seen extreme delays. The Navi Mumbai airport project was announced in 1996. However, environmental clearances were granted in 2010. As the land allotted constituted mangroves, forest clearances and the high court's permission were essential, which were received in 2013. Moreover, the project was facing land acquisition issues until 2015 where two villages were to give their consent (of the total of 1,160 hectares for core airport area, about 25% was pending). The land acquisition issues for Navi Mumbai airport have been addressed as of now. City and Industrial Development Corporation (CIDCO) stated that the affected families have been entitled for compensation of an additional 10% developed land with 2.5 floor space index (FSI), over and above the 12.5% of developed land (at 1.5 FSI) initially offered. The plots are proposed in a new township situated in the vicinity of the airport. Navi Mumbai airport is proposed to be developed through PPP. A special purpose vehicle will be formed in which CIDCO and its nominees (including project affected persons) will hold 26% of paid-up equity and the rest will be held by private developer. The Ministry of Civil Aviation approved 30% 'shared till' for Navi Mumbai airport, which indicates 30% cross-subsidization of non-aeronautical revenues for computing aeronautical tariffs at airport.

The project is steadily moving towards RFP stage, final selection of bidder is pending: Four companies and consortia which include GMR Delhi, GVK-led Mumbai International Airport, the Zurich Airport with Hiranandani Developers, and MIA Infrastructure of France along with Tata Realty had submitted their bids for the RFQ. In June 2015, these four companies and consortia got selected for submission of bids for RFP. In February 2016, the consortium of Zurich Airport with Hiranandani Developers was rejected by the Union Home Ministry on security grounds. Estimated commencement of construction is FY17. However, the project is likely to face cost overruns, which could impact financial returns.

Second Pune Airport development is in suspension. The land is yet to be identified for a new airport in Pune. The earlier identified sites at Khed and Chakan in Pune have been completely ruled out. The original site finalised in Chakan in 2008 met with opposition from farmers. Another site was explored at Khed, but this site too faced problems with over half of the land coming under special economic zone (SEZ). Maharashtra Airport Development Company is in the process of preparing technical reports for alternative sites for a new airport in Pune. In October 2015, a long-pending proposal to expand the existing Pune airport received nod of the Defence Ministry, which has agreed to stretch it by 15 acres. Though the existing airport in Pune will get expanded post Defence Ministry's nod, it shall not serve as an alternative for building a new airport but acts only as a temporary relief.

The next big increase in airport capacity led by greenfield projects will happen in 2021-23

Goa airport progressing towards RFP stage: Owing to the capacity constraint at the Dabolim airport in Goa, a second airport was being planned in Mopa. The plans for establishing a new international airport at Mopa have been over a decade. In October 2014, RFQs were floated for Goa's Mopa airport. Five bidders for RFQ include AAI, GVK, GMR, Essel Infra and Voluptas Developers. The airport is actively progressing towards the RFP stage.

Table 17: Status of major airport projects

Project	Promoter	Start of Construction	Expected Completion	Project Cost (Rs bn)	RFQ floated
Navi Mumbai Airport	City & Industrial Development Corporation of Maharashtra	FY18 end	Post FY21	145	Jan'14
Pune Airport	Maharashtra Airport Development	Land yet not finalised		75	No
Goa Airport	Government of Goa	Mid FY18	Post FY21	38	Oct'14
Hassan Airport	AAI	FY19 end	Post FY21	30	No
Dholera Airport	Gujarat Infrastructure	FY19 start	Post FY21	25	No
Ankleshwar Airport	Government of Gujarat	FY19 end	Post FY21	25	No
Dwarka Airport	Government of Gujarat	FY19	Post FY21	25	NA
Aranmula airport	KGS Aranmula Airport Ltd	FY19 end	Post FY21	20	No
Kannur Airport	Kannur International Airport Ltd	Under construction	Early FY18	19	Jan'13/ Feb'14
Nagpur Airport	Maharashtra Airport Development	FY18 end	Post FY21	15-20	No
Chennai Airport	AAI	FY19 start	Post FY21	12	Dec'14
Nedumbassery Airport	Cochin Int'l Airport Ltd	FY13	FY18	10	Yes
Bengaluru-2nd stage	GVK,AAI, Karnataka Government	Early FY18	FY20	10	NA
Kushinagar Airport	UP State Development	FY19 start	Post FY20	7.5	Mar'14
Kolkata Airport-Modernisation	AAI	FY19 start	Post FY20	7	Sep'13
Guwahati Airport-Modernisation	AAI	FY19 start	Post FY20	6	Sep'13

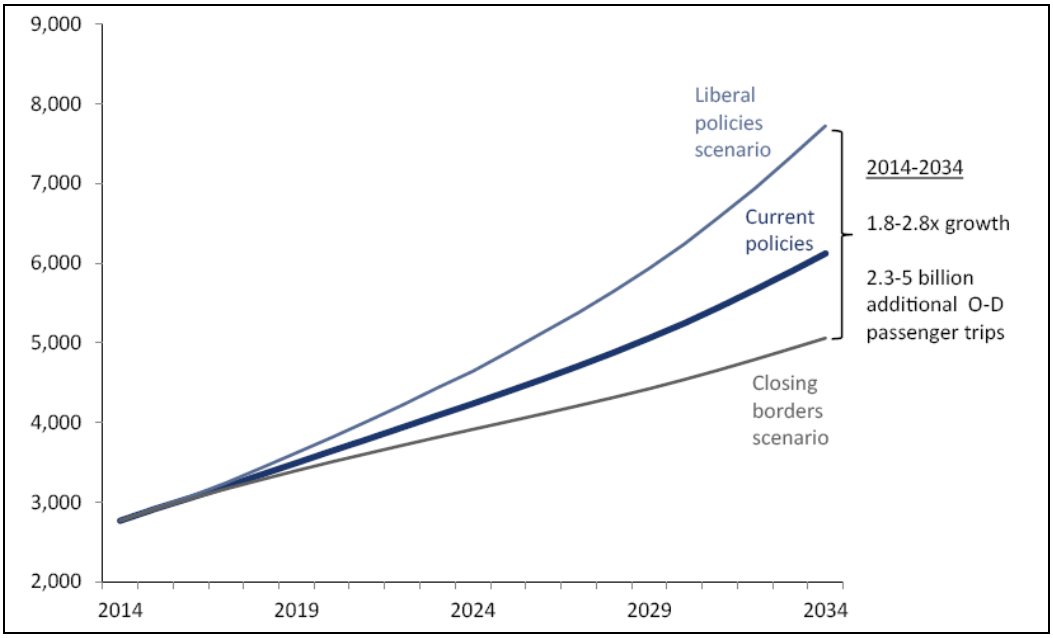
Source: Crisil

Indian aviation remain one of the best growth stories

In this section, we underline the strong growth phase of Indian airlines, how it is poised to maintain a strong footing in the presence of a favourable demographics and rising prosperity, and how is it benefitting from a congested railways with slow plans of modernisation.

Global air traffic growth outlook remain strong. IATA forecasts strong global air travel growth suggesting traffic to nearly double in the next 20 years. However, assuming a liberal policy scenario, growth could be even higher. In essence, IATA forecasts a 1.8-2.8x growth in passengers, meaning additional 2.3bn-5bn passengers over the next 20 years.

Chart 2: Outlook for worldwide O-D passenger trips in millions



Source: IATA

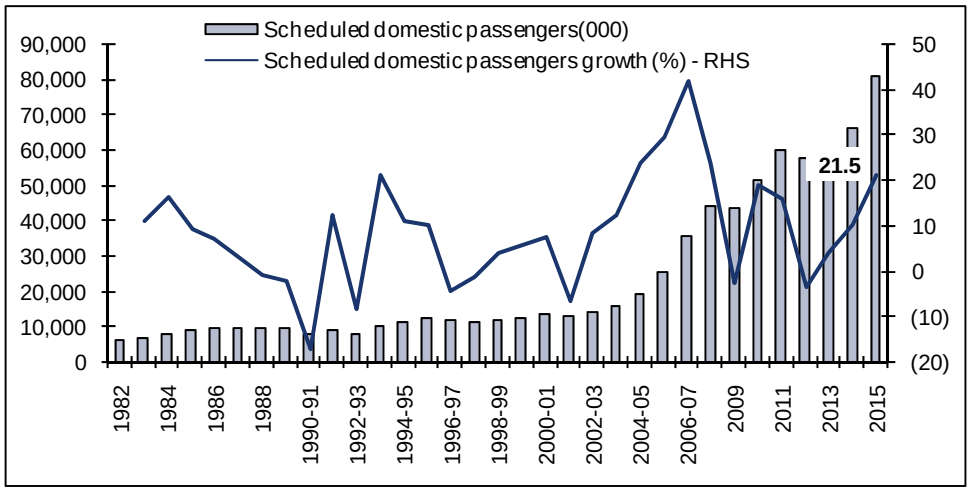
Aviation research body Centre for Asia Pacific Aviation (CAPA) had in its forecast said that India will have over 100 million fliers by March 2017. India is set to become the third largest aviation market in the world by 2020.

Passenger growth will be region-specific, favouring developing economies. Considering the drivers of air traffic to be improvement in living standards, young and working age population/demographics and cost dynamics of travel and economic growth, developing countries are likely to witness higher growth led by China and India. However, the US continues to be strong, and likely to remain the world's largest air market till 2030. India is best placed considering its sizeable middle class population, significantly favourable demographic advantage and relatively strong economic growth outlook.

IATA predicts Indian air traffic growth of 7% CAGR over the next 20 years, driven by improvement in living standards, population growth and favourable demographics and lower travel costs. **CAPA predicted domestic passenger growth of 15% for FY16 and 8-10% for international passengers. CAPA estimated aggressive pricing to help achieve this growth, which should result in international traffic increasing to 54-55mn passengers and domestic traffic to around 80mn. However, the domestic passenger traffic already increased to 80mn in CY15.**

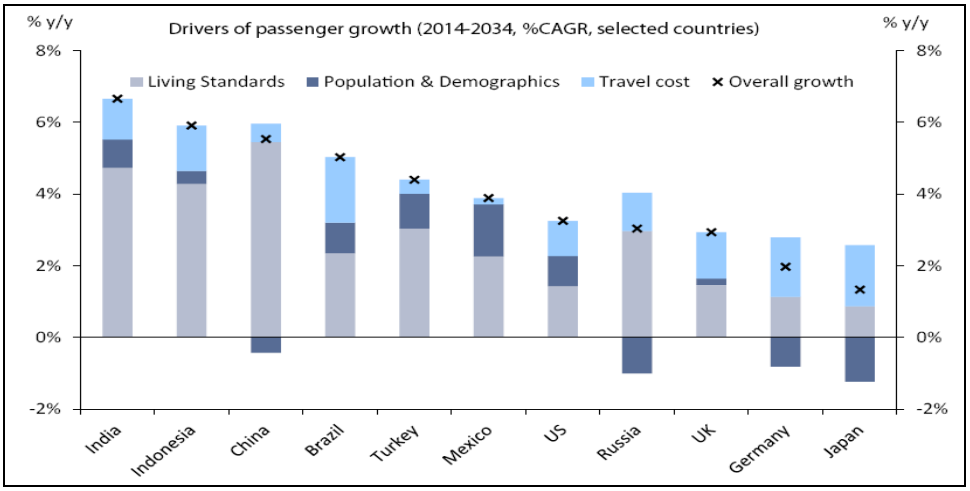
The average domestic air passenger growth over the past 32 years stands at 9%, while the average growth in the past 10 years has been 17%. Traffic growth in CY15 was 21.5%.

Chart 3: Indian domestic passenger growth – 21.5% in FY15.



Source: DGCA

Chart 4: Strong drivers for Indian passenger air traffic growth



Source: IATA

Triggers favouring strong air traffic growth in India

Indian aviation is a growing sector led by strong economic growth potential, low air penetration and favourable demographics. This has played its part in the exponential growth of air travellers and is the bedrock of investment in the sector.

- **Frequency of trips rises disproportionately across income classes with increasing prosperity.** There is exponential rise in air travel frequency with improving living standards. This again favors India as a travel and tourism market. India's middle class growth will accelerate quickly and will be adding more people than China to the global middle class in another 10 years. So, it is not surprising that the world's travel market is carefully noting the trends, including Ireland, Spain, South Korea, Indonesia, Macau (China) and Poland – all of which have recently opened tourist offices in India.

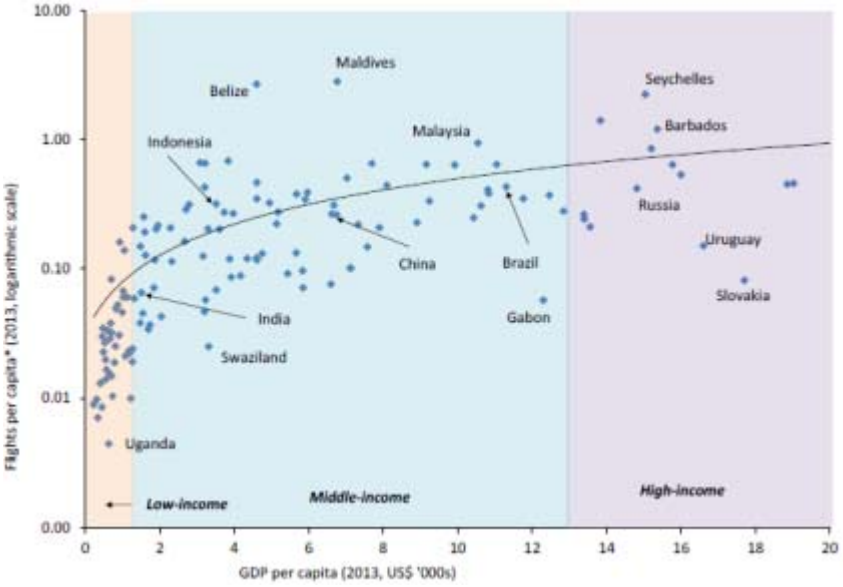
Table 18: Surge in air travel intensity with rising incomes

	Trips/yr/ person	Months before next trip
Low-income	0.04	300
Middle-income	0.29	41
High-income	1.48	8
Below US$20K per person	0.27	44
Above US$20K per person	1.80	7

Source: IATA

However, growth reaches a plateau beyond a certain level of improvement in living standards.

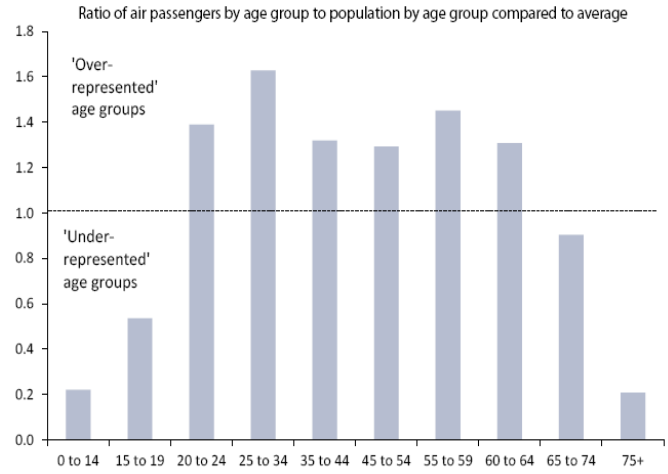
Chart 5: India is in the strong growing zone of air traffic



Source: IATA

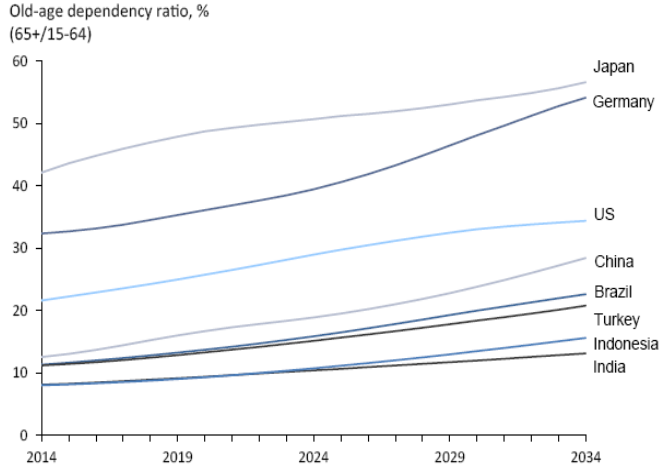
- **Demographic dividend of India is very strong with a young population.** Air travel is made more by working-age population and understandably India, with a relatively young workforce, has tremendous potential which is likely to manifest with higher air traffic growth.

Chart 6:Air travel is largely dominated by the working-age poulation



Source: IATA

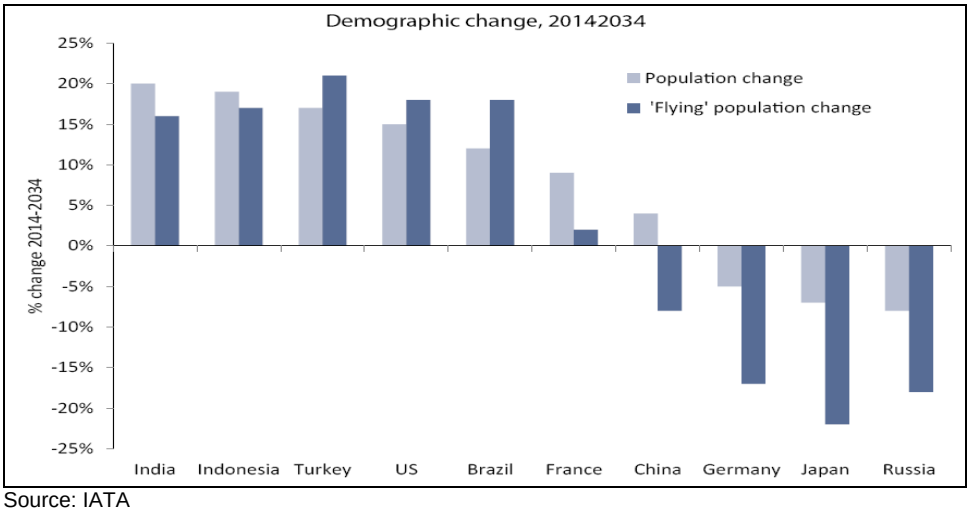
Chart 7: India is very well placed with one of the world's most young populations



Source: IATA

This is also illustrated with the strong change expected in the flying population of India, the highest in the world expected over the next 20 years.

Chart 8: India is expected to witness one of the highest change in flying population over the next 20 years



Source: IATA

Comparison of railways with airlines

Indian railways have seen extravagant growth in upper class passenger traffic. While the passenger profile in railways and air traffic are not comparable, the growth in upper class non-suburban travel in Indian Railways is indicative of the growing purchasing power among Indian people along with the aspirational drive of young Indians. This has also resulted in significant rise in the railway fares for the upper classes, consequently making air travel an increasingly viable option considering the additional time-saving benefit.

Table 19: Passenger and passenger-km growth comparison between upper and second class travel in Indian Railways

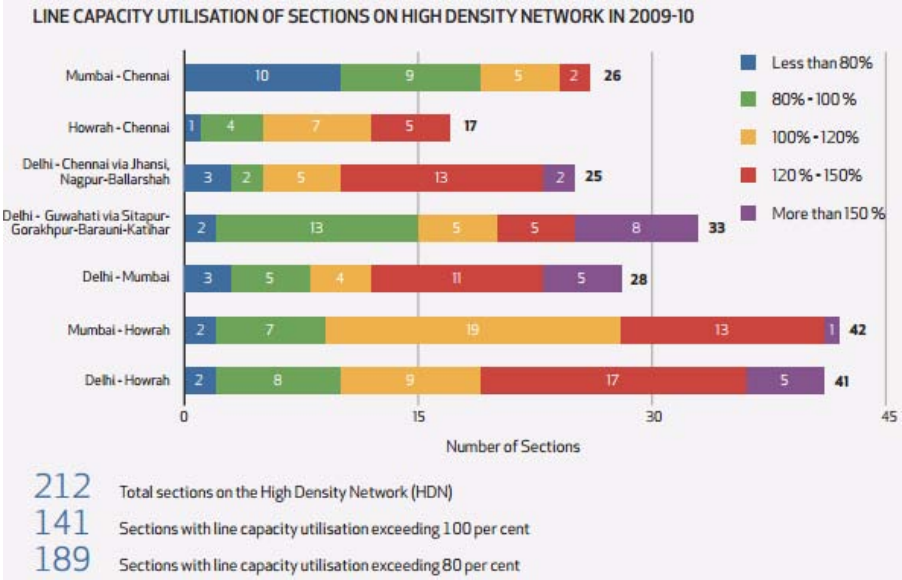
	Passengers originating (mn)					Passenger-km (mn)				
Year	Upper Class	Second Class Ordinary	Second Class Mail/Exp#	Total Second Class	Total Suburban	Upper Class	Second Class Ordinary	Second Class Mail/Exp#	Total Second Class	Total Suburban
1950-51	25	795	52	847	872	3,790	43,639	12,537	56,176	59,966
1960-61	15	803	96	899	914	3,454	40,190	22,251	62,441	65,895
1970-71	16	1,041	155	1,196	1,212	4,394	52,886	37,856	90,742	95,136
1980-81	11	1,342	260	1,602	1,613	5,140	75,620	86,712	162,332	167,472
1990-91	19	1,223	357	1,580	1,599	8,712	89,300	138,054	227,354	236,066
2000-01	40	1,460	472	1,932	1,972	26,315	119,267	222,568	341,835	368,150
2008-09	76	2,147	895	3,042	3,118	49,468	244,079	419,649	663,728	713,196
2009-10	86	2,301	983	3,284	3,370	55,182	254,045	463,321	717,366	772,548
2010-11	100	2,444	1046	3,490	3,590	62,203	278,547	500,631	779,178	841,381
2011-12	112	2,547	1188	3,735	3,847	72,148	282,456	548,861	831,317	903,465
2012-13	126	2,515	1303	3,818	3,944	82,624	281,990	587,885	869,875	952,499
2013-14	126	2,413	1306	3,719	3,845	89,117	288,561	612,475	901,036	990,153
2014-15	138	2,304	1277	3,581	3,719	101,215	279,514	614,686	894,200	995,415
CAGR 15 years	**8.6**	**3.1**	**6.9**	**4.2**	**4.3**	**9.4**	**5.8**	**7.0**	**6.6**	**6.9**
CAGR 5 years	**6.7**	**(1.2)**	**4.1**	**0.5**	**0.7**	**10.2**	**0.1**	**4.2**	**2.8**	**3.4**

#includes Sleeper class Source: Indian Railways, I-Sec research

The above average growth in upper class rail travel and convergence of fares between upper class rail fare and airline ticket prices underline the strong potential of the aviation sector in India

Indian Railways is also capacity constrained, highly uneven and imbalanced. The broad gauge network, though forming 85.6% of the route, generated almost 98% of the passenger output (PKMs) and 99.9% of the freight output (NTKMs). Further, passenger trains utilise nearly 65% of network capacity but contribute less than 30% of total revenues. The Golden Quadrilateral and the diagonals connecting the four major metros, viz. Delhi, Kolkata, Chennai and Mumbai (along with the East-West diagonal extending to Guwahati), constitute less than 16% of the route, but account for more than 50% of the passenger and freight traffic. These routes have reached over-saturated levels of capacity utilisation and at present are strained to the breaking point. A line-capacity utilisation of 80% is considered optimum as smooth operation of trains requires some slack in the line-capacity to absorb and recover from unforeseen disruptions.

Chart 9: Railways are operating at very high capacity utilizations



Source: Ministry of Railways

Across zones, the availability of line capacity on high-density network routes and other important routes is strained with 492 out of total 1,219 sections, i.e. 40% of sections are running at 100% or above line capacity as of 2015.

Table 20: Line capacity utilisation on IR (2015)

Railway	< 80%	80-100%	100-120%	120-150%	> 150%	OTOS*	Total
Central	34	9	11	12	7	1	74
East Coast	16	9	9	16	2	4	56
East Central	16	13	19	22	16	5	91
Eastern	22	22	41	1	0	3	89
North Central	11	3	7	22	2	1	46
North Eastern	12	6	12	6	6	0	42
North Frontier	18	10	4	14	3	11	60
Northern	70	26	29	23	10	4	162
North Western	39	7	6	3	1	4	60
South Central	20	32	23	8	9	0	92
South Eastern	24	13	14	17	1	2	71
South East Central	9	6	9	7	2	0	33
Southern	53	38	25	15	0	0	131
South Western	38	12	0	0	0	1	51
West Central	1	4	7	6	3	0	21
Western	32	18	17	21	4	48	140
Total	**415**	**228**	**233**	**193**	**66**	**84**	**1219**

Source: Ministry of Railway, * One train only system

It would be seen that most of the Zonal Railways are in the range of optimal and higher-than-optimal utilisation of line capacity. Further, 161 out of the total of 247 sections, i.e. 65% of the sections, are running at 100% or above line capacity on high-density network (HDN) routes.

Table 21: Line Capacity status of high density network on IR

Railway	< 80%	80-100%	100-120%	120-150%	> 150%	Total
Central	12	4	7	12	5	40
East Coast	5	0	6	8	1	20
East Central	1	5	4	3	3	16
Eastern	0	3	7	0	0	10
North Central	0	1	5	19	1	26
North Eastern	1	3	6	1	3	14
North Frontier	0	3	0	5	1	9
Northern	3	4	5	7	2	21
South Central	0	14	2	2	2	20
South Eastern	2	2	6	6	0	16
South East Central	0	0	3	5	1	9
Southern	5	8	4	0	0	17
West Central	1	0	2	2	2	7
Western	0	9	2	9	2	22
Total	**30**	**56**	**59**	**79**	**23**	**247**

Source: Ministry of Railways

Fare spread between rail and air travel has been converging

While the time advantage with air is a characteristic of air over rail journey, the price differential has sharply fallen over the years. While rail has increased fares of its upper classes and is also contemplating to increase cancellation charges and impose other tariffs, airfares have steadily declined following competition. The resultant dynamics has clearly favoured air travel in metro to metro routes and to some extent metro to non-metro routes. However, the railways still maintain edge in the non-metro to non-metro routes.

Table 22: Fare comparison of rail and air

Origin - Destination	2AC	Tatkal- 2AC	3AC	Tatkal- 3AC	Train name	Journey time	Remarks	Lowest airfare
Mumbai- Delhi	2865	3390	2080	2500	Mumbai Rajdhani	15 hrs 35 mins		3500
Delhi- Mumbai	2865	3390	2080	2500	Mumbai Rajdhani	15 hours 50 mins		3500
Mumbai- Nagpur	1880	2400	1330	1705	Nagpur Duronto	11 hrs 05 mins		3000
Nagpur- Mumbai	1880	2400	1330	1705	NGP CSTM Duronto	11 hrs 15 mins		2000
Chandigarh- Cochin	3645		2445		Kerala Sampark Kranthi	49 hrs 20 mins	No other direct train Available only twice a week	7500
Cochin- Chandigarh	3645		2445		Sampark Kranthi	50 hrs 55 mins	No other direct train Available only twice a week	5000

Source: IRCTC, Cleartrip, I-Sec research

Cost structure assumes obvious importance in a price based industry

Much of the difference in cost structure stems from the choice of fleet which over the period has given a clear edge to uniform fleet deriving economies in maintenance costs and favourable terms of rentals from bulk discounts. We have elaborated the same in greater details in our sector report.

Cost competitiveness is the be all and end all of a fiercely price based industry like aviation. IndiGo scores above all else in this regard.

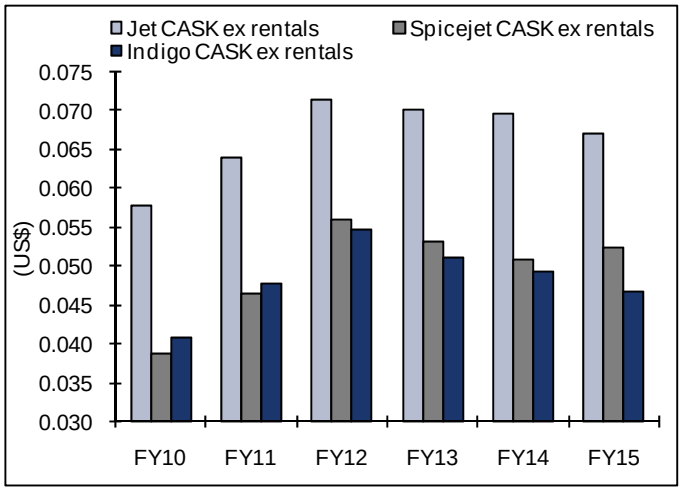
Cost Comparison across competition-IndiGo has an edge

Lowest cost metrics among Indian airlines players offers a definitive advantage to IndiGo. We start at each major operating cost heads analysed over FY10-FY15, wherein we will see that IndiGo has the maximum advantage, which stems from the uniform, large and lowest-age fleet size, consolidated by the experienced management and the near-perfect implementation of the low-cost no-frills model.

Combining the operational costs, we present our summary in two divisions, operating cost ex-rentals, and total operating cost with rentals. The rental costs also include the interest liability of finance leases to give a complete picture. While calculating cost with rentals we have adjusted for the leasing revenue of Jet Airways. We have also not taken depreciation, which is normally included in CASK calculation for airlines. To give a perspective, the average CASK excluding depreciation and including interest during FY10-FY16 for Indigo, SpiceJet and Jet was Rs3.06, Rs3.42 and Rs4.28.

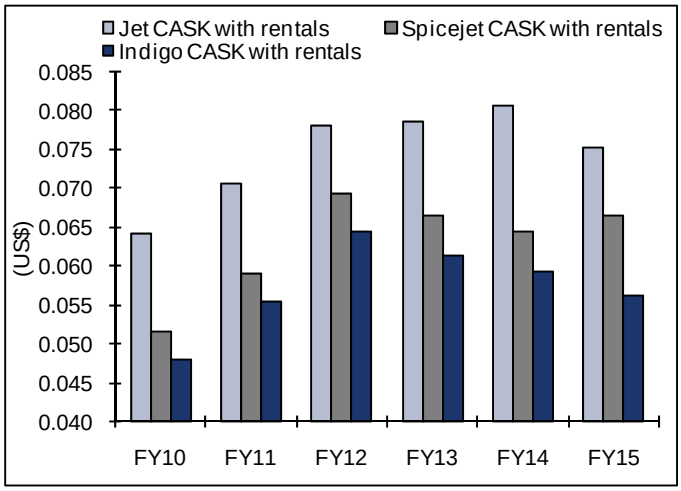
Please refer to our IndiGo report for further deep dive analysis of the cost structures of respective airlines.

Chart 10: Total operating cost comparison without rentals



Source: Company data, I-Sec research

Chart 11: Total operating cost comparison with rentals



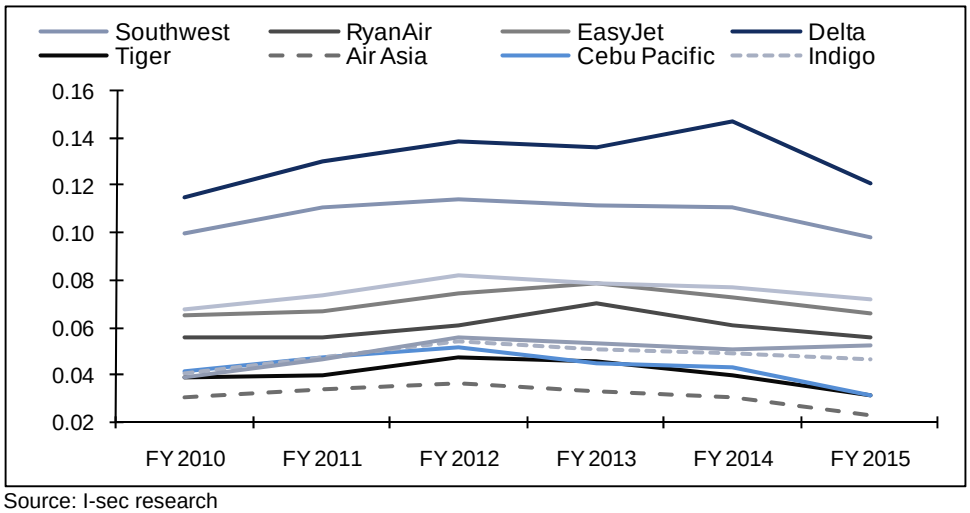
Source: Company data, I-Sec research

Cost comparison across global airlines

Indian airlines have significantly lower cost than the west. This stems from the labour cost arbitrage along with the purest form of low cost business model adopted by them. This is one of the reasons why Asian airlines tend to trade at higher multiples than western peers.

Though, increased taxes erode the cost advantage of Indian airlines, which could otherwise have been even more competitive. The South East Asian countries have the lowest operating cost per ASK, while Indian airlines are efficient despite the higher tax burden through ATF imposed on them.

Chart 12: Operating cost ex rentals per ASK for select airlines



Source: I-sec research

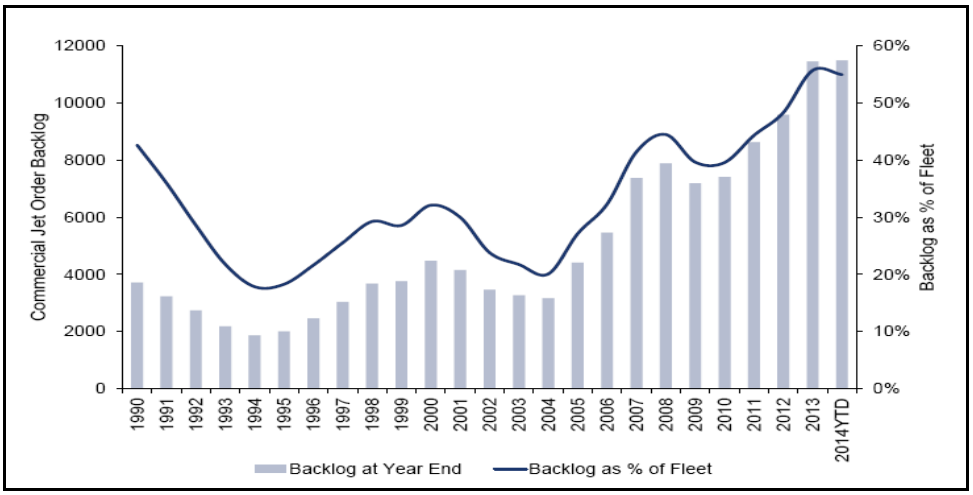
Aircraft market –next-gens like neo provide safe haven

We present counter theses to the general fear of a bubble in the aircraft market in the light of such a big order book. Yet, even in such a case, the next gens like neo/max are better placed.

Globally, commercial jet backlogs are at a record high near 55% of the current fleet. We try to assess how the value of A320neo can evolve over the next 15 years, considering that IndiGo has firm orders for 430 A320neos which will get delivered from now on to 2025. The value of these aircraft will likely have an important bearing on operators like IndiGo. We look at the aircraft market, how value of aircraft in the future is likely to be preserved even in the face of high orderbook. Secondly, we illustrate that even in a declining price environment; the next generation aircraft like neo and Max are likely to be safe harbours. Last, we illustrate how IndiGo is likely to significantly benefit from the big order A320neos compared to its competitors.

Is there a possibility of order bubble with the humungous aircraft orderbook size? It is a pertinent question considering a systemic order backlog of 12,000 aircraft valued at US$900bn, with the current backlog projected to feed only 35-40% of the demand over the next 20 years. We analyse some of the key indicators in the aircraft market, which indicate that there may have already been several measures taken to avoid such bubble.

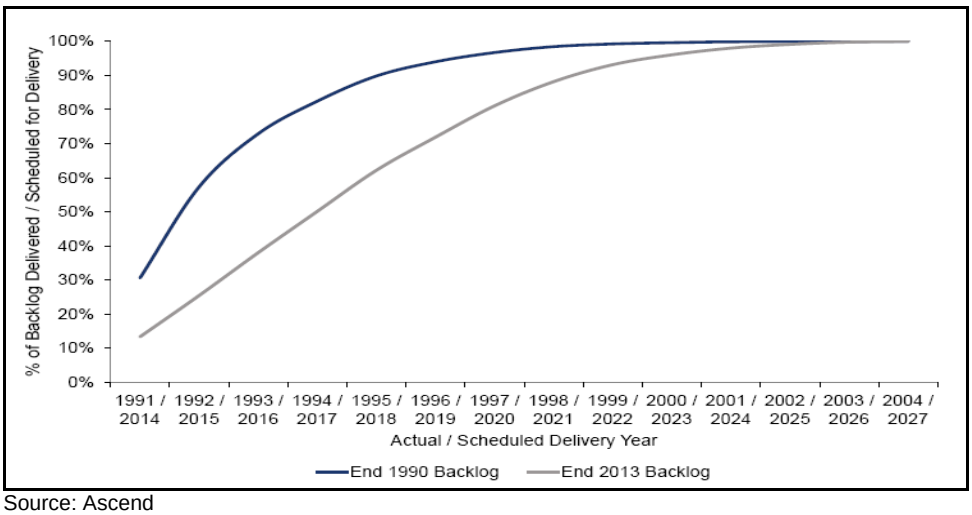
Chart 13: Record-high commercial backlog at present



Source: Ascend

- **Longer delivery schedule:** Aircraft dynamics have changed with time, which needs to be factored in estimating the supply-demand cycle. The current orderbook has a much delayed delivery horizon compared to earlier times. So, if 90% of the orderbook was supplied by the airframers in 5-10 years in 1991, the same is now stretched to 10-15 years. This protraction of order delivery schedule is an important deterrent to any bubble formation.

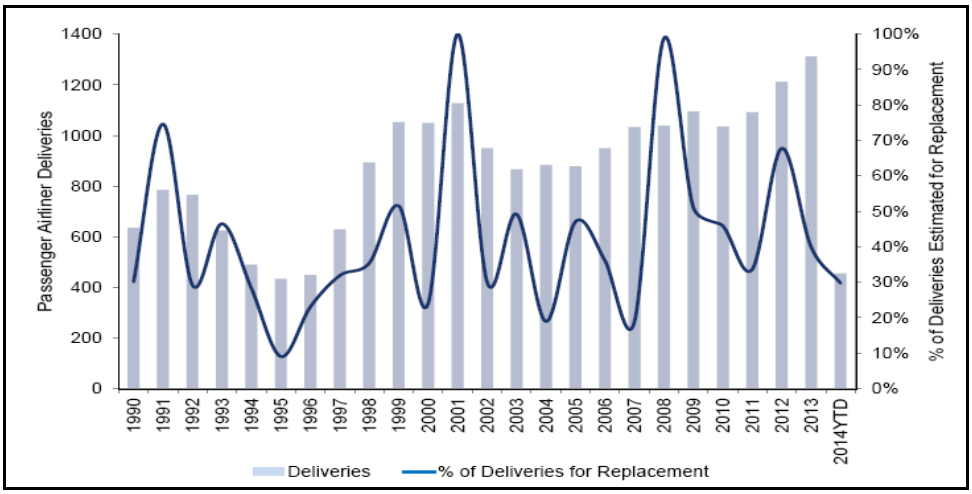
Chart 14: Delivery horizons significantly longer today



Source: Ascend

- **Higher replacement rate:** Over the past five years, 48% of deliveries have for replacements compared to 43% in the 1990s. This has been largely in line with the development of a wider lessor business and aircraft partout markets.

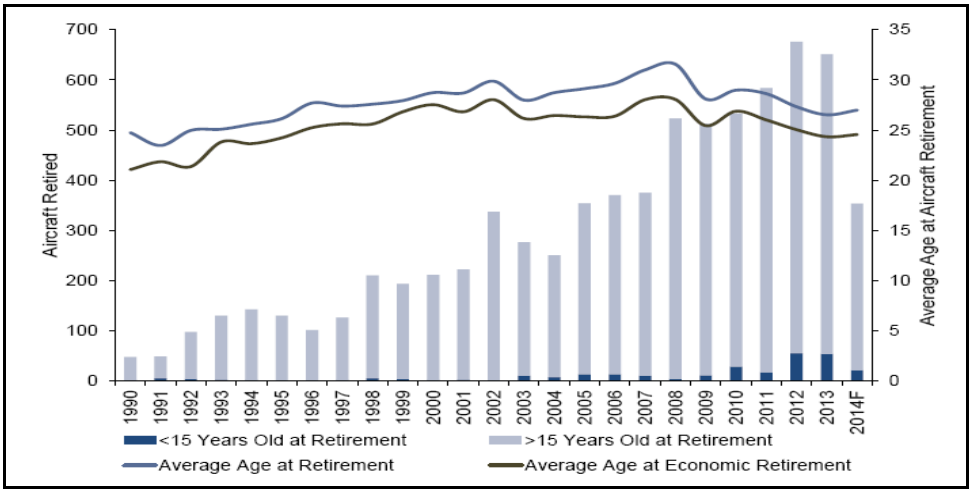
Chart 15: Over past 5-7 years, 48% of deliveries have been for replacement



Source: Ascend

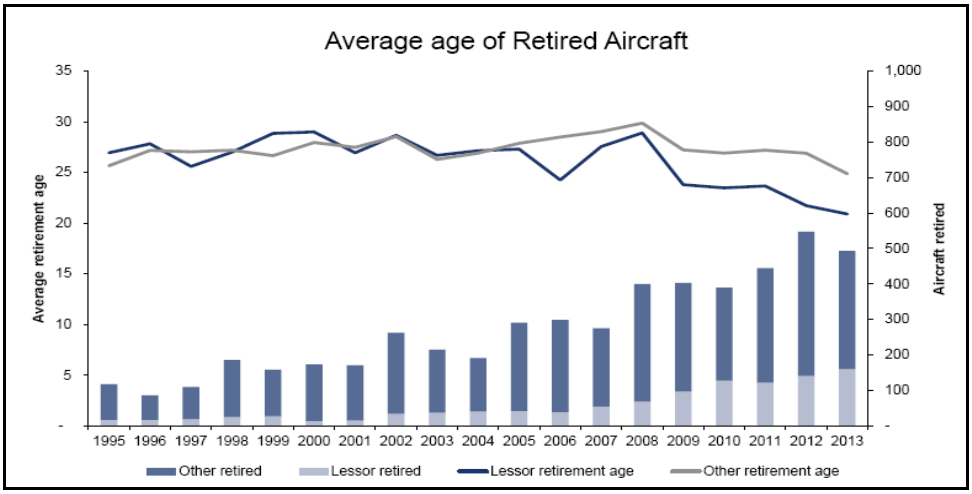
- **Increased retirement indicates economic life is the key demand determinant –not OEM production rate.** Some elements of production surplus have lowered the economic life of aircraft from 30 to 25 years. There have been increased instances when aircraft have retired before 15 years in a number of cases in the past five years. This is a completely new phenomenon for the aircraft industry and points to the fact that economic life of an aircraft, which is now determined by supply-demand of that particular aircraft and other available options, is the key determinant of the demand cycle of the aircraft industry (and not the production rate of OEMs).

Chart 16: Some elements of production 'surplus' have increased retirements at reduced age



Source: Ascend

Chart 17: Lessors have been retiring aircraft earlier



Source: Ascend

- **Regional risks differ; higher propensity of shifting to LCCs.** Backlogs as a percentage of current fleet is highest in Middle East (90%) and Asia-Pacific (50%). Traffic growth in Asia-Pacific is also expected to be lower than this supply growth in the region. While one may point to increasing oversupply risk in Asia in the coming years, at least more than any other region, a large portion of that is driven by almost five times the current respective fleet size orders from AirAsia and Lion Air. The implied growth rate for these LCCs in Asia is almost 25%. However, one must understand that this can also indicate shift in market share towards LCCs from FSCs and retirement of legacy aircraft. Similar LCCs like Ryanair and easyJet have managed to maintain growth rates of 15% in the past for considerable periods of time with increasing dominance of the LCC model.
- **Upside to aircraft obsolescence from growing partout market.** There are even instances of 10-15 years old aircraft being parted out to supply to an important segment of Use Serviceable Material (USM), which reduces maintenance costs. To some extent, perceptions have lagged reality in this area with all aircraft being considered for parting out these days including likes of 2nd generation A320s,

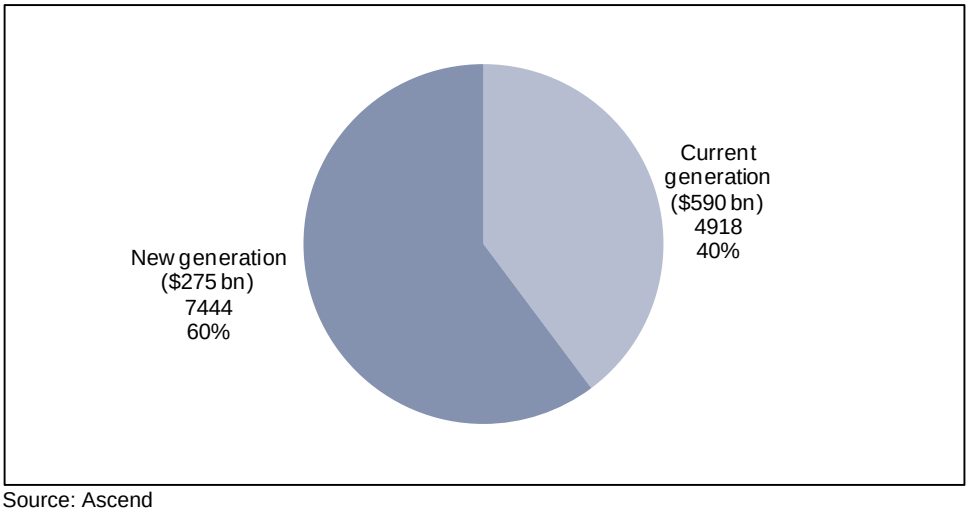
A330s and B737s. The increased parting out has been driven from a number of reasons starting from the owner's financial condition or economically higher value as USMs, or the exceptionally high-value premium for first movers in the partout market. However, as cycles will have it, this burgeoning partout business will eventually slow down as aircraft become worth more as a flying asset as the partout market heats up. After the first movers start supplying the various parts, subsequent partout deliveries fall sharply in value. With growing stockpiles, the risk of excess supply will eventually turn the tide to a longer life. The highest-value components for the airframe consist of the landing gears, API and avionics.

Why A320neo is one of the most popular aircraft and offers safe value to IndiGo

We discuss the value proposition of A320neo, which is the aircraft of choice for IndiGo in times ahead. The importance of the market for A320neo lies in the asset play which IndiGo offers through its bulk orders. We believe that A320neo is one of the most popular aircraft and offers safe value to IndiGo. IndiGo has clearly gained a structural advantage with the high orderbook of 430 neos. We believe the next generation aircraft like neo and Max are going to rule the aircraft market in coming future.

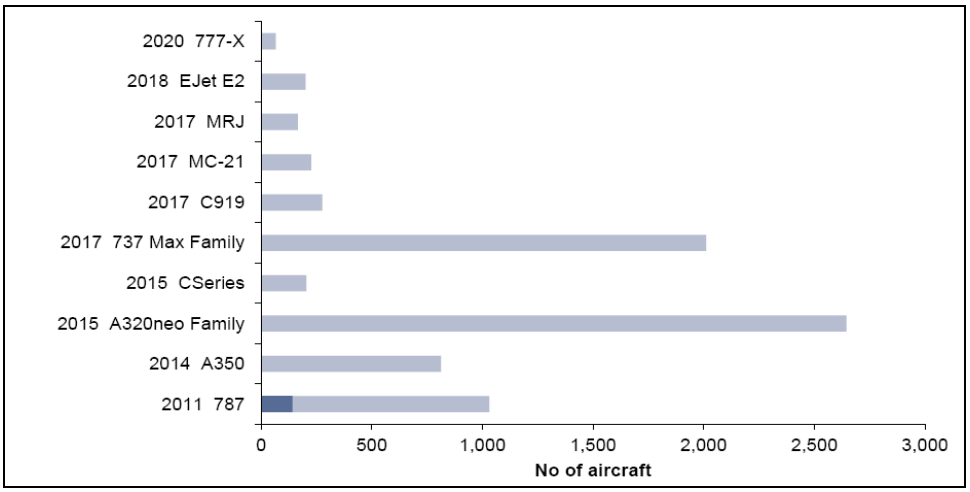
- **Dominance of neo/Max in orderbook.** As much as 60% of the backlog is dominated by next-generation aircraft like neo and Max, with neo having a significant larger orderbook than Max. In value terms, the share of next-generation aircraft is even larger at around 70%. As such, neo is likely to be one of the most liquid aircraft in the near future. However, transition to the next-gens can still be accompanied with a lot of issues as history has shown us. Yet, one has to keep in mind that the A320 ceo and neo are likely to retain similar fuselage.

Chart 18: Next-generation aircraft dominating the backlog



Source: Ascend

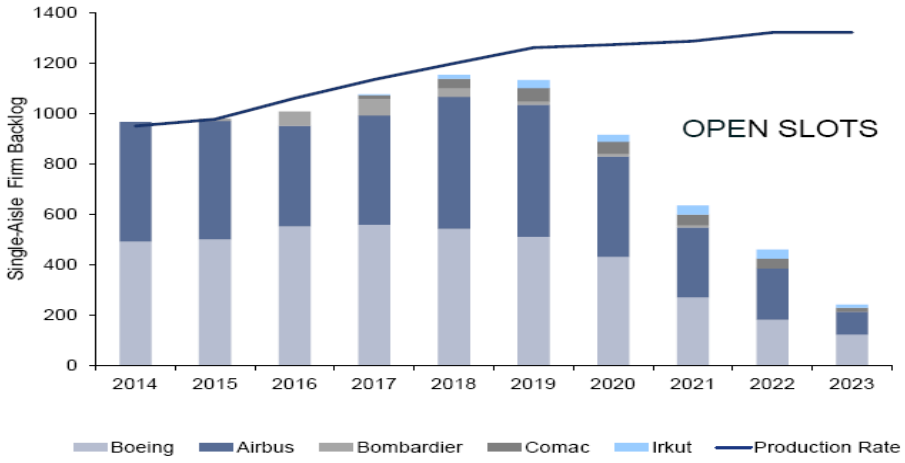
Chart 19: Transitioning to next-generation aircraft; orderbook details



Source : Ascend

- **No available slots for fresh orders of neo/Max available for the next five years.** There will be a couple of years through which the manufacturing lines of Boeing and Airbus completely transform to the next-gen airframes. Post that, there is no free single aisle open slots available for five years indicating that an airline which has not yet ordered is likely to resort to lessors for neo/Max. Higher demand will generate higher value.

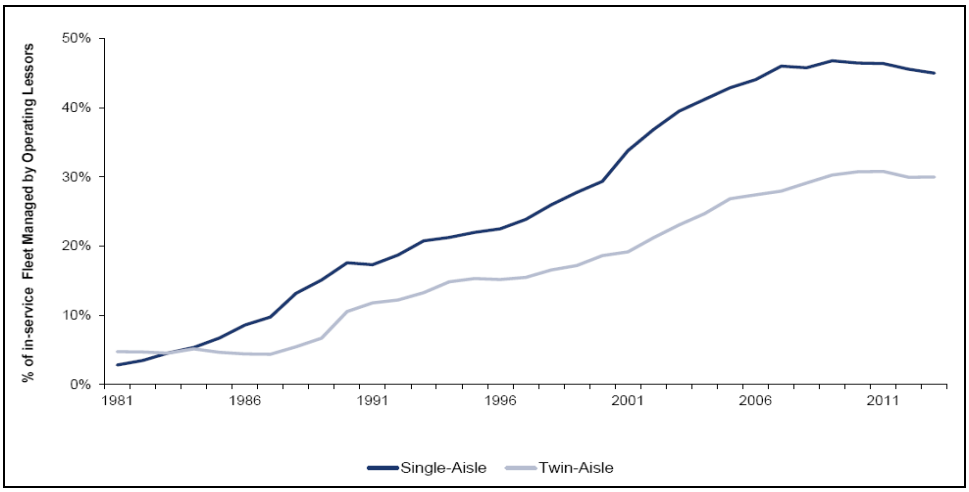
Chart 20: Single-aisle demand largely committed over next five years



Source: Ascend

- **Burgeoning lessor market now almost 40% of current fleet size.** Higher lessor market results in higher value for lessor-friendly aircraft and the A320neo has the right parameters for the same.
- **Single Aisle next gen aircraft have more lessor penetration.** Lessors prefer single aisle narrow body aircraft as they offer lower risk with their inherent lower value and they gain higher share among the LCC markets. Around 50% of the single aisle fleet is being managed by operating lessors compared to 30% for that of twin aisle aircraft. Secondly, higher number of operators increases liquidity and lessor acceptance, thus pushing up the aircraft value. A320neo has the highest orderbook.

Chart 21: Aircraft leasing penetration by class



Source: Ascend

There are certain risks though; including supply chain challenges post the transition to next-generation aircraft, significant decline in oil prices which render the increased rentals of next generations futile compared to the benefits from fuel efficiency and increase in interest rates which typically favour mid-life aircraft with lower value more attractive.

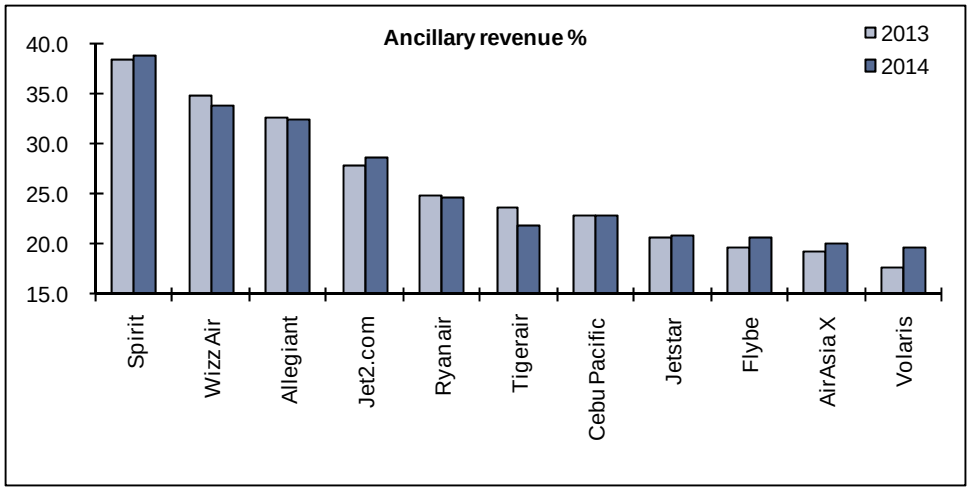
Ancillary revenues remain a growth lever

Globally ancillary revenues have a higher share

Ancillary revenues are no longer a forte of LCCs. Everybody is benefitting from increasing ancillary revenues – LCCs to FSCs, Americas, Europe as well as Asia-Pacific. Every airline is trying to boost its ancillary revenues in varying degrees. However, it is the LCCs which have managed to best increase the share of ancillary revenues as a percentage of the topline. To some extent, the sustainability of this revenue stream is further enriched by usage of the valuable data generated from every customer transaction. Additionally, an increasing number of airlines has started disclosing the detailed breakup of ancillary revenues, highlighting the prominence of this revenue stream. We highlight below, the top airlines with regards to percentage share of ancillary revenues in their topline. LCCs have increasingly come to the forefront and openly talked about aiming to shore up the percentage share of ancillary revenues by providing lower fares and charging for everything else.

Compared to 20% plus share of ancillary revenues, Indian players currently gather only 12-14% of total turnover as ancillary revenues.

Chart 22: Top airlines with regards to percentage share of ancillary revenue



Source: IdeaWorks, I-Sec research

We highlight that there are various streams within ancillary revenues, from co-branded credit card fees to seat allocation fees to baggage and advertisements. The distribution of the various streams differs among various airlines. For example, while Ryanair has ancillary revenues spread across various sources, Qantas has a large share generated from sale of miles or points to banks that issue co-branded credit cards.

Table 23: Ancillary revenue profile of Ryanair

(mn Euros)	2010	2011	2012	2013	2014	2015
Non-flight Scheduled	494	603	677	833	1,012	1,164
In-flight Sales.	87	102	107	110	117	128
Internet-related	84	96	102	122	118	101
Ancillary Revenues	664	802	886	1,064	1,247	1,394
Scheduled Revenues	2,325	2,828	3,439	3,820	3,790	4,260
Total Revenues	2,988	3,630	4,325	4,884	5,037	5,654
% Ancillary Revenue	**22.2**	**22.1**	**20.5**	**21.8**	**24.8**	**24.6**

Source: I-Sec research

The key constituents of Ryanair's ancillary revenues include excess baggage, travel insurance, accommodation services, car hire, bus tickets, car parking, SMS services,

advertising on boarding pass, extra legroom seats, full seat allocation, priority boarding and products sold on websites.

Table 24: Ancillary revenues for Cebu Pacific has been consistently above 20%

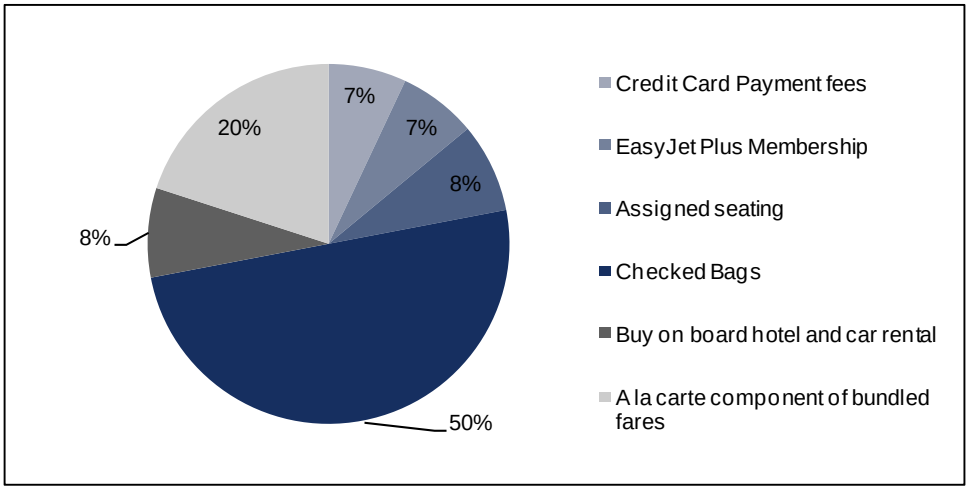
Cebu Pacific has many similarities with Indian operators. Not only is it an LCC, it is an Asian airline with fleet size nearly like SpiceJet.

(Philippine Peso)	2012	2013	2014
Passenger revenue	29,579,485,272	31,662,949,847	40,188,445,623
Cargo	2,380,938,624	2,609,444,919	3,146,083,310
Ancillary	5,944,029,727	6,731,701,515	8,665,489,377
Excess baggage fee	2,837,630,241	3,106,766,079	4,116,640,154
Rebooking, refunds, cancellation fees	2,006,490,604	2,391,871,202	2,920,343,253
Others	1,099,908,882	1,233,064,234	1,628,505,970
Total	**37,904,453,623**	**41,004,096,281**	**52,000,018,310**
% Ancillary revenue	**22.0**	**22.8**	**22.7**

Source: I-Sec Research

Chart 23: Ancillary revenue distribution at easyJet

Cargo revenues are not a part of ancillary revenues for global airlines as alongside for easyJet. Yet, for IndiGo and other Indian airlines, absence of dedicated cargo carriers has resulted in windfall revenue opportunities. Cargo contributes around 5-6% of the total revenues of IndiGo and 42% of the total ancillary revenue.



Source: IdeaWorks, * Annual subscriptions called easyJet Plus include assigned seating, fast track security, speedy boarding, and an additional carry-on bag for an annual price(~GBP170-200)

Ancillarisation of passenger revenues, bundling and unbundling

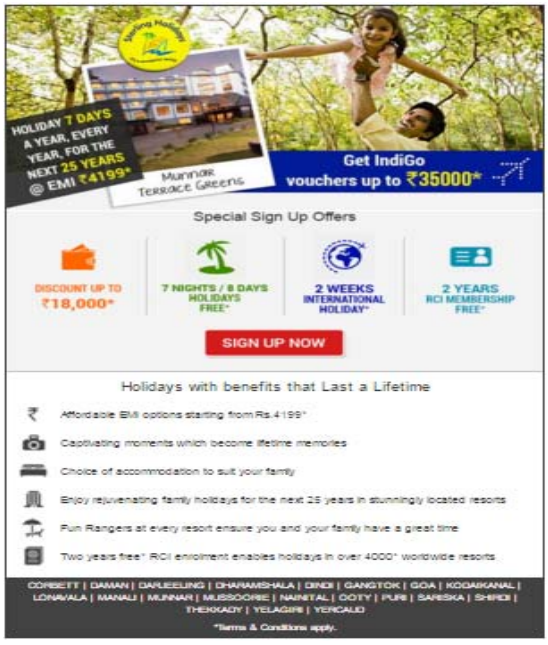
High ancillary revenues of global airlines have some components which are currently free of cost and within the ticket prices for Indian airlines. For example, checked bags constitute 50% of the ancillary revenue of easyJet. Indian airlines have till now not charged for checked baggages upto 15kgs on domestic routes. However, recently SpiceJet started additional Rs200 off for passengers with no checked baggages. Such unbundling has two effect:

- **Lower base fare and higher ancillary revenue:** Airlines will have a new low as far as base fare is concerned. With Rs200 off on SpiceJet for passengers with no checked baggages, the erstwhile light traveller, non-committal to any specific airline, would prefer to travel SpiceJet, and other competitors will follow suit. This will lower the effective base fares and eventually shift some of the revenues from the passenger to ancillary category.
- **The net benefit/loss will depend on loss due to unbundling and gain due to a-la-carte charges along with their respective volumes.** So, *is it a Rs200 off that the airline suffers or a Rs200 additional charge that the airline receives from checked baggages?* The answer lies somewhere in the middle.

Bundling of fares include sources of ancillary revenues like assigned seating, fast-track security, speedy boarding, annual membership card, hotel and car rental partnerships, etc. This will depend on the traveller's association with the airline and the airline's performance on parameters like flight punctuality, cleanliness, dependability and the brand image. IndiGo would typically rank high among Indian passengers in this regard.

Bundled fares offer upside potential to ancillary revenues for IndiGo/SpiceJet. Bundled fares are like an optional value proposition which can be taken to advantage by both LCCs as well as FSCs. While LCCs may offer increasing bundled services to attract premium customers from FSCs, unbundling of some of the services help FSCs to attract some value customers from LCCs. Yet, the revenue is a bonus for LCCs compared to FSCs, since FSCs were anyways supposed to provide value-added services. However, brand loyalty and perceived value among LCCs will define the ability of the LCC to do so. IndiGo is in a sweet spot in this case as the dominant LCC in the Indian domestic market. Does that implicate a higher brand value for IndiGo? Sure it does. However, there have been anomalies in this regard too. Southwest, despite being a LCC pioneer, never charged for up to two checked baggage until recently. It helped develop a brand for Southwest, which was bordering on passenger friendliness yet at low cost.

Co-branded promotions underline the brand value of IndiGo. Yet, till now, IndiGo has not resorted to any such schemes and maintained its low-cost focus and channelises all savings to lower airfares in a sustainable way. However, it has started using its brand for co-promotions as seen below.



In another example, American Express tied up with IndiGo Airlines and the Taj Group as anchor partners to offer card members travel and lodging rewards and benefits. Some of the key highlights of the travel credit card include up to two complimentary return flights aboard IndiGo for simply spending as low as Rs190,000 in a year; up to four complimentary return flights aboard IndiGo and up to two room nights stay at the luxurious Taj Group, on spending Rs400,000 in a year. Our channel checks indicate that this card has done well for American Express. The unique advantage of these co-promotions is that they carry very little cost compared to a card program like that of Jet Airways with its own currency (JP Miles). Since these are not aimed to create loyalty, IndiGo would bear very little cost. However, selection of IndiGo by trade partners underlines how the IndiGo brand is very easily acceptable to consumers.

Risk in an airline business

- **Economic growth measured by GDP is the single biggest factor which drive air traffic demand:** We did an exercise on US airlines to understand the various influential forces in the aviation sector. US airlines do offer a long documented history, a matured industry and can be used to draw important inferences for the Indian airlines as well. We gathered the data for the top 1,000 domestic city pair markets of the US for the last 80 quarters, i.e. since 1996 including ASM, RPM, passenger, miles, PLF –and map it with the average fares, GDP growth and fuel prices. We find that the correlation between GDP growth rate and passenger growth rate to be 0.7. The last two decades in the airline industry have been characterized by two big events, that of 9/11 in 2001 and the 2009 financial crisis. Accordingly, we see big drop in passenger growth in these two time periods. The ASM in top 1,000 city pair markets has grown by 43% in the past two decades, an annual growth rate of 2%. (Refer Chart31- Annexure)
- **Higher crude prices which roughly contribute ~40% of the total costs.**
- **Depreciation of rupee pose biggest upside risks to cost:** To give a sense, 60-67% of the total costs are in dollars for airlines taking into account cost overheads of crude, maintenance and rentals. As such, depreciation of rupee has a direct bearing on the costs. The lowest cost structure will again be the critical parameter here considering that typically sensitivities would be highest for the lowest margin player. Large movements in exchange rates impact airlines through three main channels; consumer decisions (demand), airline decisions (supply) and financial impacts. Of these, the consumer (demand) response to a significant move in relative prices can be swift and may prompt a response from airlines, including adjustments to capacity (supply). The financial impact can be especially acute for airlines when it relates to sizeable changes in the value of the US dollar because a large proportion of airline costs (including fuel) are denominated in US dollars, and carriers need to convert domestic currency into dollars each year to meet their obligations giving rise to FX risk.
- **Adverse regulations:** Fresh concerns have risen regarding possible clampdown in ancillary revenue sources for airlines post the draft changes in regulations limiting the excess baggage charges for luggage up to 20kgs. Yet, this is not material enough and the concern of the street is overdone. This will only result in minor change in ancillary revenue considering overweight above 20kgs has not been changed. Excess baggage roughly contribute less than 1% of the revenue. The proposed regulatory changes has been more to make airlines increasingly accountable and disciplined with penalties in the case of boarding denials, flight cancellations and transparent refund in case of cancellations.

The New Aviation Policy aimed to boost the sector

Cabinet cleared the new policy on 15th June, 2016. The essentials have remained the same as that envisaged in the draft policy released in Oct'15 with one major change of scrapping the 5/20 policy to a 0/20 policy. Despite being a positive for Air Asia and Vistara in the international routes, the requirement of 20 aircraft will prevent any immediate increase in traffic. Air Asia and Vistara currently has 6 and 11 aircraft respectively.

Essentially, a long term plan, the policy aims to boost regional connectivity through Government support and industry levy but will not have any short term impact. However, regional scheme will open up more routes for the airlines with regional aircraft like SpiceJet, Air India and Jet who already have such fleet of aircraft. Economics of viability remain to be tested. The biggest beneficiary of this policy will be the MRO industry which has been given a slew of incentives along with the commercial aero related manufacturing. An efficient domestic MRO industry has the potential of structurally reducing the cost of the domestic airlines, but again it is a long shot from here.

Increase in airports and development of MRO sector can significantly boost the sector from a long term view.

Key targets highlighted in the report

- The policy aims at making India the 3rd largest civil aviation market by 2022 from current position of 9th.
- The domestic ticketing is expected to grow from 80mn in 2015 to 300mn in 2022. Indian domestic and international passenger traffic was 80.7mn and 18.4mn respectively in 2015.
- Airports having scheduled commercial flights are aimed to increase from 77 in 2016 to 127 by 2019.
- Cargo volumes to increase by 4 times to 10 million tonnes by 2027
- Taking flying to masses – Enabling Indians to fly at Rs. 2,500 per hour under Regional Connectivity Scheme at unserved airports.
- Requirement of 5 years of domestic flying for starting international operations removed
- Flexible and liberalized 'open skies' and 'code share' agreements
- Incentives to MRO sector to develop as hub for South Asia.
- Ensuring availability of quality certified 3,30,000 skilled personnel by 2025
- Development of green-field airports and heliports
- Enhancing ease of doing business through deregulation, simplified procedures and e-governance
- Promoting 'Make In India' in Civil Aviation Sector

The Regional Connectivity Scheme (RCS)

- **MoCA will target an all-inclusive airfare not exceeding Rs2,500 per passenger, indexed to inflation for a one-hour flight on RCS routes. (Rs1,200 for 30 minute flight)**

These steps were mentioned in the detailed draft policy

- This will be implemented by way of:
  - Revival of un-served or under-served aerodromes and airstrips. Currently around 75 out of 476 airstrips/airports have scheduled operations. Revival of air strips, depending on demand, as no-frills airports will be done at a cost not exceeding Rs500mn, mostly through AAI. Requirement of 12% project IRR will be relaxed for revival of these airports, wherever the airport is under AAI control.
  - Concessions by different stakeholders.
  - **Viability Gap Funding (VGF) for scheduled commuter airlines (SCAs).**
- RCS will be only in states which reduce VAT on ATF at airports to 1% or less.
- State governments will provide free land and multi-modal hinterland connectivity.
- For 10 years from the date of commencement of flight operations under RCS:
  - There will be no airport charges levied on SCAs for operations under RCS.
  - Service tax on tickets under RCS will be exempted.
  - State governments will provide police and fire services free of cost. Power, water and other utilities will be provided at substantially concessional rates.
  - ATF drawn by SCAs from RCS airports shall be exempt from excise duty.
- **Viability Gap Funding (VGF)** will be funded by a small levy per departure on all domestic routes other than Cat II/ Cat IIA routes, RCS routes and small aircraft at a rate as decided by the Ministry from time to time. A detailed scheme will be put up in the Public domain for stakeholders' consultations.

5/20 rule converted to a 0/20 rule

The requirement of 20 aircraft will essentially mean some time before players like Vistara and Air Asia can start flying abroad. Currently, Air Asia and Vistara have 6 and 11 aircraft respectively

The 5/20 rule for commencement of international flight in operation since 2004 is replaced by a formulation which provides a level playing field and allows airlines, both new and old, to commence international operations provided they continue to meet some obligation for domestic operation. All airlines can commence international operations provided they deploy 20 aircraft or 20% of total capacity (in term of average number of seats on all departures put together); whichever is higher, for domestic operations.

Maintenance, Repair and Overhaul (MRO) to be boosted

The MRO business of Indian carriers alone is around Rs50bn, 90% of which is currently spent outside India – in Sri Lanka, Singapore, Malaysia, UAE, etc. The government is keen to develop India as an MRO hub in Asia, attracting business from foreign airlines. MRO, ground handling, cargo and ATF at the airport would also be accorded the benefits of the 'infrastructure' sector along with a host of tax exemptions. The tax regime has been a key dampener for MRO activity in India. Abolition of these taxes may now encourage Indian airlines to get MRO work done domestically and save some costs. The MRO industry also can grow significantly with the large number of additions expected to the Indian fleets. The incentives proposed include:

- MoCA will persuade State Governments to make VAT zero-rated on MRO activities
- Provision for adequate land for MRO service providers will be made in all future airport/heliport projects where potential for such MRO services exists.
- Airport royalty and additional charges will not be levied on MRO service providers for a period of five years from the date of approval of the policy.

Bilateral Traffic Rights to get incrementally liberalised

India has Air Service Agreements (ASA) with 109 countries covering aspects relating to the number of flights, seats, landing points and code-share. The government will enter into an 'Open Sky' ASA on reciprocal basis with SAARC countries and countries with territory located entirely beyond a 5,000km radius from New Delhi. The government plans to liberalise the regime of bilateral rights leading to greater ease of doing business and wider choice to passengers. A method will be recommended by a Committee headed by the Cabinet Secretary for the allotment of additional capacity entitlements wherever designated Indian carriers have not utilised 80% of their bilateral rights but the foreign airlines/countries have utilised their part and are pressing for increase in the capacity.

Open sky beyond 5,000km radius is likely to offer limited addition to current supply, which is fully representative of bilateral demand. Open Sky policy, by principle, would increase competition for International travel, but recent calibrated moves ensure that no major disruption is likely, particularly with Air India as one of the biggest stakeholders with a sizeable fleet of wide body aircraft.

Route Dispersal Guidelines (RDG) remains incumbent upon airlines. Capacity actually deployed on Cat-II and III routes is in excess of the RDG threshold, highlighting the business potential in these regions. The following actions will be taken to rationalise the RDG scheme:

- Category-I routes will be made more transparent. The criteria proposed for a Cat-I route is a flying distance of 700km, average seat factor of 70% and annual traffic of 500,000 passengers based on information available with DGCA. MoCA will endeavor that the rationalization of Cat-I routes does not cause undue financial and operational burden on airlines.
- The traffic to be deployed on Cat II and IIA expressed in terms of a percentage of CAT I traffic remains the same. The percentage for CAT III will be reduced in view of the Regional Connectivity Scheme coming into operation. Uttarakhand and Himachal Pradesh have been included as part of category II routes.

Category-I routes	
Mumbai-Bangalore	Calcutta-Delhi
Mumbai-Calcutta	Calcutta-Bangalore
Mumbai-Delhi	Calcutta-Chennai
Mumbai-Hyderabad	Delhi-Bangalore
Mumbai-Chennai	Delhi-Hyderabad
Mumbai-Trivandrum	Delhi-Chennai

Category-II routes
Routes connecting stations in the North-East, Jammu & Kashmir, Andaman & Nicobar, and Lakshadweep. **Himachal Pradesh and Uttarakhand have been added in this category.**

Category-III routes
Routes other than those in Category-I and Category-II

Current Route dispersal guidelines: Any airline that operates schedule air transport service on one or more of the routes under Category-I, shall be required to provide such services in Categories-II&III as indicated below:

- The operator will deploy on routes in Category-II at least 10% of the capacity it deploys on routes in Category-I, and
- Out of the capacity thus required to be deployed on Category-II routes, at least 10% would be deployed on service or segments thereof operated exclusively within the North-Eastern region, Jammu & Kashmir, Andaman & Nicobar, and Lakshadweep.
- The operator had to deploy on routes in Category-III, at least 50% of the capacity it deploys on routes in Category-I. This will be reduced as discussed above.

However, a service operated on a Category-I route as a part of international air service will not be reckoned for the above purpose. Capacity deployed will be reckoned in Available Seat Kilometres (ASKM).

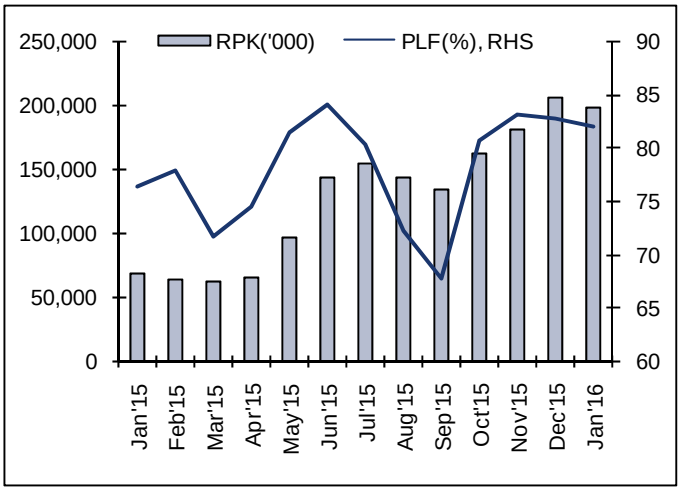
New airlines will find it tough to gain ground from competition

Case study – AirAsia

AirAsia India has remained a weak player. Comparing IndiGo and AirAsia India based on operations in the formative months would suggest a clear demarcation between AirAsia and IndiGo. IndiGo started its operations in Aug'06 and AirAsia in Jun'14. If we compare the market shares of IndiGo and AirAsia from month-8 onwards, i.e. Jan'15 for AirAsia and Mar'07 for IndiGo, results will indicate that AirAsia has not been able to gain any ground in the Indian market. So, in the 20th month of operations, IndiGo had a market share of 10-11% compared to 2-3% of AirAsia. To some extent, such a trajectory is also a result of the undercapitalised nature of Indian businesses. AirAsia invested only US$30mn of initial capital for its Indian business compared to a minimum requirement of US$100mn. This is much lower than the initial promoter equity of US$100mn. Jet Airways had invested Rs600mn in 1993, equivalent to Rs1.75bn in today's terms. For the sake of financials, AirAsia tripled its losses in the Sep'15 quarter to Rs650mn and turned into a negative net-worth company.

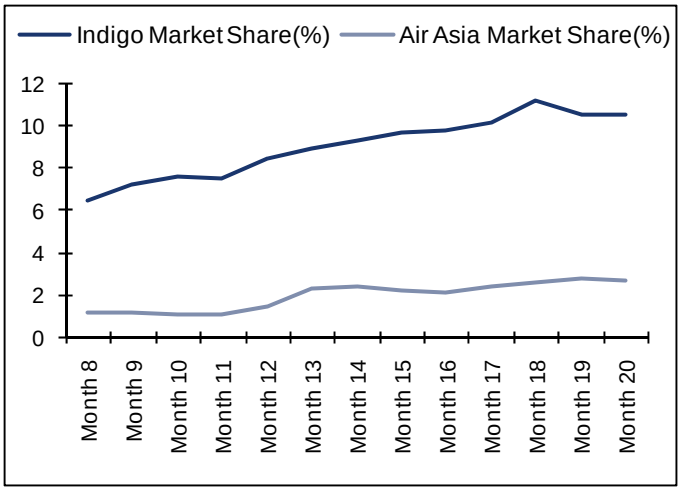
IndiGo has clearly been more successful in its formative months compared to AirAsia.

Chart 24: RPK and PLF trajectory of AirAsia



Source: DGCA, I-Sec research

Chart 25: Market share comparison between AirAsia and IndiGo in formative stages



Source: DGCA, I-Sec research

AirAsia would require deleveraging and consolidation in core markets. Much of the relief from lower crude prices is likely to be diverted by AirAsia to deleverage itself and infuse better health to its associates. The Indonesian associates had been warned once during Jul'15 regarding possible negative net worth post which there was a broad plan for revival. In H1CY15, all the associates except AirAsia Malaysia and Thai AirAsia were making losses. The company has a total of eight flying associate businesses. In such a scenario, it will depend upon the jurisprudence of the management to invest heavily in an already competitive Indian domestic market. The pressure from AirAsia to relax the 5/20 rule is indicative of the bias to use AirAsia India more like a feeder to the South East Asia hubs of AirAsia.

Table 25: AirAsia has high leverage, worse in associates

MYR mn	FY13	FY14	FY15	FY16E	FY17E
Net debt	8,976.4	11,959.6	10,185.5	9,942.2	9,520.4
Net Debt/Equity	179	263	229		
Net Debt/EBITDA	6.08	7.88	4.45	5.15	4.75
Capital Expenditures	-2,269.9	-2,084.6	-272.7	-1,185.4	-1,342.1
Revenue	5,111.8	5,415.7	6,299.1	5,959.4	6,357.7
Net Income	362.1	82.8	540.9	746.0	826.6

Source: Bloomberg

AirAsia has significant diversified ventures. Tune Group, the holding company of AirAsia, has invested in a multitude of related as well as unrelated industries. Its website indicates ventures into diversified businesses including hotels, prepaid mobile services, financial products, insurance, audio production services, education, racing car, football club, venture capital, etc.

- **Racing Car:** The racing car business – **Catherine group** – was sold to Swiss company Engavest. Engavest undertook to pay all of the existing and future creditors, including the staff. The reason for sale was cited to be requirement of finance and increasing alignment of Mr. Tony Fernandes with the interests of his football club QPR. However, the process failed as Engavest did not comply with some pending payments.
- **Football team:** The football venture, with owning of the club **Queen Park Rangers**, has also not been without trouble. The team got relegated from Premier League in 2013 and has had financial worries, with massive reduction in high-budget players, delayed wage payments and possible fines on account of breaching the financial fairplay rules. To give a context, financial fairplay indicts clubs that have not paid their dues.
- **Hotel:** The **Tune Group of Hotels** has also lost its major partner, Red Planet Hotels, which owned and operated several hotels under the Tune Hotel brand. The company recently sold one of its hotels in Melbourne while investing in new properties in Kenya.

AirAsia India has its own set of issues to be resolved. Amidst news of deep conflicts within the boardroom, there have been high profile management exits, claims of effective control by AirAsia parent group, and discord between shareholders. The Federation of Indian Airlines (FIA), a lobbying body of five local carriers, is again up in arms against AirAsia India, raising questions over the airline's control following a management exodus. There have been charges regarding transactions between the airline and the maintenance and insurance companies controlled by the parent. Similar allegations were mentioned in one of the market reports in Jul'15 causing a precipitous fall in AirAsia's share price.

Principles of Substantial Ownership and Effective Control (SOEC) The Federation of Indian Airlines (FIA), which represents leading domestic airlines –IndiGo, Jet Airways, JetLite, SpiceJet and GoAir – has raised concerns over principles SOEC being flouted by foreign partners of 'Indian airlines', referring to AirAsia and Vistara, which as per them have been permitted to operate despite being effectively controlled by their foreign parent. The FIA feels that even though India is following the principles of SOEC by allowing 49% ownership by foreign airlines in Indian airlines, it has not clearly defined 'effective control' or properly 'enforced' it.

Case study – Vistara

It has been tough going for Vistara till date. The joint-venture domestic airline between Tata Sons (51%) and Singapore Airlines (49%), started its operations in Jan'15. It currently has nine aircraft in its fleet (A320) and expects to add four more in 2016. The company plans to grow the total fleet to 20 jets by the end of 2018. It currently flies to 12 destinations in India and is likely to expand both routes and frequency of flights. Mr. Bhaskar Bhat, also the Managing Director of Tata Group-controlled Titan, took over as chairman of Tata SIA Airlines, succeeding Mr. Prasad Menon who retired in Jan'16.

Premium service policy has not worked thus far. Vistara will reduce premium seats in a cabin reconfiguration. The operations with business-class seats did not take off as hoped. It is not easy for any new airline with the policy of route dispersal guidelines, which binds it to fly some non-profitable routes. The company is planning to open passenger lounges at airports in 2016. Vistara will introduce on board wireless entertainment for domestic travellers to differentiate from other airlines. The company currently has a staff-strength of 900, which will increase with fleet additions.

With seven out of 10 domestic travellers flying in low-cost airlines, a three-class configuration – 16 business seats, 36 premium economy and 96 economy seats – may not have been the best choice for Vistara to start with.

Vistara trying to harness cost-cutting measures In a mid-year profitability review report released in Oct'15, the **Tatas estimated that the combined losses for the two start-up carriers – Vistara and budget carrier AirAsia India – would hit up to US$90mn.** Aggressive cost-cutting is something usually associated with budget airlines but full-service carrier Vistara has adopted the same strategy wherever possible, such as in backend operations.

Singapore Airlines (SIA) has a strategic interest in Vistara. A presence in India – a key source market for Emirates, Qatar Airways and Etihad Airways – could prove an effective long-term strategy for SIA in terms of extending its network into Europe and the US, where the Middle Eastern carriers are expanding aggressively. Once Vistara gets its external wings, there will also be opportunities to work closely with SIA – for example, on code-share flights.

Annexure

Fleet details of key Indian players

IndiGo has made characteristic big orders till date

- The company placed firm order with Airbus for 100 A320 aircraft in Jun'05, all of which were delivered by early Nov'14, about two years ahead of the initially scheduled final delivery date.
- The company placed firm orders with Airbus for 180 A320neo aircraft in Jun'11.
- The company placed purchase orders with Airbus for 250 A320 Neo aircraft in Aug'15. Deliveries on the orders are expected to start from 2018 subject to changes by Airbus.
- Currently, all of the aircraft carry the V-2527-A5 variant of the V2500 SelectOne engine manufactured by IAE, and, upon delivery, all of the A320neo aircraft in 2011 order will utilize Pratt & Whitney engines. However, the company is yet to select the engines for the A320 Neo order of 2015. The seating configuration is optimized at 180, all in the economy class.

A320neo delivery schedule is back on track; targets 136 fleet strength by FY17

Delay in aircraft delivery addressed as of now. Delay in aircraft delivery can happen for a variety of reasons. In the recent case of A320neo, the cause of delay was the extra time required for cooling of the Pratt & Whitney Geared Turbofan engine under some circumstances. When Qatar Airways held itself back on accepting delivery of the first A320neo, Lufthansa stepped up to become the first airline to receive the same. While some teething problems will get resolved in time, Airbus has confirmed that the technical glitch will be addressed by H1FY16 and the very fact that a delivery has already been made is very much assuring.

Jet Airways fleet details

The company has a total fleet size of 116 aircraft of which 24 are owned and the rest are on operating lease.

- Jet fleet has a total of 86 narrow body aircraft (68-B737 and 18-ATRs).
- Jet's total wide body fleet comprises 22 aircraft – split between 10 B777s and 12 A330s.
- Jet Lite has a total of eight narrow body B737s

The company has given 10 aircraft on lease. Two Airbus A330-200s aircraft have been sub (dry) leased to Etihad Airways PJSC and three Airbus A330-200 aircraft have been sub (dry) leased to Turkish Airlines. Five Boeing 777-300ER aircraft have been sub (dry) leased to Etihad. The Turkish Airline sub-lease is long-term in nature – till 2020. One A330 given to Etihad is also long-term in nature (till 2020) while 777 leases are nearing expiry.

SpiceJet fleet details

SpiceJet connects its network with fleet of 22 Boeing 737NG, 7 aircraft on wet lease (A319, 320 and 737), along with 14 Bombardier Q-400s. The Airbus 320s have been taken on wet lease from Czech company CSA to be deployed on metro routes. Five Boeing 737NGs are also on wet lease. The Bombardier Q400 was acquired under finance lease through an ECB from Export Development Canada. However, in view of overdue payments of interest and repayment of principal of ECB to the lender, SpiceJet entered into an agreement with the lender for the forbearance of defaults and the discharge of overdue amounts of principal and interest aggregating Rs898mn through 12 equal monthly payments from Apr'15. As of FY15-end, the total amount under this ECB was Rs13.4bn.

GoAir fleet details

GoAir currently has 19 A320 ceo and 1 A320 neo which came from the 72 A320neo aircraft ordered. It took the delivery of its first neo (20th) after a significant delay.

Air India fleet details

Table 26: Fleet details of Air India as per its website

Aircraft type	Owned	Sale & Lease Back	Dry Lease	Total
Operational Fleet				
Wide Body				
B777-200LR	3	0	0	3
B777-300ER	12	0	0	12
B747-400	3	2	0	5
B787-800	9	12	0	21
Wide Body Total	27	14	0	41
Narrow Body				
A319	19 (9+10*)	0	3	22
A320 (Twin Class)	4	0	5	9
A320 (Classic)	7	8	0	15
A321	20 (8+12*)	0	0	20
Narrow Body Total	50	8	8	66
Regional Aircraft				
CRJ-700	0	0	3	3
ATR42	0	0	3	3
ATR72	0	0	5	5
Regional Aircraft Total	0	0	11	11
Total Fleet	**77**	**22**	**19**	**118**

Source: Company Data, * on finance lease

Table 27: Fleet projection for Indian Airlines

		FY15		FY16		FY17		FY18		FY19		FY20	
Carrier	Type	Fleet	Seat	Fleet	Seat	Fleet	Seat	Fleet	Seat	Fleet	Seat	Fleet	Seat
AirAsia	A320	4	180	6	180	8	180	8	180	10	180	12	180
	Total	**4**	**720**	**6**	**1,080**	**8**	**1,440**	**8**	**1,440**	**10**	**1,800**	**12**	**2,160**
Pegasus	ATR72-500	2	66	2	66	3	66	4	66	5	66	6	66
	Total	**2**	**132**	**2**	**132**	**3**	**198**	**4**	**264**	**5**	**330**	**6**	**396**
TrueJet	ATR72-500	2	66	5	66	5	66	6	66	7	66	8	66
	Total	**2**	**132**	**5**	**330**	**5**	**330**	**6**	**396**	**7**	**462**	**8**	**528**
Vistara	A320	3	148	9	148	9	148	10	148	12	148	15	148
	Total	**3**	**444**	**9**	**1,332**	**9**	**1,332**	**10**	**1,480**	**12**	**1,776**	**15**	**2,220**
Air India	B747-400	3	423	4	423	5	423	5	423	5	423	5	423
	B777-200LR	8	238	3	238	3	238	3	238	3	238	3	238
	B787	13	256	21	256	21	256	21	256	21	256	21	256
	B777-300ER	12	336	12	342	12	342	12	342	12	342	12	342
	A320	24	140/168/150	26	140/168/150	29	140/168/150	33	140/168/150	35	140/168/150	38	140/168/150
	A319	22	144/122	22	144/122	18	144/122	20	144/122	20	144/122	20	144/122
	A321	20	182	20	184	20	184	20	184	20	184	20	184
	A330	2	279	-	279	-	279	-	279	-	279	-	279
	Total	**104**	**21,377**	**108**	**22,522**	**108**	**22,878**	**114**	**23,764**	**116**	**24,074**	**119**	**24,539**
AI Express	B737-800	21	186	17	186	17	186	17	186	18	186	20	186
	Total	**21**	**3,906**	**17**	**3,162**	**17**	**3,162**	**17**	**3,162**	**18**	**3,348**	**20**	**3,720**
Air Allied	ATR42-320	4	48	9	48	10	48	11	48	12	48	13	48
	CRJ700	4	70	3	70	4	70	5	70	6	70	7	70
	Total	**8**	**472**	**12**	**642**	**14**	**760**	**16**	**878**	**18**	**996**	**20**	**1,114**
Jet Airways	B737-900	4	166	2	168	2	168	2	168	2	168	2	168
	B737-900ER			4	168	4	168	4	168	4	168	4	168
	B737-700	3	134	8	168	8	168	8	168	8	168	8	168
	B737-800/MAX	59	168	55	168	55	168	55	168	76	168	90	168
	B777-300ER	4	329	4	329	6	329	6	329	4	329	4	346
	A330-200/300	7	247	8	247	9	247	9	247	11	247	11	250
	ATR72-500/600	18	65	18	72	18	72	18	72	18	72	18	72
	Total	**95**	**15,186**	**99**	**16,176**	**102**	**17,081**	**102**	**17,081**	**123**	**20,444**	**137**	**22,902**
JetLite	B737-700	3	134	3	168	3	168	3	168	3	168	3	168
	B737-900ER	1	202	1	168	1	168	1	168	1	168	1	168
	B737-800	5	170	4	168	4	168	4	168	4	168	4	168
	Total	**9**	**1,454**	**8**	**1,344**	**8**	**1,344**	**8**	**1,344**	**8**	**1,344**	**8**	**1,344**
SpiceJet	B737-800	12	189	22	189	25	189	30	189	36	189	49	189
	B737-900ER	4	212	4	212	4	212	4	212	4	212	4	212
	A319			1	150	6	150	14	150	18	150	25	150
	DHC-8402	14	78	15	78	13	78	13	78	13	78	13	78
	Total	**30**	**4,208**	**42**	**6,326**	**48**	**7,487**	**61**	**9,632**	**71**	**11,366**	**91**	**14,873**
Blue Dart	B737-200												
	B757-200												
	Total	7		8		9		10		11		12	
GoAir	A320												
	Total	**19**	**3420**	**19**	**3420**	**25**	**4500**	**29**	**5220**	**33**	**5940**	**41**	**7380**
IndiGo	A320-200												
	Total	**94**	**16920**	**106**	**19080**	**135**	**24300**	**149**	**26820**	**169**	**30420**	**189**	**34020**
Air Costa	ERJ-170-100LR	2	60	0	67	0	67	0	67	0	67	0	67
	ERJ190-100STD	2	112	5	112	6	112	8	112	9	112	10	112
	ERJ190-E2		98		98		98	0	98	1	98	2	98
	ERJ-195E2		100		100		100		100		100	1	100
	Total	**4**	**344**	**5**	**560**	**6**	**672**	**8**	**896**	**10**	**1106**	**13**	**1416**
	Total	393	68,715	438	76,106	489	85,484	534	92,377	603	103,406	683	115,268
	Domestic		52,248		59,113		66,964		73,731		84,701		95,951
	International		16,467		16,993		18,520		18,646		18,705		19,317

Source: I-Sec research

Airlines – a cyclical industry and the role of yield management

In this section we discuss the important role of yield management in airlines. **Yield management is the pricing technique to maximise revenues, minimise losses, maximise PLFs, maximise market share and every other thing that can be done in the near to medium term through pricing based allocation of seats in various buckets in line with the expected demand of tickets with passage of time.** It makes pricing a very dynamic function in airlines aided by real time price management software. While it has both positives and negatives, it being the singular control factor tends to favour market player with lowest cost structure, by which logic IndiGo has an edge in the domestic Indian air traffic market.

Cyclicity is normally due to tardy response to a negative feedback loop. Aggregate airline industry earnings globally have exhibited large-amplitude cyclical behaviour globally since deregulation in 1978 with an average peak-to-peak period of approximately 10 years. Profit cycles are caused by a failure to fully account for delays in the negative feedbacks controlling inventory, capacity acquisition, or other resources. Unfortunately, the low salience of capacity on order together with long capacity lifetimes and high fixed-costs often limit the implementation of strategies to mitigate the cycle.

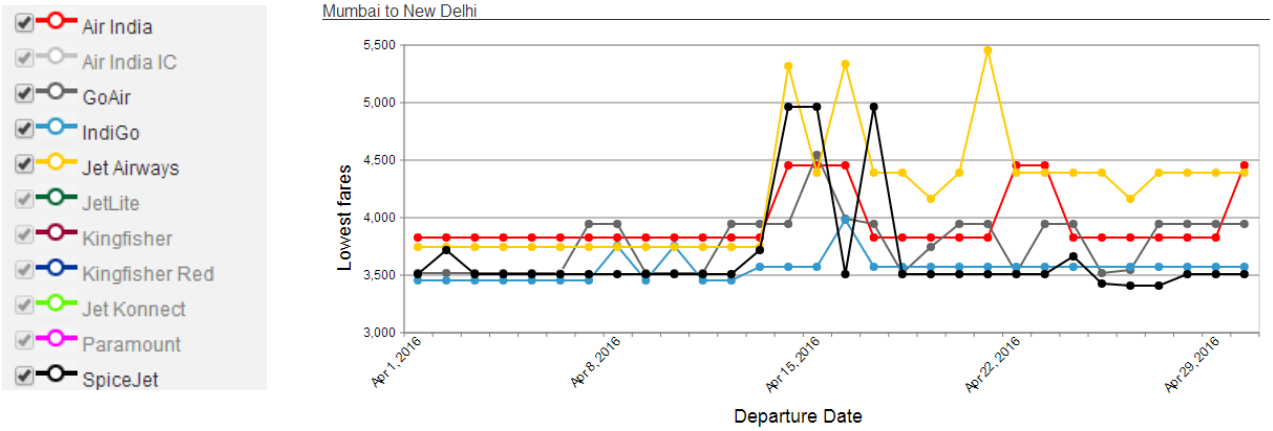
However, there is little proof of failure to account for supply lines in the airlines industry. Airlines are keenly aware of the need to adjust the supply line of aircraft on order to the desired number of aircraft they seek. Evidence from experimental studies and from other industries (e.g. commercial real estate and shipbuilding) suggests weak supply line adjustment and a role for inadequate supply line control in the genesis of industry cycles. However, the high price of aircraft, concentrated nature of the industry, and contractual terms for aircraft orders favour fully accounting for the supply line. This is illustrative of the fact that average tenure of delivery of aircraft has changed from time to time, with current delivery tenure almost triple from that in the 1990s. The airline market is characterised by a small number of producers, high barriers to entry, and few product variants. The supply line of capacity on order is well known to both manufacturers and their customers. These conditions favour a more complete accounting for the supply line in ordering decisions. Additionally, a fully functioning lessor market, which now accounts for nearly 40% of the aircraft share, does help in perfect supply management for airlines. So, depending upon the cycle, what tool does an airline have to maximise revenue or minimise losses? Yield management is the answer.

Revenue maximisation strategy involves yield management, which implies inventory control. Revenue management is a process where airlines manage fares of seats based on category and date of travel between the same origin-destination (O-D) markets. Airlines manage the seat inventory availability to maximise revenues. With the evolution of LCC, the lever of different seat categories has also diluted significantly. Today, the likes of IndiGo have one plain vanilla seating class. Yet, yield management is important with the development of one-dimensional differential pricing mechanism in which same seat can be sold at different prices based only on time. Leisure travel would involve buying discount tickets with longer time horizon; however, business travellers would pay higher for near time horizon tickets. Hence, a crucial strategy would involve optimum capacity control to protect seats for later booking, high fare business passengers. Without strong restrictions to impose demand segmentation

by passengers' willingness to pay, the only way an airline can force those with higher willingness to pay higher fares is to limit the seat availability in lower fare classes. This protection of high-yield seats and at the same time maximising the PLF is a function of the yield management. This is accomplished by forecasting the expected future booking demand for higher fare classes and performing mathematical optimisation to determine the number of seats that should be prevented from low fare bookings.

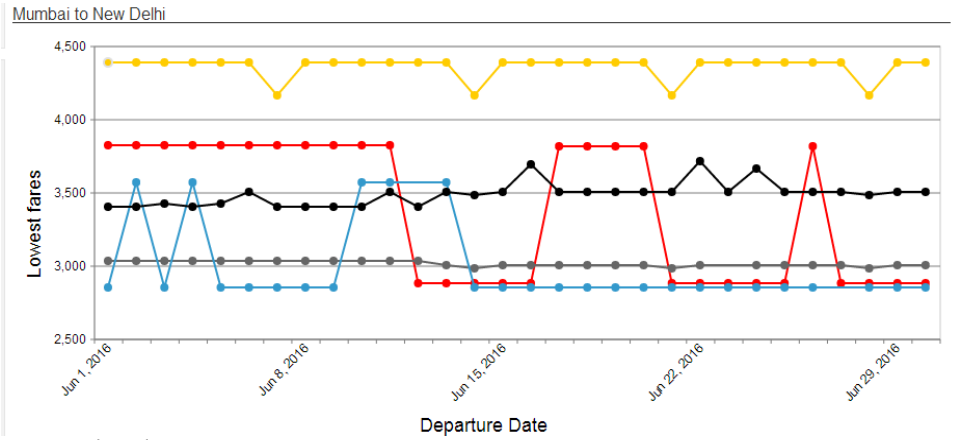
An example would be that of SpiceJet fares on the Delhi-Mumbai route. Although SpiceJet is a low-cost airline, its advance booking tariffs are much higher than current booking. As we go down the time, it is no longer the lowest air fare airline, a position which it maintains for current bookings. This strategy is an example of yield management through inventory management through yield management again. So, while SpiceJet is happy to be lowest at Rs3,500 per ticket for current bookings, it is not the lowest-fare player at Rs2,900/2,800 for subsequent advanced bookings.
However, this is more applicable for low-capacity airlines like SpiceJet while a high market share player like IndiGo has to focus more on its generic strategy of low cost at all points of time.

Chart 26: Delhi-Mumbai booking fare for next 5-6 weeks as of Mar'16 (for Apr'16 bookings)



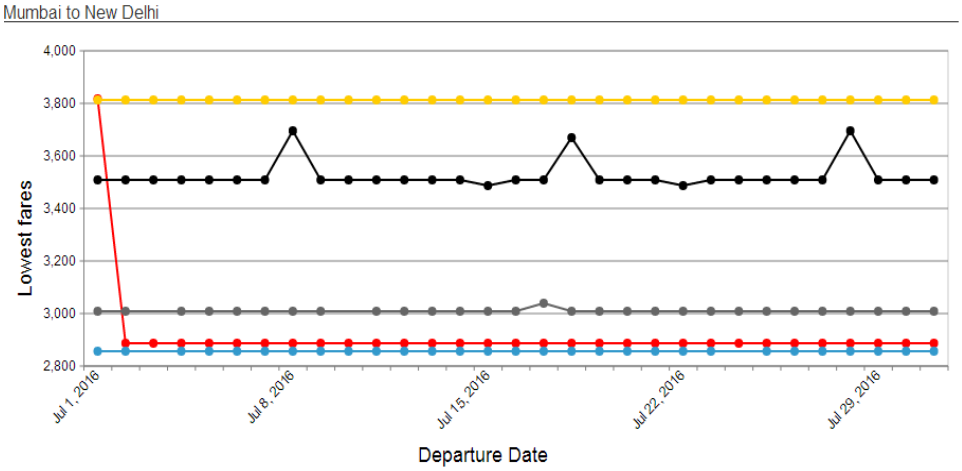
Source: Cleartrip

Chart 27: Delhi-Mumbai booking fare for 7-15 weeks as of Mar'16 (for Jun'16 bookings)



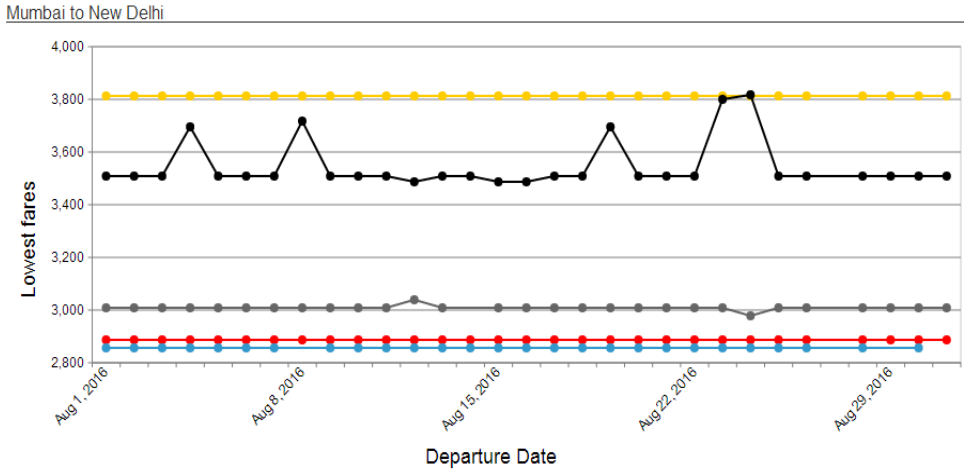
Source: Cleartrip

Chart 28: Delhi-Mumbai booking fare for 16-25 weeks as of Mar'16 (for Jul'16 bookings)



Source: Cleartrip

Chart 29: Delhi-Mumbai booking fare for 16-25 weeks as of Mar'16 (Aug'16 bookings)



Source: Cleartrip

Marginal revenue management in a declining fare structure assumes importance. Revenue management optimisers also require to gauge the propensity of passengers to buy down in a given fare structure. This is based on the fact that while each incremental seat will be sold, making more seats available at lower fares may be revenue-negative for the airline even if some seats remain empty. Till the time there is negative marginal revenue, additional seat should not be made available to the lower class for revenue maximisation. Hence there needs to be an optimiser in yield management to manage this marginal revenue maximisation across fare categories. This also directly indicates a salient consideration – **Higher PLFs may result in lower aggregate revenues if the company fails to optimise the marginal revenue management in order to gain market share.**

Yield management increases the stability in airline industry. The yield management feedback acts when increases in demand cause higher load factors, raising average industry ticket prices, which then decrease demand in a negative feedback. Yield management heuristics improve the stability of the system since estimated time to adjust ticket prices is very short compared to the lags in capacity acquisition. Yield management acts as an effectively immediate negative loop that

damps the cycle. The stronger the effect of load factors on price, the greater the stabilising effect of the price-demand feedback. To give another example, what is the likely result of a congested Mumbai Traffic? How can equilibrium be created with a stronger demand compared to a capacity constraint which cannot be ramped up in a short time period? The adjustment has to happen again with the only available lever, yield management.

However, yield management also increases operating leverage and volatility of profits. With a positive demand shock, profits rise as load factor rises. If price also rises in response to the increase in demand, then profits will increase even further, because each seat is sold at a higher average price. Hence, the stronger the effect of yield management on prices, the greater the operational leverage of the industry. Stronger yield management stabilises the fluctuations in capacity and increases mean reversal of cycles, but the initial response of profit to the demand shock is also much larger. So, while yield management increases the mean reversal tendency of the system, it simultaneously increases the short-run volatility of profits of the airlines and in turn the risk of the investors, as the industry responds to demand shocks. Aggressive yield management will maximise average profitability and cause load factors to increase steadily. Yield management technology has enabled the average load factor of the fleet to rise steadily from about 0.6 in the 1980s to more than 0.8 in the last decade. Hence, any market is least likely to see a lower PLF from higher capacity, but yield management driven price cuts can be expected to retain steady-state PLFs assuming demand does not change drastically.

There are downsides to yield management. While aggressively cutting prices to fill empty seats boosts average profit, it also increases the response of profit to demand shocks. Pricing policies that generate higher average profits also induce higher variability in profits. While higher average profits are desirable, greater variability in airline profits increases the risk premium required for investors. Herein is the advantage that the market leader enjoys in this industry. It can use yield management to the peril of others while simultaneously do supply management without losing significant market share, which reduces cycle risks.

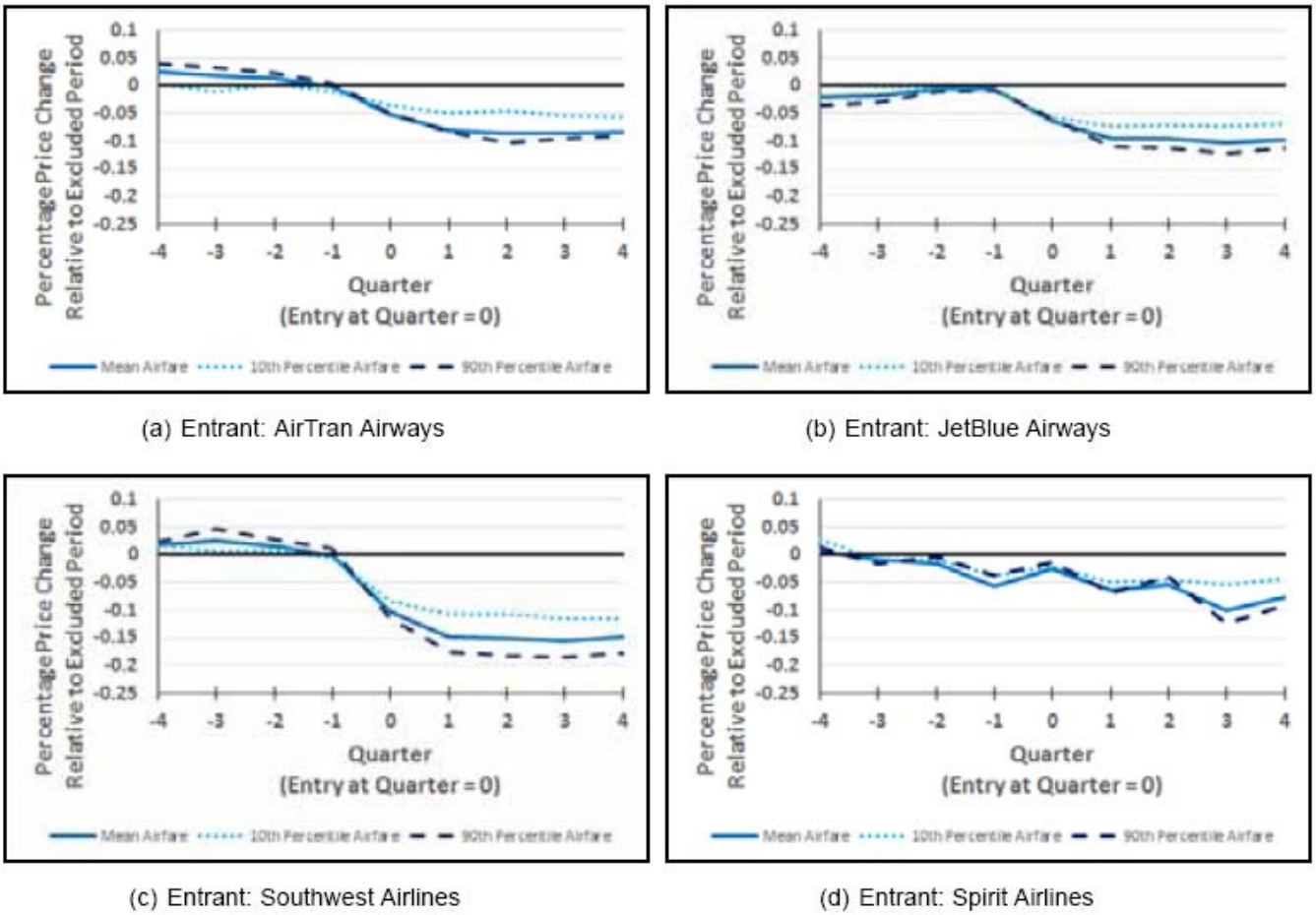
Effects of competition in aviation industry

Dominant influence again has been price control

US airlines history shows that legacy carrier incumbents have predominantly decreased their average airfares once a low-cost carrier enters a route, which is consistent with the competitive effect. There has been this famous 'Southwest Effect', in which incumbent airlines decrease their average airfare when Southwest Airlines enters a route. It is evident from chart 5 below that the competitive effect has been the largest with the new entrant being Southwest in the US, which kind of justifies the name.

We have seen similar strategy adopted by IndiGo whenever a new entry like AirAsia has entered any particular route. IndiGo has in fact always reacted and never been the first to start a fare-based competition, but nevertheless it has always exhibited this competitive effect.

Chart 30: Effect of new player on incumbent airline prices



(a) Entrant: AirTran Airways

(b) Entrant: JetBlue Airways

(c) Entrant: Southwest Airlines

(d) Entrant: Spirit Airlines

Incumbent Response to Entry: Mean, 10th Percentile, and 90th Percentile Airfares

Competition also leads to decreased price dispersion

The analysis pertaining to the dominance of the competitive effect can be extended to various points of the price distribution. In particular, incumbent firms can respond to

entry by rival firms by altering their 10th percentile price and 90th percentile price. In the airline industry, the 10th percentile airfare can be characterised as discount tickets, whereas the 90th percentile airfare describes full-fare prices. If the competitive effect truly dominates the airline industry, then legacy carrier incumbents would respond to entry by low-cost carriers by lowering both their 10th percentile and 90th percentile airfares. On the other hand, incumbents decreasing their 10th percentile airfare while increasing their 90th percentile airfare would be associated with the displacement effect, wherein they would decrease their 10th percentile airfare to attract price-sensitive consumers, while increasing their 90th percentile airfare to exploit their brand-loyal consumers.

It is found that the difference between more expensive full fares (90th percentile airfares) and cheaper discount fares (10th percentile airfares) is smaller for routes that are serviced by more airlines, confirming the competitive effect dominance. Although airfares seem to decrease at the mean and tails of the price distribution, the 10th percentile airfare tends to fall by a smaller percentage than mean airfares, while the 90^{th} percentile airfares experience a larger percentage decrease than mean airfares. Therefore, increased competition will effectively always reduce price dispersion.

This is also evident from a typical metro to metro fare distribution compared to metro to non-metro and a non-metro to non-metro. Metro to metro routes have more competition and lower price dispersion. Please refer to the airfare price charts given earlier.

Tracking the key determinant forces of aviation

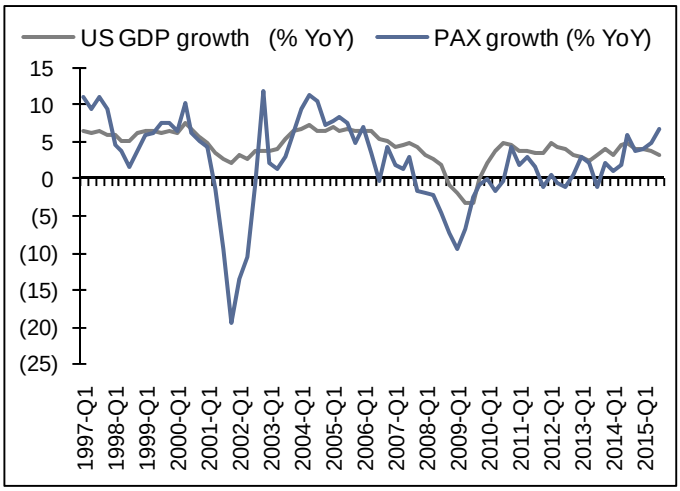
In this section we analyse different markets and how key factors shape the airline industry. While some of the factors are well known (such as GDP growth), fuel prices' effect on fares is somewhat subjective. We illustrate those relationships here. Additionally, we show that sustainable increase in ASMs always tends to result in increased market share, a likely outcome for IndiGo.

We did an exercise on US airlines to understand the various influential forces in the aviation sector. US airlines do offer a long documented history, a matured industry and can be used to draw important inferences for the Indian airlines as well. **We gathered the data for the top 1,000 domestic city pair markets of the US for the last 80 quarters, i.e. since 1996 including ASM, RPM, passenger, miles, PLF –and map it with the average fares, GDP growth and fuel prices.**

GDP growth is the singular strongest parameter

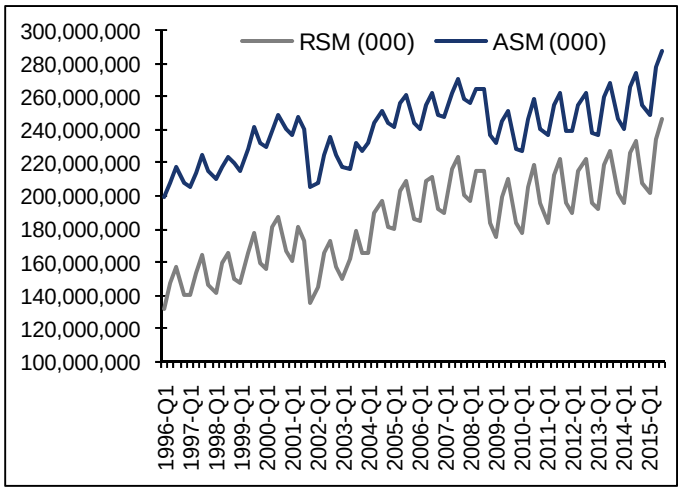
Though not surprising and pretty obvious, a data verification of the same is important-enough reinforcement. We find that the correlation between GDP growth rate and passenger growth rate to be 0.7. The last two decades in the airline industry have been characterised by two big events, that of 9/11 in 2001 and the 2009 financial crisis. Accordingly, we see big drop in passenger growth in these two time periods. The ASM in top 1,000 city pair markets has grown by 43% in the past two decades, an annual growth rate of 2%.

Chart 31: Strong correlation GDP growth and passenger growth



Source: Bureau of Transportation Statistics, US

Chart 32: ASM and RSM trend in the US



Source: Bureau of Transportation Statistics, US

Correlation between fuel and fares is not decisive

We find that the correlation between average fares and fuel prices to be 0.5, indicating a weak positive relation. While there are other factors to be considered (such as hedging practices), an interesting observation can be derived from the rather sticky fares in the wake of falling crude prices. It is can be seen that while an increasing fuel price scenario has forced average fares to rise, fall in crude prices has not seen equally enthused fall in fares. The two periods of fall in crude prices (1996-99) and

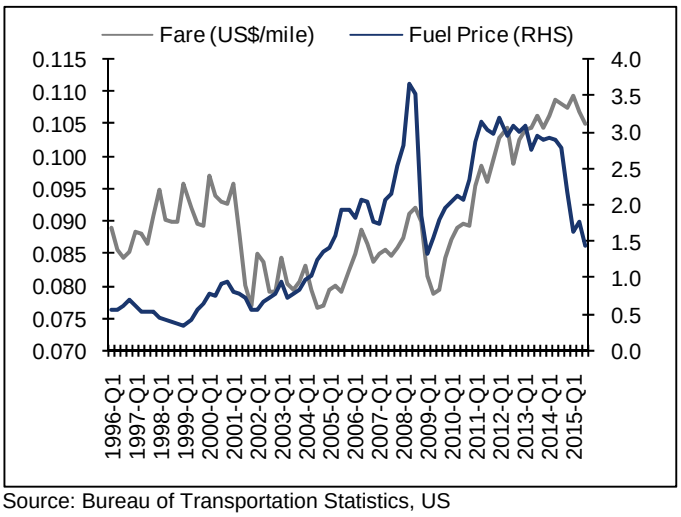
(2014-current) have seen sticky fares. This can be attributed to the opportunistic profit booking tendency enjoyed by airlines in the wake of falling crude prices and inability of some airlines to take fare cuts due to hedged positions. This raises a question of the extent of fall in fares that Indian markets can witness in this falling crude price atmosphere. A key difference between Indian and US airlines is that the latter is quite matured and had gone through a series of consolidations to achieve a more predictable and steady state of affairs. Hence, with high competition in a growing market, Indian airlines are likely to cut the fares and pass some benefits of low crude prices to the consumer to gain some market share. Yet, we believe that a large part of that low crude low fare cycle has already been completed.

Correlation between PLF and fares is weak

This is another important factor which comes up in our analysis. The correlation between fares and PLF is weak at 0.4. This is indicative of the matured economy of the US wherein, post a certain level of GDP per capita, we see relatively low elasticity of PLFs with fares. Hence, although Indian markets may not be directly comparable, it is likely that we see lower change in PLFs with fares as air travel becomes more and more intrinsic to the lifestyle of Indian consumers. It is interesting to note that PLFs in the US have risen significantly over the past two decades with aggressive yield management. However, Indian PLFs have fast moved to reach similar levels to that of the US, indicating a faster maturing rate of the Indian markets.

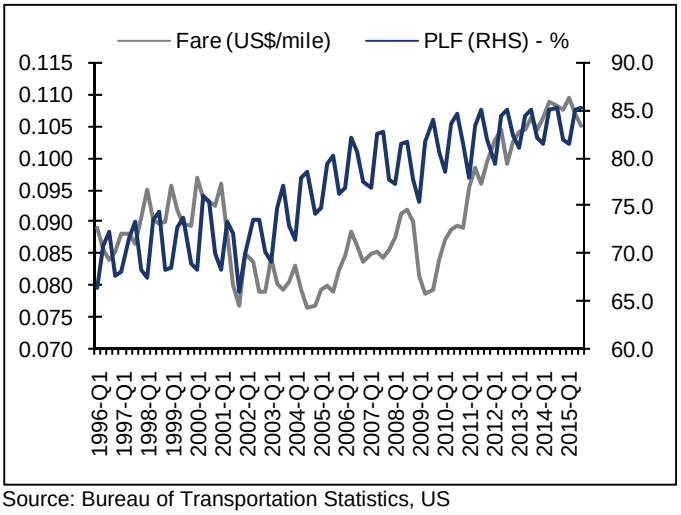
However, this systemic PLF and fare relationship should not be extended to that of individual players. While systemic PLF and fare would not have a very strong relationship in the US, it will hold very strong relationship for individual airlines. We did similar exercise for Southwest airlines and found correlation of near-90%.

Chart 33: Trend of fuel prices and average fares – a weak positive



Source: Bureau of Transportation Statistics, US

Chart 34: Trend of PLF with airfares – low correlation



Source: Bureau of Transportation Statistics, US

Increasing ASMs always levitate to higher market share. Whether aggressive yield management or supply management based on passenger growth, increasing ASMs has always led to higher market share. Therefore, if expansion can be made with safe balance sheet management, market share can be boosted with strategic increase in ASM. This is an important thesis underlying the strength of IndiGo considering a strong orderbook and strong balance sheet and a market pole position.

PLFs always adjust to increasing ASMs by yield management

Increasing capacity naturally leads to lower PLFs when the feedback cycle generates a response of lower fare resulting in regain of PLF. We can see the same in case of Southwest over the last 25 years. As its ASMs have increased steadily, PLFS have followed in a wave pattern indicating the feedback and cycle pattern. Although the trend of PLF and fare relation being positive is contrary to our finding for the US market as a whole, Southwest is a market leader and has to depend on yield management to maximise PLFs. So, even if the broader market correlation of fares and PLFs is weak, as explained earlier, the case of an active market leader is different. Likewise, IndiGo will also have to manage yields as it increases its capacity to maintain a systemic PLF depending upon passenger growth.

Chart 35: Trajectory of Southwest PLF(%) and ASM

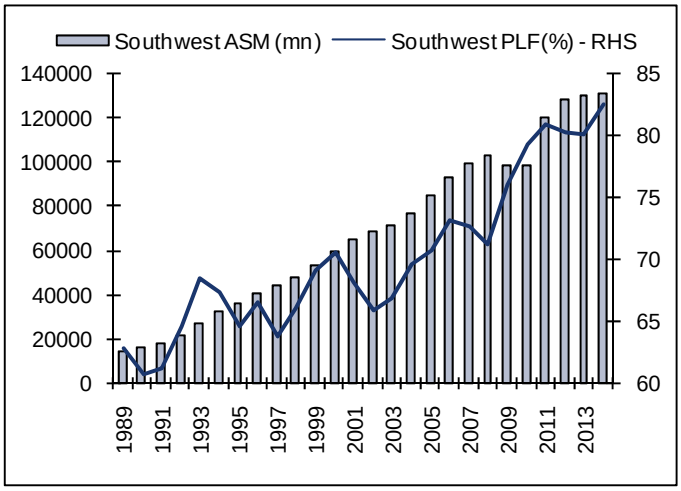
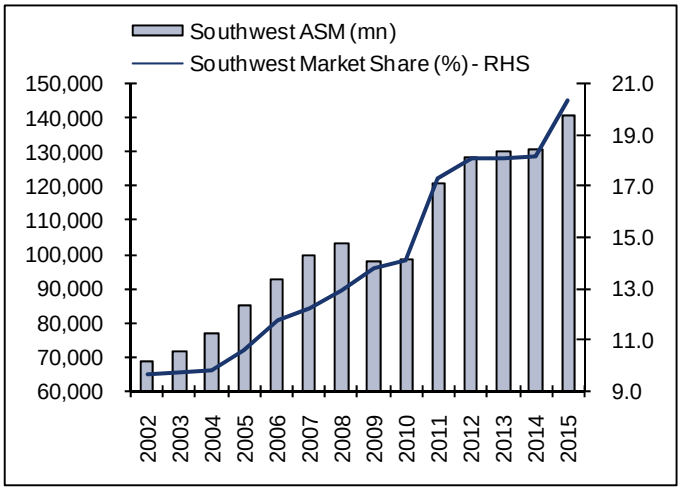
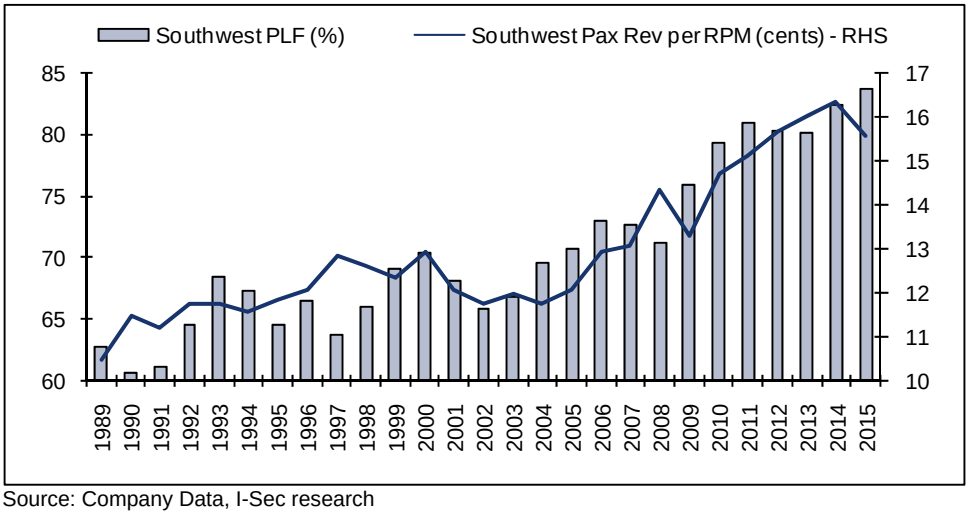


Chart 36: Trajectory of Southwest market share and ASM



Source: Company Data, I-Sec research

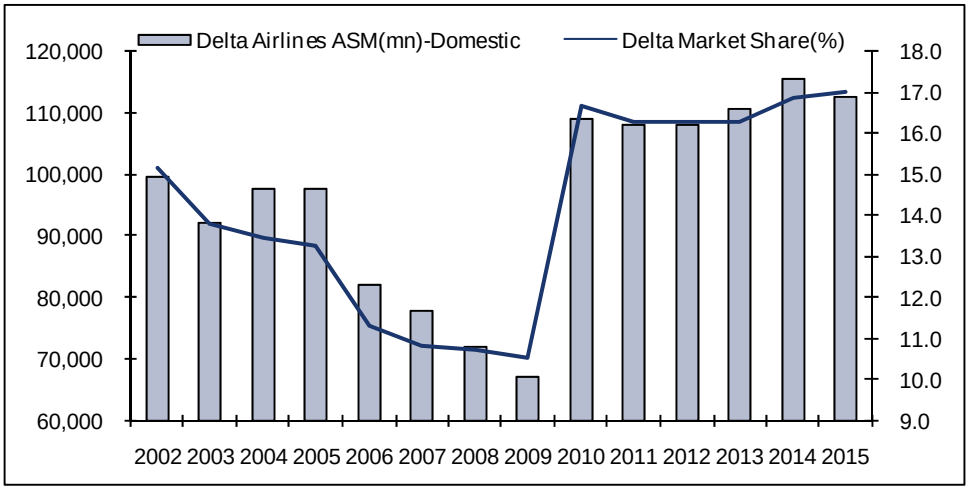
Chart 37: Trajectory of Southwest PLF and Revenue per RPM indicate strong correlation



Source: Company Data, I-Sec research

The sudden increase in market share of Delta Airlines coincides with its acquisition of Northeast Airlines in 2010.

Chart 38: Trajectory of Delta Airlines' market share and ASM

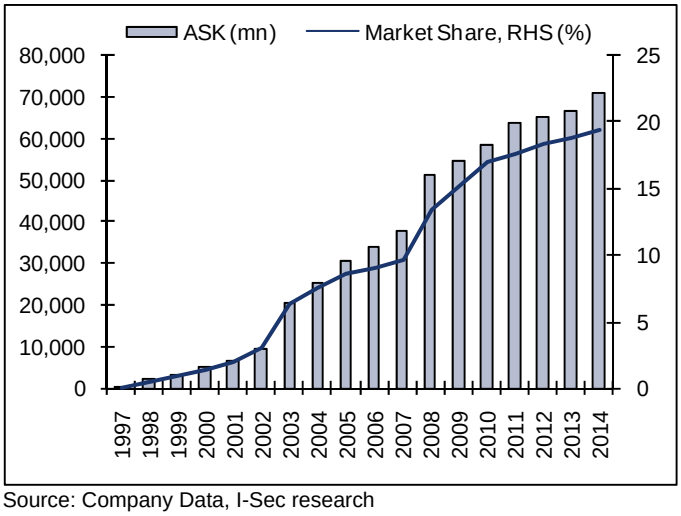


Source: Company Data, I-Sec research

UK markets show similar trend of ASMs with market share for easyJet. We have seen similar pattern in case of UK, where easyJet has managed phenomenal growth in ASMs with a significant increase in market share.

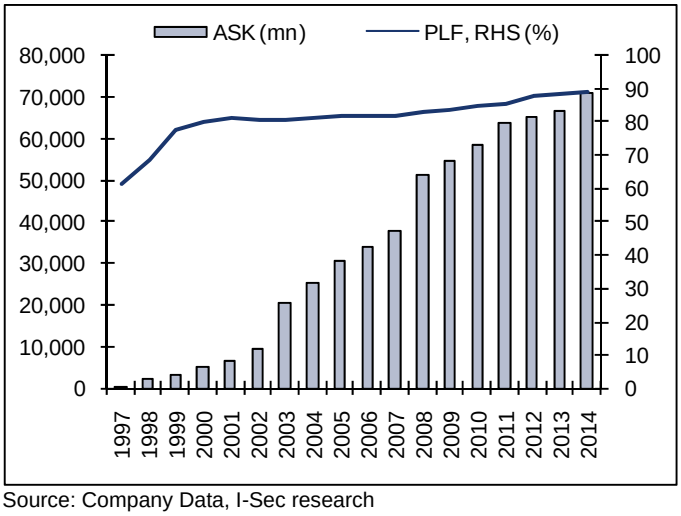
Yet, PLFs have also increased in tandem with ASM for easyJet, not in the usual feedback and cycle wave pattern. In the UK, there has been a serious churn in the industry with only three of the top 10 airlines in 1997 still in service today. easyJet has been able to capture the market with the LCC revolution and fragile competition, which has meant that the PLFs have also risen with increasing ASMs. This has also been helped by lower increase in ASMs. Compared to an ASM growth of 43% in the US over the last two decades, UK ASMs have grown by 38% while its RSMs have grown by 49%.

Chart 39: easyJet's growth in ASMs and market share



Source: Company Data, I-Sec research

Chart 40: easyJet's growth in ASMS and PLFs



Source: Company Data, I-Sec research

Aviation Turbine Fuel: Supply-side to keep prices on the leash

We present highlights from the World Oil Outlook. Jet/kerosene comprises two similar products: jet kerosene used in the aviation sector and domestic kerosene used in the residential/commercial/agriculture sector. While demand for domestic kerosene is expected to decrease as a result of a switch to alternative fuels (mainly LPG and gasoil/diesel), demand growth for jet kerosene will continue. Currently, the aviation sector is the main source of demand for jet/kerosene with a share of 83% of total demand. It is expected that this share will increase in the future up to 88% by 2040. Jet/kerosene is estimated to be the second-fastest growing refined product with an average growth of 1.2% p.a. between 2014 and 2040, rising from 6.7mb/d to 9.2mb/d during the period.

Demand growth will come from Asia-Pacific and Middle East

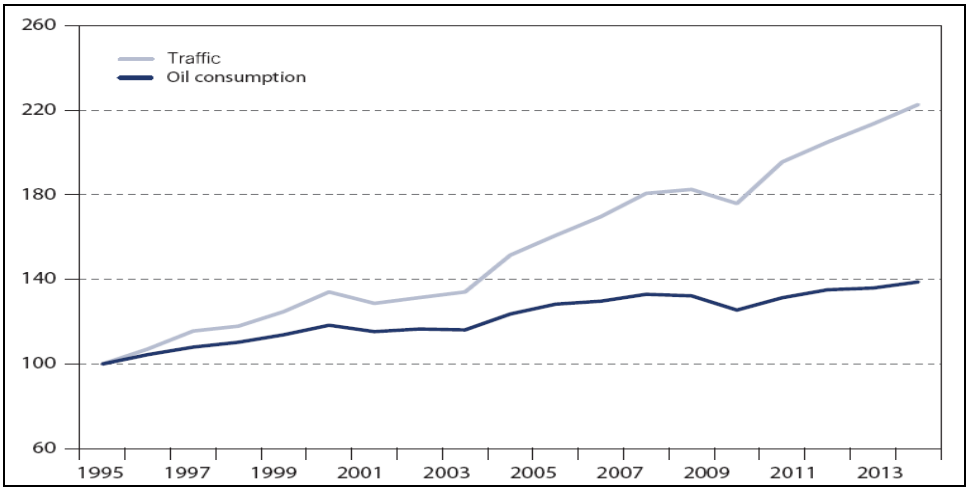
Demand for Jet/kerosene in the former region is expected to increase 1.9mb/d between 2014 and 2040 with China alone adding 0.6mb/d. Rising income levels and the expansion of the middle-class, together with strong aviation demand from the domestic and inter-regional market supported by the establishment of Low-Cost Carriers (LCCs), will be the main drivers. Demand in the Middle East will grow 0.4mb/d on the back of development of business hubs, increasing connectivity services and the establishment of more traffic hubs.

The aviation sector consumed 5.2mboe/d of in 2013. The OECD region accounted for 3.1mboe/d, developing countries 1.9mboe/d an Eurasia 0.3mboe/d. Since 1990, demand growth has mainly come from developing countries. Between 1990 and 2013, sectorial demand for ATF more than tripled in the developing countries while in the OECD it increased by only 21%. In Eurasia it shrank by 30%.

Increasing oil efficiency would remain a constant feature

Improvement in fuel efficiency has been a constant feature of the aviation market. While air traffic has multiplied by 2.1 between 1995 and 2013, sectorial oil demand has multiplied by only 1.4 for the same period. In fact, average fuel consumption of the world passenger fleet has historically exhibited a marked downward trend. While in 1995 the average efficiency was 6.3-litres/100 RPK, 10 years later it reached 5-litres/100 RPK. In 2013, an average fuel efficiency of just under 4-litres/100 RPK was achieved. This trend is expected to continue in the future as older airplanes are replaced by modern and more efficient units, which can achieve fuel efficiencies of 3.5-litres/100 RPK. Currently, the most efficient aircraft in service are the Airbus A380 and the Boeing B787. They consume only 3-litres/100 RPK. According to Airbus, out of 18,500 aircraft currently flying only 6,100 aircraft will stay in service by 2033. Therefore, 12,400 aircraft will be replaced with more fuel-efficient units in the next 20 years along with the addition of 19,000 new units.

Chart 41: Air traffic and sectoral ATF demand (1995=100)



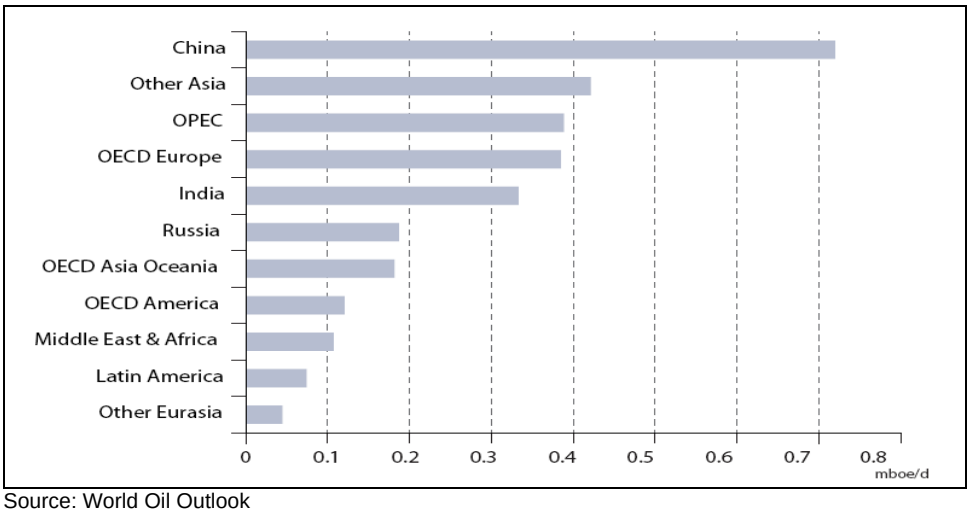
Source: World Oil Outlook

Table 28: Oil demand in aviation

(mboe/d)	Levels							Growth
	2014	2015	2020	2025	2030	2035	2040	2014–2040
OECD America	1.6	1.6	1.7	1.7	1.7	1.7	1.7	0.1
OECD Europe	1.1	1.1	1.2	1.2	1.3	1.4	1.5	0.4
OECD Asia Oceania	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.2
OECD	3.1	3.2	3.3	3.5	3.6	3.7	3.8	0.7
Latin America	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.1
Middle East & Africa	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.1
India	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.3
China	0.4	0.4	0.5	0.7	0.8	1.0	1.1	0.7
Other Asia	0.6	0.6	0.7	0.8	0.9	1.0	1.0	0.4
OPEC	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.4
Developing countries	1.9	2.0	2.3	2.7	3.0	3.5	4.0	2.0
Russia	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.2
Other Eurasia	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-
Eurasia	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.2
World	**5.4**	**5.5**	**6.1**	**6.6**	**7.1**	**7.7**	**8.4**	**3.0**

Source: World Oil Outlook

Chart 42: Growth in aviation oil demand by country/region



Source: World Oil Outlook

Higher supply scenario to prevail

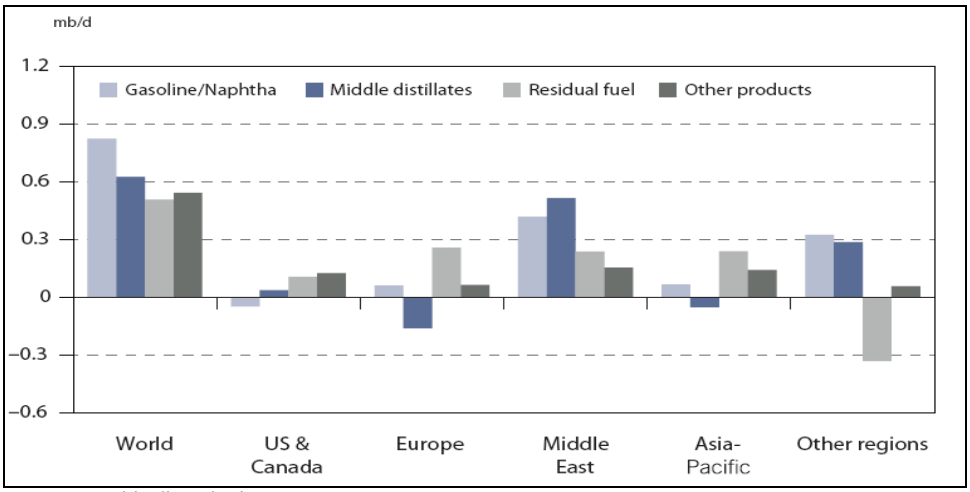
In assessing the implications for regional product balances after capacity additions projected, it should be remembered that refiners have some flexibility to optimise their product slate depending on the market circumstances and seasons, either through altering feedstock composition and/or through adjusting process unit operating modes. World Oil Outlook presents an estimation of the cumulative potential incremental output of refined products resulting from existing projects, grouped into major product categories, under an assumption that these new units are run at 90% utilisation rates. **Almost half (48%) of the increase by 2020 is for middle distillates (3.1mb/d) and another 2.2mb/d (35%) for the light products, naphtha and gasoline**.

Table 29: Global cumulative potential for incremental output, 2015–2020

(mb/d)	Gasoline/Naphtha	Middle distillates	Fuel oil	Other products
2015	0.4	0.6	(0.1)	0.2
2016	0.8	1.0	(0.1)	0.4
2017	1.2	1.5	(0.2)	0.6
2018	1.6	2.0	(0.3)	0.9
2019	1.9	2.5	(0.3)	1.1
2020	2.2	3.1	(0.2)	1.3

Based on 90% utilisation for new units

Chart 43: Expected surplus/deficit according to product category



Source: World Oil Outlook

The Middle East is projected to be the one region with surpluses in every product group by 2020, and also by far have the highest aggregate surplus at 1.3mb/d. All other regions are expected to have aggregate surpluses in the range of 0.2-0.4mb/d in 2020, but with deficits in one major product category. Across all products combined, the cumulative global surplus in the medium term is some 2.5mb/d. Consistent with a total surplus 2.5mb/d across all products by 2020, 'other products' are projected to be in surplus by over 0.5mb/d and, interestingly, distillates too at close to 0.6mb/d. The distillate surplus reflects the industry shifting to add more distillate capacity, including hydro-cracking, and a dip in estimates for distillate demand growth, especially for Asian countries. The regional imbalances indicate the potential for distillate trading trends, notably from the Middle East to Europe

The table below shows the reconciliation of ATF prices with the crude prices. The Indian ATF prices are a sum of the crude prices, the Jet Kero crack, the marketing margins charged by Indian oil companies along with the cost of freight and transportation and taxes. The taxes include two major components: 1) excise duty

(raised from 8% to 14% in FY17 Union Budget), and 2) sales tax which ranges from 20-30% depending upon location.

Table 30: Reconciliation of crude prices with Indian ATF tariffs

	1-Apr-15				10-Mar-16							
	Delhi	Kolkata	Mumbai	Chennai	Delhi	Kolkata	Mumbai	Chennai	FY17E	FY18E	FY19E	FY20E
Basic price (Rs/KL)-India	32,600	33,280	32,710	33,080	25,769	25,168	24,910	25,419	33,379	35,486	35,486	35,486
Basic price (Rs/L)	32.60	33.28	32.71	33.08	25.77	25.17	24.91	25.42	33.38	35.49	35.49	35.49
US$	62.19	62.19	62.19	62.19	67.13	67.13	67.13	67.13	67.00	67.00	67.00	67.00
Barrel to Litre Conversion	159.00	159.00	159.00	159.00	159.00	159.00	159.00	159.00	159.00	159.00	159.00	159.00
Basic Price (US$/bbl)-India	83.35	85.09	83.63	84.58	61.03	59.61	59.00	60.20	79.21	84.21	84.21	84.21
Dubai Crude	53.40	53.40	53.40	53.40	34.41	34.41	34.41	34.41	55.00	60.00	60.00	60.00
Jet kero Crack	14.69	14.69	14.69	14.69	12.07	12.07	12.07	12.07	12.00	12.00	12.00	12.00
Bloomberg Singapore Jet Kerosene	66.90	66.90	66.90	66.90	47.75	47.75	47.75	47.75	67.00	72.00	72.00	72.00
Differential- Marketing margin+Freight	16.45	18.19	16.73	17.68	13.28	11.86	11.25	12.45	12.21	12.21	12.21	12.21
Inland differential	570	-	-	-	485				121	121	121	121
State surcharge	841	3,210	946	841	600	2,291	675	600	1,042	1,042	1,042	1,042
Freight	504	954	100	362	403	764	80	289	384	384	384	384
Siding charges	49	-	-	-	49	-	-	-	12	12	12	12
Marketing cost	3,241	5,581	3,490	4,402	2,313	3,984	2,491	3,142	2,982	2,982	2,982	2,982
MSL cost	308	308	308	308	308	308	308	308	308	308	308	308
Assessable value	38,113	43,334	37,554	38,993	29,927	32,514	28,464	29,758	38,228	40,335	40,335	40,335
Excise Duty Rate	8	8	8	8	8	8	8	8	14	14	14	14
Excise Duty	3,049	3,467	3,004	3,119	2,394	2,601	2,277	2,381	5,352	5,647	5,647	5,647
Education Cess @3% on ED	-	-	-	-								
Toll Tax	-	-	-	-								
Posted Airfield Price per KL	41,162	46,800	40,558	42,112	32,321	35,115	30,741	32,139	43,580	45,982	45,982	45,982
HPCL Website Price	41,273	46,891	40,570	42,215	31,598	36,831	30,741	32,552				
Sales Tax Rate	20	25	25	29	20	25	25	29	25	25	25	25
Sales Tax Amount	8,232	11,700	10,140	12,213	6,464	8,779	7,685	9,320	10,786	11,381	11,381	11,381
Surcharge on Sales Tax- Rate	-	-	-	-								
Surcharge on Sales Tax- Rate	-	-	-	-								
Final selling price per KL	**49,395**	**58,500**	**50,698**	**54,325**	**38,785**	**43,894**	**38,426**	**41,459**	**54,366**	**57,363**	**57,363**	**57,363**
ATF retail price (Rs/KL)	49,338	58,614	50,713	54,457	38,785	43,894	38,426	41,459	54,366	57,363	57,363	57,363

Source: MoPG, I-Sec research

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Equity Research

June 16, 2016

BSE Sensex: 26726

Aviation

Target price Rs1,268

Shareholding pattern

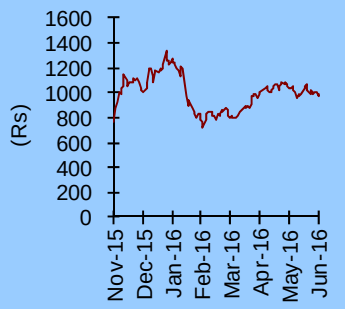
	Dec '15
Promoters	86.2
Institutional investors	7.2
MFs and UTI	1.2
Insurance	0.0
FIIs	6.0
Others	6.6

I-Sec vs Bbg* consensus

(%)	FY17E	FY18E
Sales	0.9	(1.5)
EBITDA	(5.9)	14.2
Adj. PAT	(11.1)	14.3

Source: *Bloomberg, I-Sec research

Price chart



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INDIA

InterGlobe Aviation

BUY

Consolidating leadership

Rs1,011

Reason for report: Initiating coverage

InterGlobe Aviation (IndiGo) is the leader in the Indian domestic aviation industry with a market share of 37%, which is expected to increase to 41% by 2020 as it starts taking delivery of the *bulk ordered neos* from Airbus. Armed with the benefits of the lowest cost structure, largest existing orderbook with Airbus and the strongest balance sheet among competitors, IndiGo is the best play in the Indian air traffic growth story by a margin.

- **Volume growth in the best way at the most opportune time leading to increase in market share.** The historical orderbook with Airbus would provide Indigo with the lowest cost way of fleet addition (guidance of 136 aircraft by FY17 and 154 by 2018 from 107 currently) in perhaps an exponential stage of Indian domestic aviation growth which saw 22% passenger growth in 2015. Our analysis of airport capacity shows ~45mn excess capacity in the existing airports, which have 90% of the current traffic apart from the remaining non metro destinations.
- **Cost asymmetry- biggest differentiator in a price driven industry.** IndiGo will continue to enjoy lowest cost structure through its young and uniform A320 fleet which has all the favorable cost levers broadly based on incentives from Airbus, lowest maintenance costs and higher fuel efficiency(with neos coming in). What is ironical, albeit in a positive way, is that the only counterpoise to these cost benefits which may come from drop in incentives through a decline in market value of neos will only happen with a sharp drop in crude prices which anyways is a sweet situation for IndiGo and the sector. Yet, that it will receive an incentive in any case is itself a structural cost differential. However, the interplay of rentals, incentives and better fuel efficiency of the bulk ordered neo will always generate favorable equation for IndiGo. The credit stature and prominence of IndiGo allows it to pay lower supplementary rentals, which will continue ahead along with the benefits of a uniform and young fleet. To give a perspective, the average CASK excluding depreciation and including interest during FY10-FY16 for Indigo, SpiceJet and Jet was Rs3.06, Rs3.42 and Rs4.28.
- **Recommend BUY with a target price of Rs1,268 based on 8x FY18E EV/EBITDAR.** IndiGo is expected to increase its ASK/RPK/Pax from 42.8bn/35.9bn/33.1mn in FY16 to 59.3bn/50.3bn/47mn in FY18E, resulting in EBITDAR growth from Rs56bn in FY16 to Rs87bn in FY18E (FY18E EBITDAR margin of 36%). The lease-adjusted RoCEs will remain ~20%. Our revenue model factors an average fare growth of 2/3% each in FY17/FY18 with a rising crude price assumption of US$55-60/bbl in FY17/FY18.

Market Cap	Rs364bn/US$5.4bn
Reuters/Bloomberg	INGL.BO/INDIGO IN
Shares Outstanding (mn)	360.4
52-week Range (Rs)	1343/720
Free Float (%)	13.9
FII (%)	6.0
Daily Volume (US$/'000)	NA
Absolute Return 3m (%)	26.4
Absolute Return 12m (%)	NA
Sensex Return 3m (%)	9.4
Sensex Return 12m (%)	1.9

Year to March	FY15	FY16P	FY17E	FY18E
Revenue (Rs mn)	139,253	161,399	205,627	243,776
Net Income (Rs mn)	13,042	19,897	21,260	32,034
EPS (Rs)	36.2	55.2	59.0	88.9
% Chg YoY	174.9	52.6	6.9	50.7
P/E (x)	27.9	18.3	17.1	11.3
CEPS (Rs)	44.6	69.2	75.6	106.9
EV/E (x)	20.4	11.9	10.5	6.8
Dividend Yield (%)	3.46	4.25	1.98	1.98
RoCE (%)	23.6	29.5	27.9	35.3
RoE (%)	306.0	109.1	68.4	58.5

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IndiGo growing in the best way at the right time

IndiGo set to benefit from original order driven increase in fleet

It had made characteristic huge fleet orders in 2011 and 2015, which has started being delivered from 2016. IndiGo will receive the maximum direct orders (i.e. from airframers) in this duration. While GoAir has an order of 72 neos, which is likely to trickle through from CY17 onwards, the 75 Boeing-737Max orders of Jet Airways (Jet) is likely to stream in from late 2018 or 2019. SpiceJet ordered 42 737Max's in Oct'13, but till date there has not even been any date announced for the first delivery, leave aside any schedule of delivery. This advantage for Indigo will be critical considering the current strong growth in the Indian aviation market. Clearly, the likes of SpiceJet, Air India and Jet have missed a crucial trick of big bulk ordering in the past five years. A reason could be the poor financial health of these airlines. IndiGo will capitalize on this position, something which is a structural construct in a market where the market leader enjoys a cost advantage and also has a natural reinforcement of that advantage stemming from this expanding fleet of low rental aircraft from an airframer-led order rather than short-term leases.

The original order from an airframer is likely to lead to the lowest rentals on the back of incentives/profit from sale and leasebacks and the characteristic discounts offered in bulk orders. Additionally, being absolutely new, these aircraft typically tend to have the minimum maintenance costs. The higher fuel efficiency of neos will further add to the cost advantage of IndiGo

Now, one may question the relevance of orderbook considering a perfectly functioning aircraft lessor market. While addition or delay/reduction in fleet size has been made more liquid with the active lessor market, implying that airlines can deploy more aircraft in a growing market with the help of **short-term operating leases or wet leases**, that mode of supply chain management inevitably leads to cost escalations. Even a normal lessor arrangement is costly compared to the manufacturer order simply driven by the profit share of the lessor. Hence, very short-term or wet leases would levy even more burden on the operator. SpiceJet has gone for short-term leases as well as wet-leases to boost the capacity so as not to miss the high growing Indian air traffic story. Air India has signed an agreement with Kuwaiti lessor ALAFCO for 14 A320neos, scheduled for delivery from 2017 onwards. However, Air India will have some retirements in line along with probable delays in these deliveries, which is likely to result in minimal fleet growth for it. These moves, while responsive to the higher demand in Indian domestic air traffic and the low oil price environment, will ultimately further erode the cost structures of the respective airlines compared to IndiGo. So, the pecking order of fleet induction from the best to worst will be as follows:

- Original order from OEMs being used through placement to lessors.
- Medium-term operating leases (3-6 years)
- Short-term operating leases (1-3 years)
- Very short-term operating leases (less than a year) and wet leases.

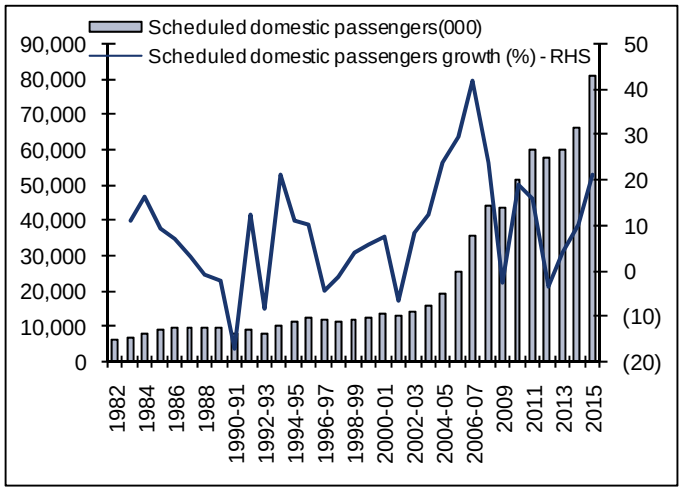
Why longer term leases are better than short term leases?

- **Longer term leases more proximate to owning.** In many ways, long-term leases are easier to negotiate because the longer the term, leasing comes closer to owning. In that case, the lessee expects to be responsible for all fixed and variable operating costs, just as if he were the owner. The financial institution, on the other hand, takes the residual risk on the aircraft's value on lease termination.
- **Difference in expectation between lessor and lessee widens in short term leases**. A one to three year lease is a different ball game, and a large gap often looms between the desires and expectations of lessor and lessee. The lessor – especially if it is a financial institution – usually has no appetite for retaining any risk, exposure or expense related to the aircraft. The lessee, on the other hand, regards the aircraft as a temporary solution to its needs. It is generally not interested in treating the airplane like something it owns, and certainly not in pouring money into it.
- **Maintenance burden is always an issue in short term leases.** It is particularly troublesome during negotiations about the lessee's responsibility for maintenance. A reasonable lessor should be willing to share the cost of that inspection with the lessee and make some accommodation regarding downtime and give an extension to the lease term that wholly or partly covers the downtime.
- **Unscheduled maintenance can waste money and even shorten the effective time of the lease**. Unfortunately, prorating costs between lessor and lessee doesn't help much with unscheduled maintenance. Then there is an issue if the aircraft requires additional maintenance because of negligent operation by the lessee. Depending on the lease term, there will also be a full-blown pre-buy inspection to ensure that the aircraft is in good condition.

Why is it an opportune time in Indian aviation?

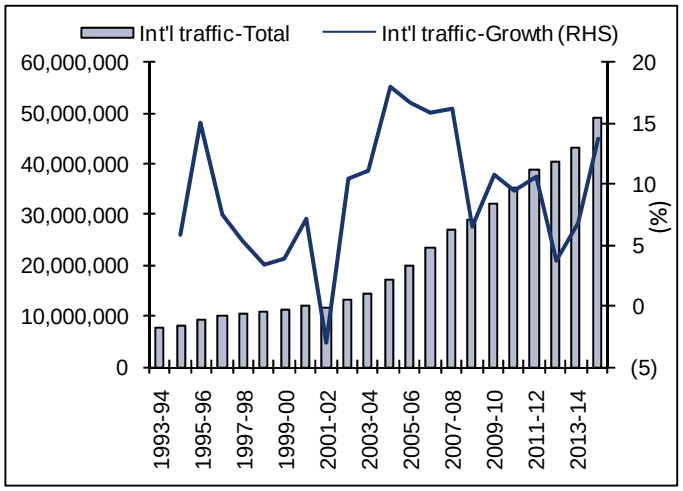
The Indian aviation market has grown tremendously in the past decade with reasons galore. There is the burgeoning middle class, congested rail capacity, young demographics and the relatively high performing economy. This is best reflected in the domestic passenger growth trend, which has also been boosted by the low fares from a low oil price environment. We have highlighted the same in details in our sector note, where we have shown how India is poised in the exponential growth seat based on its GDP per capita and the low flight penetration. Though low penetration and high consumer base is a constant theme in India, applicable to most of the consumer facing industries, the story has played out absolutely along expected lines in Indian air traffic. There has been a stellar growth in Indian air traffic post 2000, only interrupted for a short term during the 2009 on account of the global financial crisis.

Chart 1: Indian domestic passenger traffic growth, 21.5% in CY15.



Source: DGCA

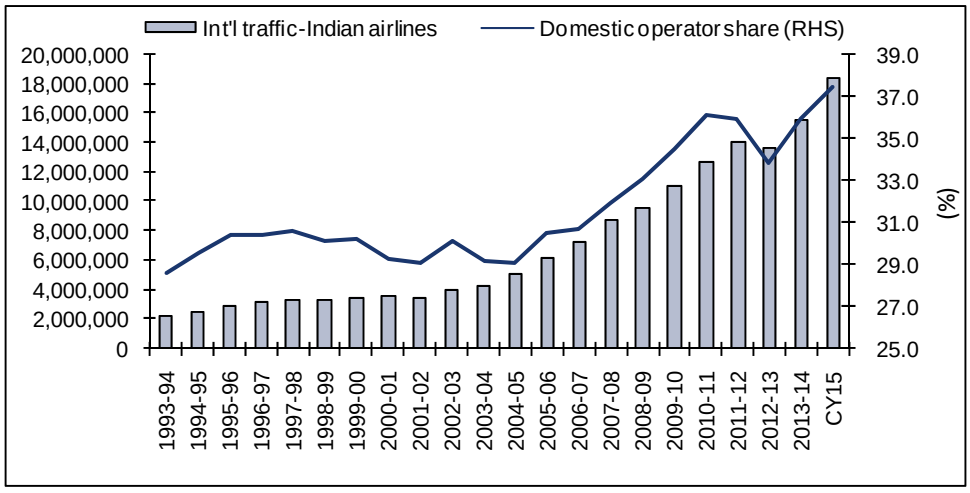
Chart 2: Total international air traffic growth, 13.7% in CY15



Source: DGCA

Chart 3: International traffic share of domestic airlines have grown steadily

Domestic airlines have increased their share in total international air traffic from 29% in 1994 to 38% in CY15.



Source: DGCA

IndiGo set to gain market share

We have made a supply model of the planned capacity additions of all domestic airlines in India over the next four years, factoring the orders placed, probable delays, replacements and resultant average domestic seats for the period between FY17-FY20. We believe that yield management will ensure that most of the large airlines will operate along the 85% level of PLFs. However, some of the new and marginal airlines will not be able to garner such PLFs, simply due to the exorbitant high passenger growth required for them in order to achieve the same. The result of the exercise is the implied passenger growth of all airlines and also the total domestic passenger growth model.

Our domestic supply-demand model shows implied domestic passenger growth rate of 14%. Our supply demand model for domestic air traffic in India has a consolidated average growth of 14% over the next four years. This is the implied growth rate based on the capacity addition programs of domestic airlines. This model accounts for all the operating airlines in India along with their planned capacity additions, hence reflects competition. We have already established that, barring a perilous way of short-term operating lease/wet lease, the capacity addition options should be largely in line with the airline's plan. Additionally, PLFs typically tend to be stable or modestly increasing at an aggregate level, thanks to the aggressive yield management practices adopted by the airline industry. These boundary conditions of rational capacity addition, passenger growth and PLF levels are the bedrocks of our India domestic air traffic model.

Therefore, when we arrive at an average industry growth of 14% with these boundary conditions, it is but the implied growth rate of the system.

It is a supply model to generate the implied demand growth.

Table 1: Domestic air traffic supply model

System	FY16E	FY17E	FY18E	FY19E	FY20E
Passenger growth		**15.5**	**13.0**	**14.1**	**14.7**
Passengers carried	85,197,675	98,363,142	111,189,886	126,879,624	145,505,253
Avg km per passenger	950	954	956	956	956
RPK (mn)	80,938	93,838	106,298	121,297	139,103
Departure/plane	1,980	2,000	2,030	2,040	2,050
Effective seats (FY)	56,044	64,504	70,043	78,812	90,916
Avg km per seat	881	890	885	881	881
ASK (mn)	97,761	114,817	125,836	141,644	164,199
PLF (%)	82.8	81.7	84.5	85.6	84.7

Source: I-Sec research

IndiGo is price setter in a competitive market from its high low-cost capacity at disposal. With a cost advantageous growing fleet in a growing market, IndiGo is a price setter. With active yield management which is so prevalent in the current airline business, PLFs normally tend to increase over time or best stabilize over time. This again is evident from all the international markets. We have studied the US and UK airlines industry and they have both witnessed rising PLFs over time. Though at the perils of operating in a near a complete price war based strategy leading to disastrous competition, the airlines industry has truly engaged in price management to maintain PLFs. We have detailed the same in our sector piece. The reason we mention it here is that IndiGo is least likely to accept low PLFs, which would be a natural result post increase in its fleet size.

IndiGo is likely to set prices accordingly to boost its PLF, ultimately increasing its market share. While low fares and price wars will affect IndiGo, it will affect the others even more because of IndiGo's inherently high margins. The natural question that will arise now is whether there is a need for price war and cut-throat competition. **As evident in our Indian passenger growth model, which has an implied passenger growth of 14% CAGR, even considering all the fleet addition programs, Indian air traffic should have enough natural growth to avoid irrational fare wars. However, as is the case in an oligopoly and its related game theory, sanity and rationality are the virtues which often elude the psyche of industry players.** Yet, in an adverse scenario of such an eventuality, IndiGo is likely to weather the storm and consolidate its dominant market share, considering its lowest cost structure, which we discuss in the successive sections.

- **Increase in IndiGo's market share from 36.9% to 41.1% by FY20.** This is largely driven by IndiGo's capacity increase. However, the implied passenger growth is an average 18% for IndiGo between FY17-FY20. This is very much possible because, even then, IndiGo's PLFs would remain in the 80-86% range.

Table 2: IndiGo supply model

System	FY16	FY17	FY18	FY19	FY20
Passenger growth		**25.0**	**15.0**	**15.0**	**15.0**
Passengers carried	31,453,451	39,316,814	45,214,336	51,996,486	59,795,959
Market Share	36.9	40.0	40.7	41.0	41.1
Avg. km per passenger	1,028	1,028	1,028	1,028	1,028
RPK (mn)	32,318	40,398	46,458	53,426	61,440
Departure/plane	2,510	2,510	2,510	2,510	2,510
Effective seats (FY)	16,895	22,093	24,043	26,847	30,609
Avg. km per seat	906	906	906	906	906
ASK (mn)	38,420	50,241	54,674	61,052	69,607
PLF (%)	**84.1**	**80.4**	**85.0**	**87.5**	**88.3**

Source: Company Data, I-Sec research

- **New entrants would struggle; exits would lead to further consolidation.** The combined market share of the new players would remain low. To give a perspective, the combined market share of Air India Express, Air Alliance, Vistara, True Jet, Pegasus, Air Costa and Air Asia would only manage to increase only by 1% between FY17 and FY20E. Although Air India Express and Air Alliance are not new, we have clubbed them in the group considering their low market share. This is the maximum market share they are able to reach with a passenger growth at 20% CAGR between FY17E-FY20E. Their PLFs would remain low, but increase in line with the growth in traffic. We believe it would be difficult for them to achieve a growth beyond 20% considering the market dominance of established players, the deep pocket of the market leader who also enjoys a cost advantage and no major fleet orderbook. Any growth beyond the 20% would imply an unsustainable erosion of net worth. Any exits by any of the players or weakening of position would further provide opportunity for consolidation of the industry. So, one wonders whether IndiGo has any such exits factored in with their big orderbook.

Table 3: Air Asia supply model

System	FY16E	FY17E	FY18E	FY19E	FY20E
Passenger growth		**20.0**	**20.0**	**20.0**	**20.0**
Passengers carried	1,705,808	2,046,970	2,456,364	2,947,636	3,537,163
Market share	2.0	2.1	2.2	2.3	2.4
Avg. km per passenger	1,104	1,104	1,104	1,104	1,104
RPK (mn)	1,883	2,260	2,712	3,254	3,905
Departure/plane	2,500	2,500	2,500	2,500	2,500
Effective seats (FY)	899	1,260	1,440	1,620	1,980
Avg. km per seat	1,045	1,045	1,045	1,045	1,045
ASK (mn)	2,348	3,292	3,762	4,232	5,172
PLF (%)	**80.2**	**68.7**	**72.1**	**76.9**	**75.5**

Source: Company data, I-Sec research

Table 4: Vistara supply model

System	FY16E	FY17E	FY18E	FY19E	FY20E
Passenger growth		20.0	20.0	20.0	20.0
Passengers carried	1,422,611	1,707,133	2,048,560	2,458,272	2,949,926
Market share	1.67	1.74	1.84	1.94	2.03
Avg. km per passenger	1,028	1,028	1,028	1,028	1,028
RPK (mn)	1,462	1,755	2,106	2,527	3,033
Departure/plane	2,350	2,000	2,000	2,000	2,000
Effective seats (FY)	888	1,332	1,406	1,628	1,998
Avg. km per seat	1,010	1,010	1,010	1,010	1,010
ASK (mn)	2,108	2,691	2,840	3,289	4,036
PLF (%)	**69.4**	**65.2**	**74.1**	**76.8**	**75.1**

Source: Company data, I-Sec research

- **Maximum decline in market share likely for Air India followed by Jet.** A slower growth in capacity will drive this lower market share for 'Air India and Jet. This is a missed opportunity for Air India/Jet who has not been able to manage their fleet inventory with long delays in orders and a higher share of wide body aircraft. To give a sense, Jet has had to lease 10 aircraft to Turkish Airways/Etihad, while Air India has recently concluded an agreement with a Kuwaiti leasing company whose supply is not likely to come in before FY18.

  However, it is not the missed opportunity from a strategy point of view, but more from the poor financial condition of these carriers. These airlines are big enough to take significantly more time to turnaround and as such it is in their best interest to focus on deleveraging rather than capacity expansion.

Table 5: Air India supply model

System	FY16E	FY17E	FY18E	FY19E	FY20E
Passenger growth		**3.0**	**8.0**	**5.0**	**4.0**
Passengers carried	12,742,163	13,124,428	14,174,382	14,883,101	15,478,425
Market share	15.0	13.3	12.7	11.7	10.6
Avg. km per passenger	961	961	961	961	961
RPK (mn)	12,245	12,613	13,622	14,303	14,875
Departure/plane	1,085	1,085	1,085	1,085	1,085
Effective seats (FY)	12,299	12,430	12,839	13,437	13,825
Avg. km per seat	1,159	1,159	1,159	1,159	1,159
ASK (mn)	15,470	15,634	16,150	16,902	17,389
PLF (%)	**79.2**	**80.7**	**84.3**	**84.6**	**85.5**

Source: Company data, I-Sec research

Table 6: Jet Airways supply model

System	FY16E	FY17E	FY18E	FY19E	FY20E
Passenger growth		**8.0**	**3.0**	**12.0**	**15.0**
Passengers carried	15,961,308	17,238,213	17,755,359	19,886,002	22,868,902
Market share	18.7	17.5	16.0	15.7	15.7
Avg. km per passenger	864	864	864	864	864
RPK (mn)	13,783	14,885	15,332	17,172	19,747
Departure/plane	1,825	1,825	1,825	1,825	1,825
Effective seats (FY)	12,877	13,412	13,443	15,268	18,275
Avg. km per seat	728	728	728	728	728
ASK (mn)	17,109	17,819	17,860	20,286	24,280
PLF (%)	**80.6**	**83.5**	**85.8**	**84.6**	**81.3**

Source: Company data, I-Sec research

- **SpiceJet and GoAir likely to have high PLFs and modest growth in market share.** These two airlines are likely to increase their fleet size on the back of orders made earlier, albeit on a small scale compared to IndiGo. This will result in modest increase in market share. The limiting factor of capacity is evident from their relatively higher operating PLFs.

Table 7: SpiceJet growth model

System	FY16E	FY17E	FY18E	FY19E	FY20E
Passenger growth		**15.0**	**20.0**	**20.0**	**20.0**
Passengers carried	10,670,866	12,271,496	14,725,795	17,670,954	21,205,145
Market share	12.5	12.5	13.2	13.9	14.6
Avg. km per passenger	874	874	874	874	874
RPK (mn)	9,326	10,725	12,870	15,444	18,533
Departure/plane	2,100	2,100	2,100	2,100	2,100
Effective seats (FY)	5,775	6,567	8,220	10,160	12,780
Avg. km per seat	836	836	836	836	836
ASK (mn)	10,139	11,530	14,432	17,837	22,437
PLF (%)	**92.0**	**93.0**	**89.2**	**86.6**	**82.6**

Source: Company data, I-Sec research

Table 8: GoAir's growth trajectory

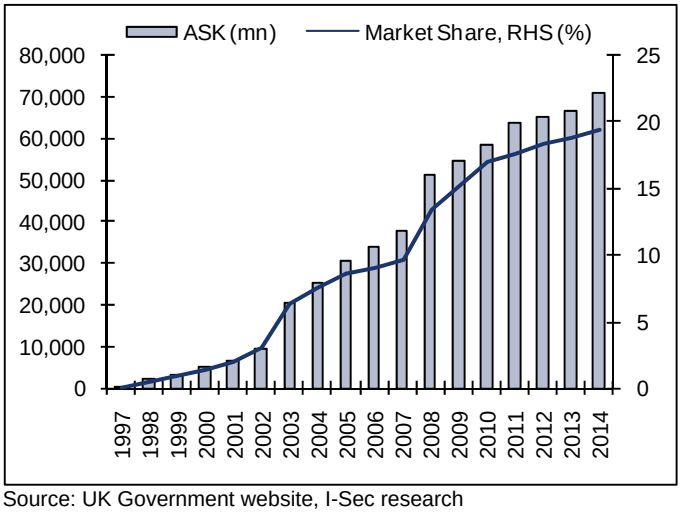
System	FY16E	FY17E	FY18E	FY19E	FY20E
Passenger growth		**16.0**	**22.0**	**18.0**	**18.0**
Passengers carried	7,160,189	8,305,819	10,133,099	11,957,057	14,109,328
Market share	8.4	8.4	9.1	9.4	9.7
Avg. km per passenger	945	945	945	945	945
RPK (mn)	6,766	7,849	9,576	11,299	13,333
Departure/plane	2,500	2,500	2,500	2,500	2,500
Effective seats (FY)	3,420	3,960	4,860	5,580	6,660
Avg. km per seat	946	946	946	946	946
ASK (mn)	8,088	9,365	11,494	13,197	15,751
PLF (%)	**83.7**	**83.8**	**83.3**	**85.6**	**84.7**

Source: Company data, I-Sec research

Can IndiGo manage a multi-period strong growth?

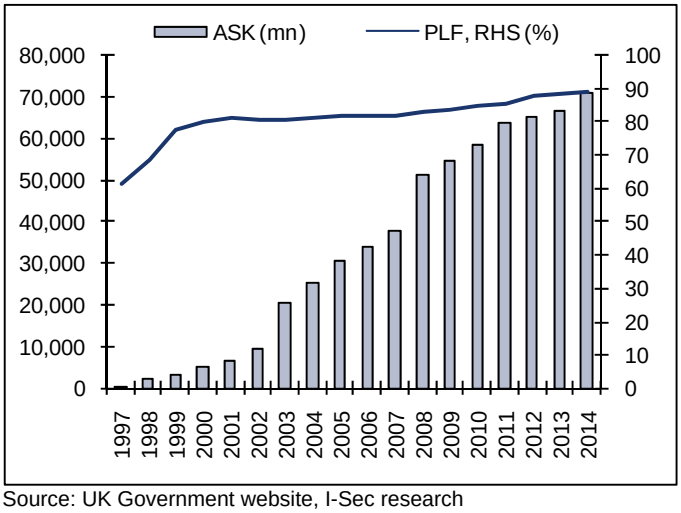
We believe it can, considering its pole position in the Indian aviation market and cost leadership. We have similar instances of strong growth in capacity and a resultant stronger market share growth exhibited by easyJet in the UK, Southwest in the US and Ryanair in Europe.

Chart 4: Growth in ASK and market share of EasyJet



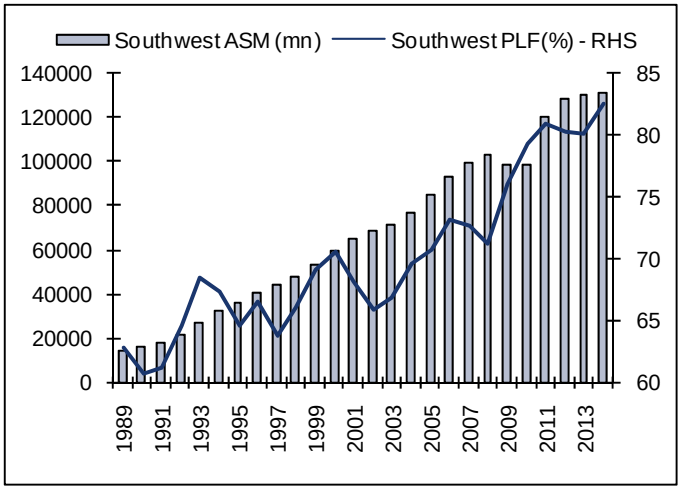
Source: UK Government website, I-Sec research

Chart 5: EasyJet PLFs tend to remain stable



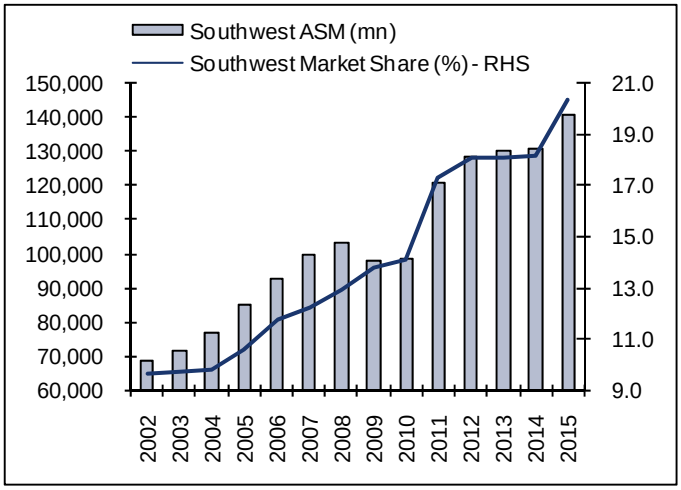
Source: UK Government website, I-Sec research

Chart 6: PLFs have steadily risen by yield management over the last decade



Source: Company Data, I-Sec research

Chart 7: Growth in ASK and market share of Southwest airlines



Source: Company Data, I-Sec research

IndiGo fleet details – new, uniform, Airbus

IndiGo has made characteristic big orders till date

- The company placed firm order with Airbus for 100 A320 aircraft in June 2005, all of which were delivered by November 3, 2014, about two years ahead of the initially scheduled final delivery date.
- It placed firm orders with Airbus for 180 A320neo aircraft in June 2011.
- It placed purchase orders with Airbus for 250 A320neo aircraft in August 2015. The orders are expected to start delivery from 2018 subject to increase or delay by Airbus.

Option available to IndiGo include using 189 seats instead of 180 and opting for a bigger A321 (220 seats)compared to A320

Currently all of the aircraft carry the V-2527-A5 variant of the V2500 SelectOne engine manufactured by IAE, and, upon delivery, all of the A320neo aircraft in our 2011 order will utilize Pratt & Whitney engines. However, the company is yet to select the engines for A320 neo order of 2015. The seating configuration is optimized at 180, all of which is in the economy class.

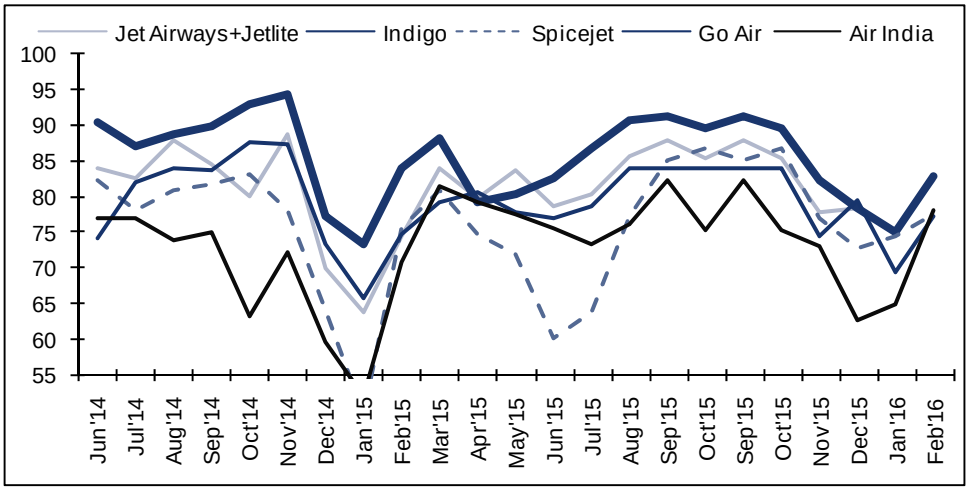
A320neo delivery schedule is back on track; targets 136 fleet strength by FY17

Delay in aircraft delivery addressed as of now. Delay in aircraft delivery can happen for a variety of reasons. In the recent case of A320 neo, the cause of delay was extra time required for cooling of the Pratt & Whitney Geared Turbofan engine under some circumstances. When Qatar Airways held itself back on accepting delivery of the first A320neo, Lufthansa stepped up to become the first airline to receive the same. While some teething problem will get resolved, Airbus has confirmed that the technical glitch will be addressed and the very fact that a delivery has already been made is very much assuring.

Uniform fleet makes way for best OTP

On-time performance (OTP) is critical to customers when choosing an airline to fly, so it is a key competitive dimension in the airline industry. Carriers with better on-time performance display comparative statistics on flight delays prominently on their websites. At the same time, airlines that are plagued by excessive flight delays receive a great deal of negative publicity. While the qualitative angle of customer delight and negative publicity is well known, punctual airlines seem to be more profitable. We present two snapshots of US/Europe airline operators which indicate the positive relationship between on-time performance and operating margins. Similar story is there for Indian operators as well, where not surprisingly, the best OTP operator also enjoys the highest margins and profitability.

Chart 8: OTP of Indian airlines operators (%)-thick line on the top is for Indigo



Source: DGCA

The three key parameters to push punctuality are network planning and control, aircraft availability and ground operations and departure process.

The thick line is the OTP of IndiGo, which is distinctively superior to other airlines. We underline that this OTP of IndiGo is an example of its superior operations.

The other themes which come across from the chart are the weak performance of SpiceJet and Air India. However, SpiceJet has made significant improvement in the past three quarters and has been able to improve its OTP.

Chart 9: Airline punctuality *vs.* operating margin – US 1999

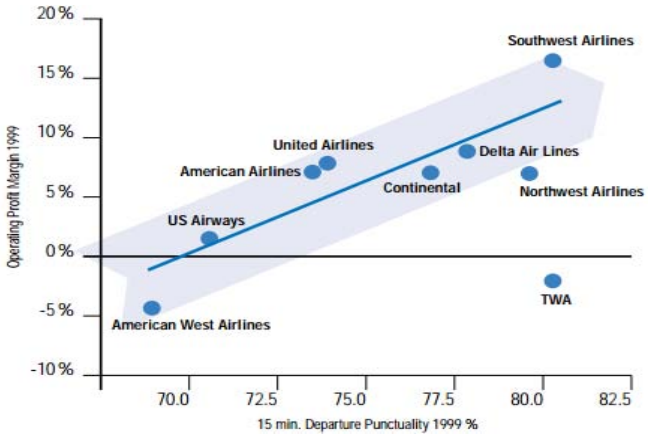
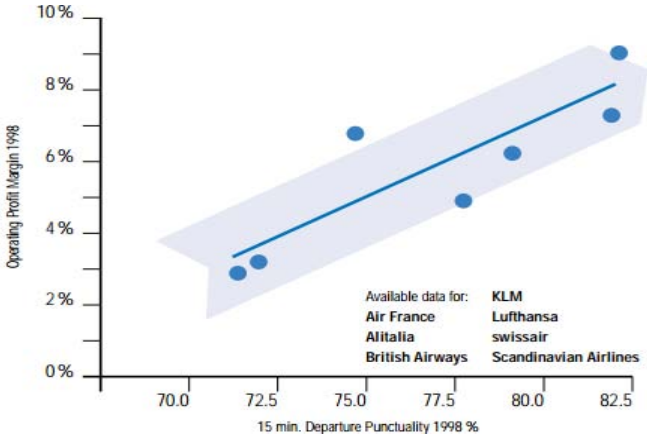


Chart 10: Airline punctuality *vs.* operating margin – Europe 1998



Source: Booze Allen & Hamilton Report

Higher utilisation compromises OTP

Utilisation and OTP are difficult to achieve simultaneously at higher levels. There is a tradeoff between one particular way that airlines can reduce cost – namely, increasing aircraft utilisation – and a quality dimension that it is closely related to it – OTP. With other things being equal, for any airline, reducing unit cost by increasing aircraft utilisation would hurt OTP, due to longer delays. Linking to the notion of closeness to the asset frontier, airlines that are operating close to their asset frontier, in that they are already at a high level of aircraft utilisation, incur a heavier penalty in terms of worsened OTP when they further increase aircraft utilisation, relative to airlines operating further away from their asset frontier.

Additionally, all else being equal, routes with greater capacity flexibility in terms of the ability to swap a different aircraft than the one scheduled for a flight, should incur lower delays, at the same level of aircraft utilisation.

Increasing load factors can also dampen OTP. Due to improvements in revenue management, airlines have made huge strides in increasing load factors over time. However, since flying fuller planes increases the time needed for boarding, deplaning and ground activities, one would expect that if aircraft utilisation is high, increasing load factor could simultaneously worsen OTP.

As such, one does wonder the sustainability of the 90%-plus PLF pattern of SpiceJet and the 13hour plus utilization of Jet Airways. They has managed a commendable turnaround and higher asset utilisation along with increase in PLFs. However, they need to stand guard against another drop in OTP as has happened in the past.

Airport capacity-is there room for IndiGo to grow?

The Indian airports have constraints with some of the airports already running above capacity. However, the overcapacity is in metros like Mumbai, Hyderabad, Pune and Goa. We have elaborated the same in our sector piece. However, the non-metro tier 2 and 3 cities have enough room to grow. This is best described by mapping the airports which Indigo does not fly now despite being capable of accommodating an A320.

There is enough excess capacity in Indian airports to absorb incremental ASK of IndiGo

We have made a route map table for the major domestic airlines in India as shown in table below. The yellow shaded cells indicate cities with more than 10,000 passengers per month (Based on March 16). While most of these cities are covered by Jet/Air India, there are several cities yet to be covered for IndiGo, SpiceJet and GoAir. This is especially positive for IndiGo, which will tap these markets as it aggressively ramps up its capacity. We have also indicated the cities which are capable of handling an A320 (relevant for IndiGo and GoAir). Airports which are big enough to host an A320 will also be capable to host a B737 (relevant for SpiceJet and Jet Airways).

The upcoming capacity of IndiGo is likely to target these growth cities. Based on the table below, there are 17 cities which have an airport capable of hosting an A320 and where IndiGo has no current flights.

Table 9: Current traffic and capacity of Indian airports (cumulative 90% of the traffic)

Airport	Pax (mn)	Share(%)	Capacity	Post expansion	Current excess capacity	Cumulative Share
Delhi	48.40	21.6	60.0	100	11.6	21.6
Mumbai	41.67	18.6	40.0		(1.7)	40.3
Bangalore	18.96	8.5	20.0	50	1.0	48.8
Chennai	15.22	6.8	23.0	30	7.8	55.6
Kolkata	12.42	5.6	24.0		11.6	61.1
Hyderabad	12.36	5.5	12.0	50	(0.4)	66.6
Cochin	7.75	3.5	13.0	20	5.3	70.1
Ahmedabad	6.48	2.9	14.0		7.5	73.0
Pune	5.42	2.4	3.9	12	(1.5)	75.4
Goa	5.38	2.4	4.9	13	(0.5)	77.8
Trivandrum	3.47	1.6	14.0		10.5	79.4
Lucknow	3.24	1.4	3.0	6	(0.2)	80.8
Jaipur	2.89	1.3	8.8		5.9	82.1
Guwahati	2.78	1.2	5.5		2.7	83.4
Srinagar	2.31	1.0	8.3		6.0	84.4
Calicut	2.31	1.0	6.6		4.3	85.4
Bhubaneshwar	1.89	0.8	3.5		1.6	86.3
Visakhapatnam	1.80	0.8	6.1	12	4.3	87.1
Indore	1.69	0.8	6.1		4.4	87.8
Coimbatore	1.69	0.8	5.5	11	3.8	88.6
Mangalore	1.67	0.7	4.4		2.7	89.4
Nagpur	1.60	0.7	9.6		8.0	90.1

Source: Company Data, I-Sec research

Table 10: Current domestic route map of Indian airlines

Destinations	Jet Airways	Indigo	Spicejet	Go Air	Air India	Vistara	Air Asia	Monthly Traffic
Chandigarh	✓	✓	✓	✓	✓	✓	✓	159,138
Bengaluru	✓	✓	✓	✓	✓	✓	✓	1,380,333
Kochi	✓	✓	✓	✓	✓	✓	✓	280,739
Goa	✓	✓	✓	✓	✓	✓	✓	449,877
Srinagar	✓	✓	✓	✓	✓	✓		191,332
Jammu	✓	✓	✓	✓	✓	✓		101,945
Delhi	✓	✓	✓	✓	✓	✓		3,274,512
Jaipur	✓	✓	✓	✓	✓		✓	244,888
Ahmedabad	✓	✓	✓	✓	✓	✓		502,893
Lucknow	✓	✓	✓	✓	✓	✓		238,786
Bagdogra	✓	✓	✓	✓	✓	✓		108,934
Guwahati	✓	✓	✓	✓	✓	✓		270,479
Kolkata	✓	✓	✓	✓	✓		✓	1,004,200
Hyderabad	✓	✓	✓	✓	✓	✓		867,021

Destinations	Jet Airways	Indigo	Spicejet	Go Air	Air India	Vistara	Air Asia	Monthly Traffic
Chennai	✓	✓	✓	✓	✓		✓	978,593
Mumbai	✓	✓	✓	✓	✓	✓		2,613,920
Pune	✓	✓	✓	✓	✓	✓		486,621
Varanasi	✓	✓	✓		✓	✓		150,999
Dehradun	✓	✓	✓		✓			61,628
Udaipur	✓	✓	✓		✓			85,074
Indore	✓	✓	✓		✓			138,973
Patna	✓	✓		✓	✓			153,546
Agartala	✓	✓	✓		✓			81,573
Vizag	✓	✓	✓		✓			163,048
Coimbatore	✓	✓	✓		✓			135,720
Trivandrum	✓	✓	✓		✓			113,244
Kozhikode	✓	✓	✓		✓			31,478
Nagpur	✓	✓		✓	✓			134,060
Port Blair	✓	A320	✓	✓	✓			84,896
Bhubhaneswar		✓		✓	✓	✓		175,873
Leh	✓	A320		✓	✓			23,431
Amritsar	✓	A320	✓		✓			94,142
Baroda	✓	✓			✓			80,586
Bhopal	✓	A320	✓		✓			51,782
Khajuraho	✓		✓		✓			8,780
Imphal	✓	✓			✓			79,673
Raipur	✓	✓			✓			101,443
Vijaywada	✓	A320	✓		✓			39,196
Madurai	✓	A320	✓		✓			60,225
Mangalore	✓	A320	✓		✓			77,597
Aurangabad	✓	A320	✓		✓			25,141
Ranchi		✓		✓	✓			66,925
Jodhpur	✓	A320			✓			24,972
Bhuj	✓	A320			✓			12,105
Rajkot	✓	A320			✓			30,942
Silchar	✓	A320			✓			16,301
Aizawl	✓	A320			✓			13,090
Rajahmundry	✓		✓					19,448
Tiruchirapalli	✓	A320	✓					11,915
Dharamsala			✓		✓			8,360
Allahabad			✓		✓			3,516
Tirupati		A320	✓		✓			36,778
Surat		A320	✓		✓			12,467
Jabalpur		A320	✓		✓			10,949
Dimapur		✓			✓			9,530
Dibrugarh		✓			✓			26,674
Gorakhpur	✓							5,105
Jorhat	✓	A320						4,342
Belgaum			✓					8,913
Hubli			✓					3,255
Pondicherry			✓					-
Tuticorin			✓					8,264
Mysore			✓					-
Agatti					✓			1,814
Agra					✓			1,382
Dammam					✓			-
Diu					✓			2,717
Durgapur		A320			✓			1,414
Gaya		A320			✓			6,901
Gwalior		A320			✓			1,204
Jamnagar		A320			✓			6,698
Kullu					✓			1,704
Lilabari					✓			738
Pantnagar					✓			1,010
Shillong					✓			1,105
Tezpur					✓			172

Source: Company Data, I-Sec research

Cost advantage of IndiGo – a deep dive analysis

Bulk orders – genesis of cost advantage

IndiGo's cost advantage stems from two main strategies of bulk ordering and uniform A320 fleet. Now, bulk ordering would automatically result in a uniform fleet and, as such, we will further analyze the effects of the big bulk orders that IndiGo has made, and then ponder how it was possible to capitalize on the same from the selection of A320 as the aircraft for IndiGo.

IndiGo generates a lot of value through incentives received from Airbus. The incentives decrease the net rentals for IndiGo. Now one may question the sustainability of these incentives, whether they are a part of the core operations of an airline business and how investors should be looking at these payments. To give a fair assessment, IndiGo reported incentives of Rs17.6bn between FY10-FY15, which is almost 47% of its reported PAT during the same time period.

Incentives are a play on aircraft markets, but offers head start value. IndiGo purchases the right to buy aircraft in a bulk order from Airbus with 3-5% of the value as a down payment (which is big for weak balance sheet players). When the aircraft is ready for delivery, IndiGo can trade it to lessors to cash in the difference between the market value of the aircraft and the deep discount value at which it has booked from Airbus. As such, IndiGo is a play not only on the airline market but also the aircraft asset market and this value capture happens through the incentives which decrease IndiGo's rental outgo. However, this asset play has a strategic advantage of the deep discounts that it has received from the OEM, which in turn is a result of the bulk order.

Bulk orders enable a value transfer from airframers to airlines. Bulk orders come with huge discounts to market price. Airframers like Airbus and Boeing depend on big orders to have a committed orderbook and dedicated assembly line, which should have some resistance to the vagaries of global economy and offer discounts to bulk orders where the final price can be 60-70% of the listed price or even lower depending on the order. The desired resistance comes in the shape of upfront payment required for the bulk order, which can be of significant help in the case of order cancellation or postponement. This value which gets transferred to the airlines comes at the simultaneous risk of the asset which is now transferred to the airline. Clearly, the importance of the bulk order cannot be underestimated. Without the bulk order, there is no value in risk interchange because there are no deep discounts.

What if Incentives go down?

The direct relationship between the aircraft value and rentals offers a strategic hedge. The value and risk that was transferred to airlines which placed the bulk order now has another partner in the form of aircraft lessors. These aircraft lessors can now buy the aircraft from the airline and charge rentals. The direct relationship between the aircraft value and rentals would offer a hedge to the airlines in the following ways:

- If the aircraft value would have increased between the order and delivery, the asset business of the airline would have given a very good value (deep discounts plus the market driven increase in asset value over time); partially offset by the airline business, which now has to pay higher rentals for a higher value asset.
- **If aircraft value would have decreased, to offset the entire strategic value of the discounts that was received from the bulk order, the asset business would have given a negative return, but the airline business will be the beneficiary from lower rentals, in line with lower asset price.**
- There is also a third case of a middle ground where there would be partial value from the asset business and partial value from the airline business when the drop in aircraft value is not enough to entirely offset the original discounts. This is the most likely case for IndiGO

Hence, these incentives are to be taken into account for value assessment as they reflect the value captured during the time of ordering of the aircraft, which can manifest itself through lower rentals and lower incentives, or a higher rental and higher incentives, in either of which there is value for an airline like IndiGo. It should however be clear that while the incentives will be received with each new delivery of aircraft, the value outgo through rentals will happen over the tenure of the lease.

This strategic hedge has been giving a positive return to IndiGo. Having established the benefits of a strategic hedge with the bulk orders, there is another value judgment to be made on the dynamics of a particular aircraft in a lessor market vis-a-vis an aircraft owner market. The extent of rise in asset value may not be similar to increase in rentals for each aircraft. IndiGo has been able to select its aircraft of choice, the A320family, which has given it the perfect result. The net effect has been an advantageous disposition with regard to incentive-adjusted rentals.

Incentives will continue to provide cost arbitrage

The incentives are accumulated as earned in the balance sheet as deferred incentives under liabilities. The offsetting amount is usually cash, often netted against capital expenditures. This deferred incentive is amortized over the period of the lease in the profit and loss statement.

Now, these incentives would depend upon two heads: 1) the increase in aircraft value during the period between order and delivery, and 2) the discount that Airbus had offered to IndiGo.

Based on our positive assessment of IndiGo's A320neo aircraft, we believe that incentives will remain significant for the company. While the value of A320neo should increase as next-gen aircraft demand increases, discounts will also increase as IndiGo has made successive big orders totaling 430 aircraft and is the largest customer of Airbus. This will play out mostly with a high oil price outlook

However, we have factored incentives to go down. Compared to FY10-15, when the total incentive was 47% of the total Pat, we factor that the total incentive benefit will only constitute 13% of the total PAT between FY17-20. However, does it matter? We believe not. This is simply because that the entire incentive led earnings are incremental, much like a bonus to the basic cost structure when compared to the domestic peers of IndiGo. Secondly, that goes down also implies a lowering of the asset value of Neos. This in turn will again have a relief from lower rentals in line with lower value, which we have already discussed earlier in regards to how this offers a strategic hedge to IndiGo.

It is but ironical to mention here that the probable value erosion of IndiGo through lower incentive is based on a lower oil price scenario, which is the biggest positive for airlines as such.

Table 11: Incentive modeling for IndiGo

(Rs mn)	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E	FY19E	FY20E
Deferred Incentives at beginning	5,680	6,899	11,804	15,304	17,533	17,516	15,832	18,101	16,072	14,742
Amortized in P&L	(2,274)	(2,627)	(3,588)	(3,607)	(3,553)	(3,566)	(4,447)	(5,271)	(5,961)	(6,778)
Added in the year	3,493	7,532	7,088	5,836	3,537	1,882	6,716	3,242	4,632	4,632
Deferred Incentives at end	6,899	11,804	15,304	17,533	17,516	15,832	18,101	16,072	14,742	12,596
Net Aircrafts added	14	16	11	11	17	13	28	14	20	20
Aircrafts added through short term lease					10	3	7			
Aircrafts Retired							8			
Aircrafts added from Airbus	14	16	11	11	7	10	29	14	20	20
Increase in Incentives per addition (Rs mn)	250	471	644	531	505	188	232	232	232	232
Increase in Incentives per addition (US$ mn)	5.5	9.8	11.8	8.8	8.3	2.9	3.5	3.5	3.5	3.5
Amortized incentive per weighted fleet(US$ mn)	1.6	1.2	1.1	0.8	0.7	0.5	0.5	0.6	0.6	0.6

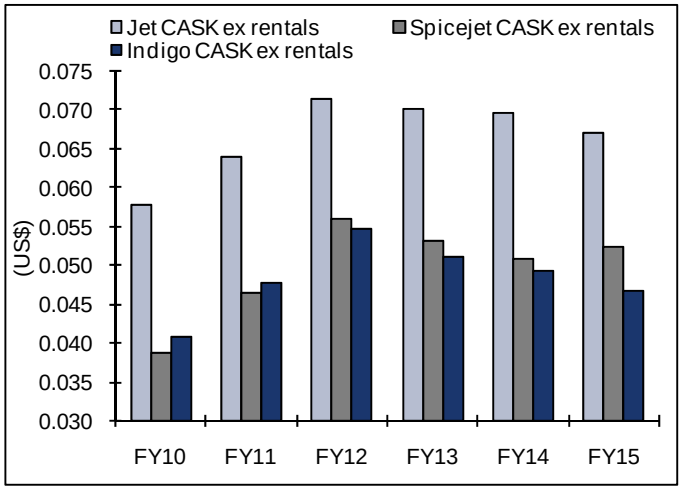
Source: I-Sec research

Cost Comparison across competition-IndiGo has an edge

Lowest cost metrics among Indian airlines players offers a definitive advantage to IndiGo. We start at each major operating cost heads analyzed over FY10-FY15, wherein we will see that IndiGo has the maximum advantage, which stems from the uniform, large and lowest-age fleet size, consolidated by the experienced management and the near-perfect implementation of the low-cost no-frills model.

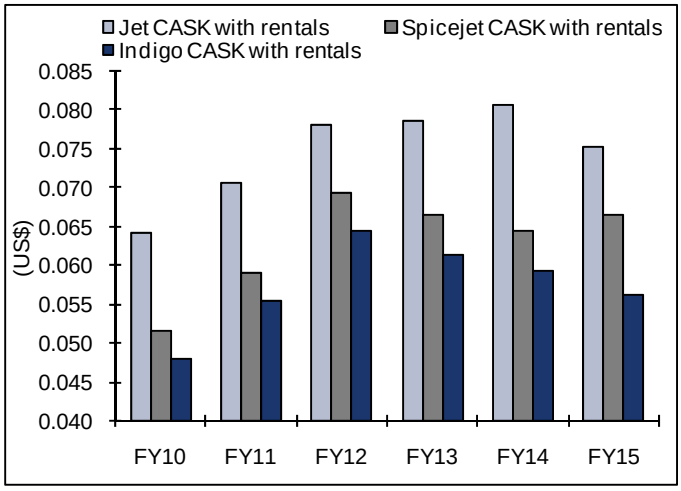
Combining the operational costs, we present our summary in two divisions, operating cost ex-rentals, and total operating cost with rentals. The rental costs also include the interest liability of finance leases to give a complete picture. While calculating cost with rentals we have adjusted for the leasing revenue of Jet Airways. We have also not taken depreciation, which is normally included in CASK calculation for airlines.

Chart 11: Total operating cost comparison without rentals



Source: Company data, I-Sec research

Chart 12: Total operating cost comparison with rentals



Source: Company data, I-Sec research

- **Net rentals are lower for IndiGo not only on the back of incentives**. Incentives are an essential part of the IndiGo business model, which we have already illustrated in our earlier sections. However, it is not the only reason for the lower rentals. IndiGo does manage lower yields on its finance leases and manages to better utilize the aircraft leading to lower rentals per ASK. To prove our point, we have shown the rental cost per ASK on a comparative basis, with and without incentives. The rental cost of IndiGo per ASK remains lowest even without incentives. We calculate the rental cost taking into consideration the interest borne on financial leases along with the operating lease rentals paid out as a part of operating expenditure. The operating lease rentals include the normal expense and supplementary lease charges which depend upon the kilometers/hours flown in line with the contract with lessors. While IndiGo does not share the supplementary rentals separately, it is considered under maintenance costs for both SpiceJet and Jet. It is important to consider the cost head in USD terms as the payments are mostly denominated in them.

  On an intuitive basis, IndiGo has the youngest fleet and no regional aircraft like SpiceJet/Jet Airways has, and no major long-haul operations like Jet, which should have resulted in higher rentals per ASK. Yet, the difference in

rentals are stark even if we compare it on ASK basis. The answer lies in the supplementary rentals, which are basically contribution towards maintenance reserves. We have discussed it in detail in our next section.

Table 12: SpiceJet rental cost analysis

SpiceJet	FY10	FY11	FY12	FY13	FY14	FY15
Lease charges	3,898	4,285	6,019	8,081	10,532	8,644
Supplementary Lease Charges	1,459	1,687	2,473	3,244	4,245	3,340
Total Charges	5,357	5,972	8,493	11,325	14,777	11,984
Average Aircraft	20	23	33	46	54	42
ECB outstanding	-	-	6,149	13,506	13,572	13,430
ECB in US$ mn	-	-	120	248	226	215
Estimated ECB interest in US$ mn	-		4.8	7.4	9.5	8.8
Estimated ECB interest in Rs mn			231	401	573	539
Total Rental (operating rentals + financing interest)	5,357	5,972	8,723	11,726	15,350	12,523
Rental per aircraft	275	261	268	255	287	301
Rental per aircraft (SpiceJet, US$ mn)	**5.79**	**5.72**	**5.60**	**4.69**	**4.74**	**4.93**
ASK(mn)	8,770	10,467	13,730	16,106	18,494	14,541
Rentals per ASK(SpiceJet, US$)	**0.0129**	**0.0125**	**0.0132**	**0.0134**	**0.0137**	**0.0141**

Source: Company data, I-Sec research

Table 13: IndiGo rental cost analysis

IndiGo	FY10	FY11	FY12	FY13	FY14	FY15
Rentals	4,704	6,372	10,634	17,150	20,310	23,076
FL charges	88	300	313	364	827	929
Total Charges	4,792	6,673	10,948	17,514	21,137	24,005
Average Aircraft	22	32	47	61	72	86
LT Finance Lease Liability	6,205	7,416	7,940	14,421	30,407	36,261
LT Finance Lease Liability (US$ mn)	131	163	166	265	503	593
Interest (mn US$)	2	7	7	7	14	15
Interest (mn Rs)	88	300	313	365	827	928
Rental per aircraft	218	209	233	289	296	281
Rental per aircraft(US$ mn)	4.59	4.58	4.86	5.32	4.89	4.59
IndiGo Incentive	1,941	2,274	2,627	3,588	3,607	3,553
IndiGo Incentive per aircraft	1.86	1.56	1.17	1.09	0.83	0.68
Net Rental per aircraft (IndiGo, US$ mn)	**2.73**	**3.02**	**3.69**	**4.23**	**4.05**	**3.91**
ASK(mn)	9,286	12,491	18,006	24,977	29,967	35,327
Rentals per ASK(IndiGo, US$)	**0.0065**	**0.0077**	**0.0096**	**0.0102**	**0.0097**	**0.0095**

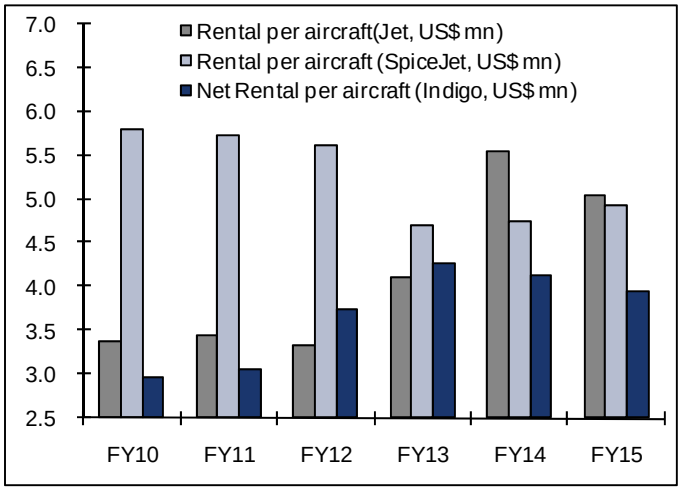
Source: Company Data, I-Sec research

Table 14: Jet airway rental cost analysis

Jet	FY10	FY11	FY12	FY13	FY14	FY15
Aircraft and Engine Lease Rentals	11,591	11,452	12,050	15,260	20,899	21,725
Aircraft and Engine Variable Rentals	2,296	2,146	3,211	5,985	11,474	7,739
Revenue -Aircraft/Engines lease	7,177	5,172	4,521	5,056	6,872	9,322
Average Jet Fleet Size	86	90	98	95	93	94
Jet Lite fleet Size	25	19	19	15	12	9
Total Fleet	111	109	117	110	105	103
LT Finance Lease Liability	93,739	83,202	82,555	68,747	59,994	51,859
LT Finance Lease Liability (US$ mn)	1,977	1,826	1,722	1,263	992	848
Interest (mn US$)	79	76	71	60	45	37
Interest (mn Rs)	3,750	3,466	3,402	3,249	2,727	2,251
Total rental	17,637	17,063	18,663	24,494	35,100	31,714
Rental per aircraft	159	157	160	223	334	308
Rental per aircraft(Jet, US$ mn)	**3.36**	**3.44**	**3.33**	**4.09**	**5.53**	**5.04**
ASK(mn)	34,398	39,804	44,472	41,994	42,001	44,796
Rentals per ASK(Jet, US$)	**0.0108**	**0.0094**	**0.0088**	**0.0107**	**0.0138**	**0.0116**
Adj. Rentals per ASK(Jet, US$) (ex lease revenue)	**0.0064**	**0.0066**	**0.0066**	**0.0085**	**0.0111**	**0.0082**

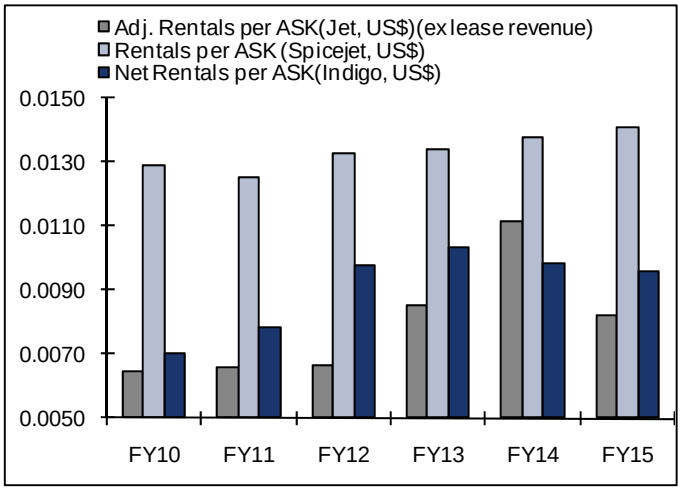
Source: Company data, I-Sec research

Chart 13: IndiGo has the lowest net rentals per aircraft



Source: Company data, I-Sec research

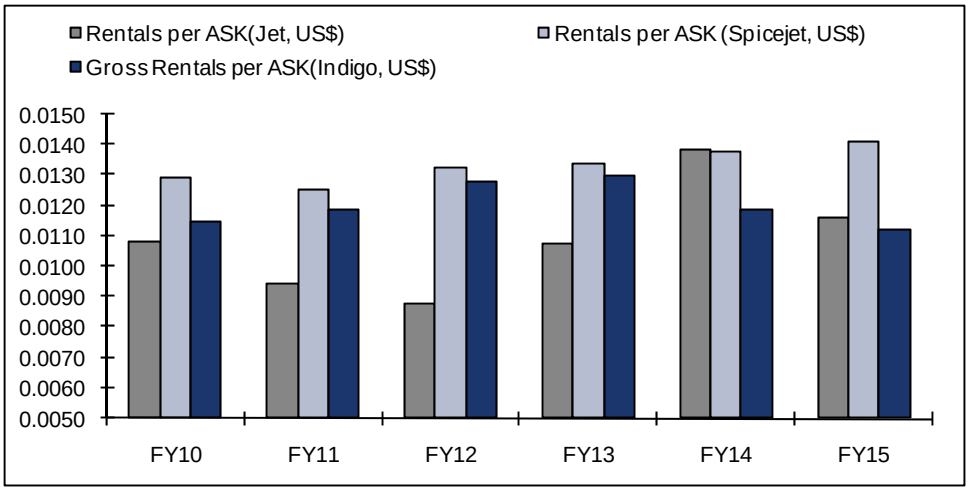
Chart 14: IndiGo has lower net rentals than SpiceJet, Jet is lowest due to long hauls



Source: Company data, I-Sec research

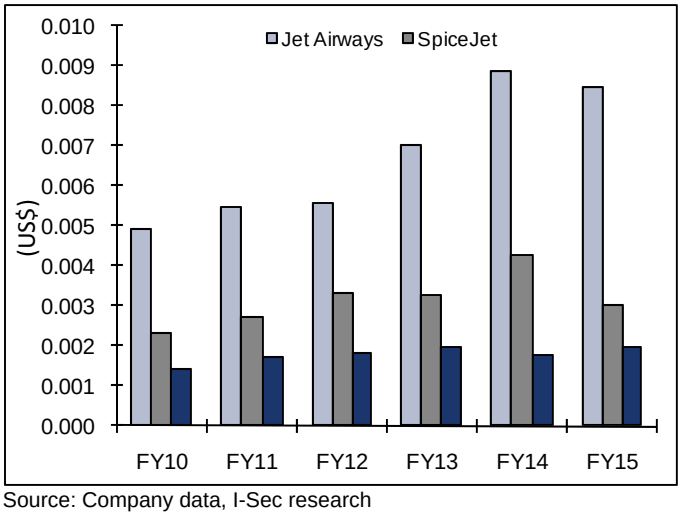
Jet Airways has managed to increase its rentals per ASK even with the long-haul operations as more and more narrow body aircraft are put in international operations and some of the older wide body aircraft are leased to other airlines. We have adjusted the rentals cost of Jet with the lease income it has received.

Chart 15: Even ex incentives, IndiGo has lowest rentals in the past two years



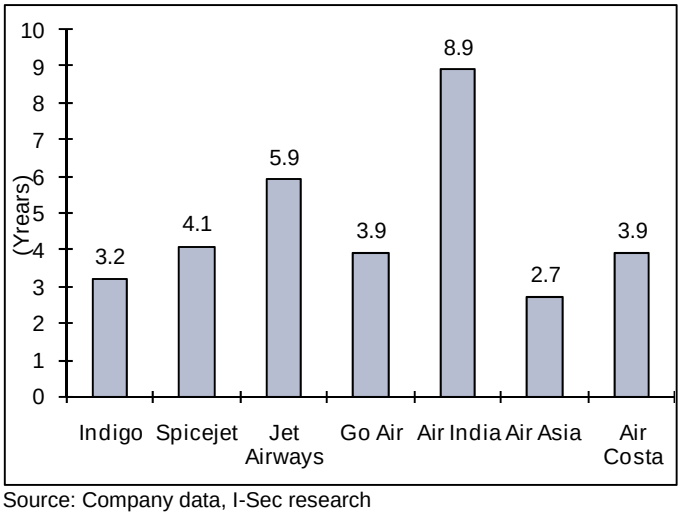
Source: Company Data, I-Sec Research

Chart 16: Maintenance cost per ASK for IndiGo remain lowest



Source: Company data, I-Sec research

Chart 17: Average age of fleet as in FY15

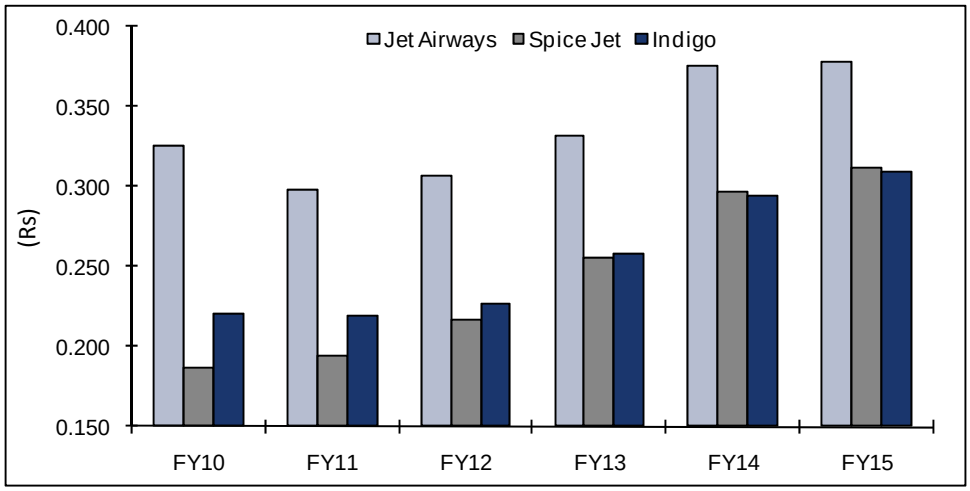


Source: Company data, I-Sec research

Landing, Navigation and airport charges lower for IndiGo. These, being dependant on number of airports used by the airline, should have been significantly higher for IndiGo than SpiceJet. However, IndiGo has managed to attain economies of scale to bring it down on per ASK basis. It will also depend on the route dispersal guidelines factoring the airport charges at various Category-I, Category-II/IIA and Category-III airports. Yet, uniform fleet would offer some advantage with navigation software charges. Ideally, these should have been lower for SpiceJet since the reqgional feet/turboprops enjoy lower charges than bigger jets.

These costs include landing charges, route navigation facility charges, terminal navigation landing charges, parking and housing charges, X-ray charges and CUTE charges (at CUTE-enabled airports). Airport-related charges are typically payable to the AAI or the operator of the airport. Airport charges are fixed by various airport operators and are primarily determined on the basis of number of passengers carried, aircraft weight and type of airport (domestic or international).

Chart 18: Landing, navigation and airport charges per ASK.



Source: Company data, I-Sec research

Redelivery expenses, the bane of short-term operating leases and disadvantaged contracts. Airlines have in their fleet aircraft on operating lease. As contractually agreed under the lease agreements, the aircraft have to be redelivered to the lessors at the end of the lease term under stipulated technical conditions. Such redelivery conditions entail costs for technical inspection, maintenance checks, repainting costs prior to its redelivery and the cost of ferrying the aircraft to the location as stipulated under the lease agreement. These costs are estimated by management based on historical trends and data, and recorded in the financial statements in proportion to the expired lease period.

Table 15: Redelivery expense closing provision comparison

Closing Balance (Rs mn)	FY10	FY11	FY12	FY13	FY14	FY15
IndiGo	51	84	86	121	203	283
Jet Airways	628	580	738	704	1,526	1,901
SpiceJet						2,227

Source: Company data, I-Sec research

SpiceJet did not maintain any closing provision of redelivery expense prior to FY15. However, in its FY15 annual report, it provided for Rs 2.2bn out of which Rs2.1bn was on account of early termination of aircraft lease. SpiceJet also expensed Rs3.2bn as

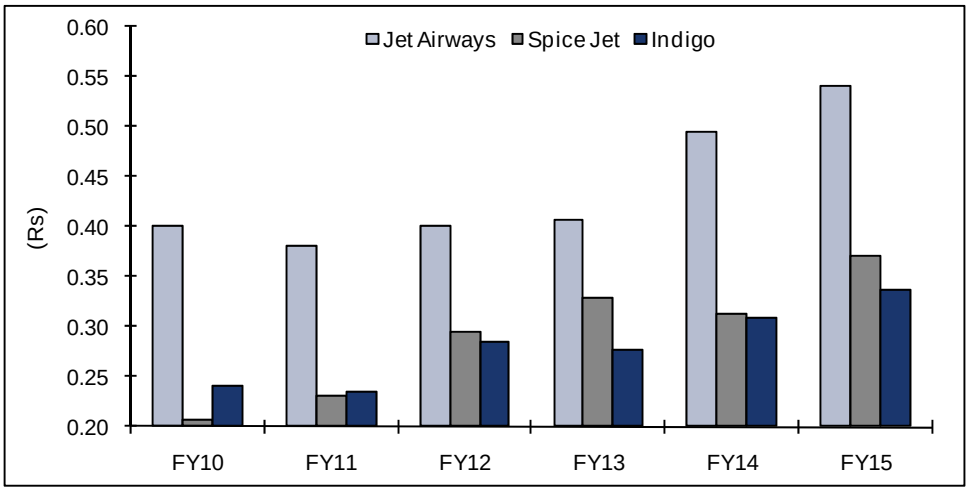
operating expenses in FY15 and Rs291mn in FY14 as aircraft redelivery expense, suggesting similar expenses in the past, clubbed with other expenses. In 9MFY16, SpiceJet expensed Rs364mn. However, it has also written back some of the provisions related to early termination of the Boeilng leases as a result of negotiations, which amounts to nearly Rs740mn in 9MFY16. Still, the construct of poor aircraft management, a lot of which emanates from historical bad decisions and financial constraints, gets across clearly.

This high redelivery expense has resulted in high outgo of SpiceJet and Jet Airways compared to IndiGo. This is a result of optimal duration of operating leases, avoiding the critical inspection periods and using new aircraft for operations, which IndiGo has done resulting in serious savings. The softer aspects of better aircraft management will involve management expertise, quality of recruits and the employee strength, which again is our next cost heading.

The importance of redelivery cost is futher accentuated considering that almost 90% of the same is incurred in foreign currency.

IndiGo remain cost leader on employee costs as well, with further economies expected. The flexibility of deploying workforce among the same aircrafts gives a definitive edge as pilots operate a particular aircraft alone. IndiGo again is a cost leader in this front.

Chart 19: Employee cost per ASK



Source: Company data, I-Sec research

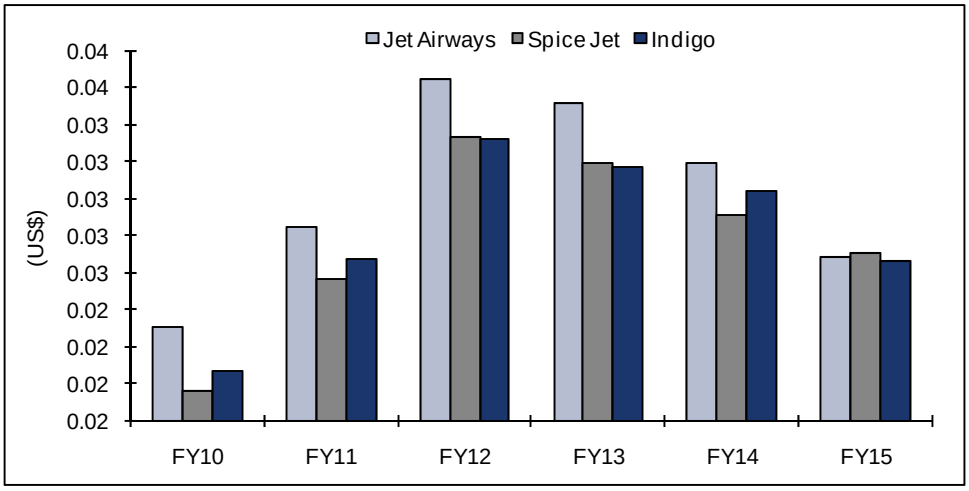
If we assume a steady 100-110 employees per aircraft, IndiGo has a employee base of 900-1,000 extra reserve, which includes the non-flight workforce. Assuming a historical average of 250 such personnel, IndiGo currently has 750 extra employees, which is likely to be deployed over the new A320neos. As such, the employee cost per ASK is likely to come down. On the other hand, this non-flight workforce has come down for SpiceJet from 250-300 in FY10-11 to 30 in FY15, understandably as its fleet got depleted in FY15 and severe cost cutting ensued. SpiceJet will have to increase it further in coming years indicating a cost pressure in the offing. Employee costs form a significant ~10% of airline revenues with per employee salary per annum in the range of ~Rs1.2mn.

However, the A320neo has a different engine than A320 and there are other differences that require additional training for operating crews and engineering staff. There are new pylons, new wing structures and minor changes to the electrical and pneumatic systems. The crews have to undergo training to cover for all the differences and this will mean additional cost for IndiGo.

Fuel cost per ASK will further improve post induction of neos Fuel cost per ASK is entirely dependent on the global oil prices. However, with the introduction of neos, which supposedly should have 15% improved oil efficiency, IndiGo is likely to perform better than the rest.

In the recent conference call of Indigo, the management confirmed fuel savings of 13% being achieved with the already existing Neo aircraft in operations.

Chart 20: Fuel cost per ASK



Source: Company data, I-Sec research

Supplementary rentals is another important cost differential

While the maintenance reserves are strictly implemented on most airlines, many airlines have sufficient credit stature and prominence in the marketplace by which means they can reject paying maintenance reserves.

Genesis of maintenance reserves lies in risk mitigation of lessors. Most operating leases provide that the lessee is liable for the ongoing costs related to maintaining an aircraft to the required standard. In the event that an aircraft is repossessed due to a default by the airline, the aircraft may require expensive investment in outstanding maintenance work before it is in a condition to be re-leased or sold to another airline/investor. Therefore, a lessor's primary risk in relation to maintenance is one where the lessee fails to pay, in whole or in part, for the maintenance utility it consumed.

To mitigate maintenance exposure, most lessors have independent credit departments to evaluate the creditworthiness of lessees. Evaluation of an operator's credit standing generally involves the establishment of some financial test, the failure to meet which would invoke an obligation to establish more stringent collateral security in the form of security deposits and payment of maintenance reserves. **Hence, maintenance reserves are payments made by the lessee to the lessor to accrue for those scheduled major maintenance events that require significant aircraft grounding time and/or turnaround time for certain major component overhauls. Put another way, maintenance reserves are payments for maintenance utility consumed**.

Does it imply that IndiGo may get away with lower supplementary rentals compared to its peers? We think so. This can be one of the key factors that allows IndiGo to pay overall lower money despite using considerably new aircraft.

Mathematically, Full-life Maintenance Value = Maintenance Utility Consumed + Maintenance Utility Remaining, or Full-Life Maintenance Value = Maintenance Reserves + Maintenance Utility Remaining, which understandably indicates that Maintenance Reserves = Maintenance Utility Consumed.

Maintenance costs can generate cost asymmetry. Maintenance reserves are often the most contentious part of a lease negotiation; the lessor views reserves as a cost-covering exercise, while the lessee views it as a burden on cashflow resources. However, it is not this burden which is of the only interest. There is a differential in the levy of these maintenance reserves. While the maintenance reserves are strictly implemented on most airlines, many airlines have sufficient credit stature and prominence in the marketplace by which means they can reject paying maintenance reserves. Does it imply that IndiGo may get away with lower supplementary rentals compared to its peers? We think so. This can be one of the key factors that allows IndiGo to pay overall lower money despite using considerably new aircraft.

Lowest cost structure enables lowest fares

As hinted earlier, in a price-based competitive industry, it is but important to check the lowest airfares and which airline is offering them. We based our search on three categories of routes, metro to metro, metro to non-metro and non-metro to non-metro. We also check for time distribution, with time zones spread up to 2-4 months horizon.

This is a direct advantage of better cost structure for IndiGo

Table 16: IndiGo is the lowest fare provider most of the time

Delhi-Mumbai	Mumbai-Nagpur	Cochin-Chandigarh
Metro to Metro – key highlights of the fare distribution	**Metro to Non metro-key highlights of the fare distribution**	**Non-Metro to Non-Metro**
In the next 6-week window	The fare dispersion is very low compared to a metro to metro route	No deductible algorithm
Very little to choose between IndiGo and SpiceJet who offer the lowest fares, while Jet and Air India have a little higher rates in line with in flight amenities provided by them.	Some of the players are not present, for example SpiceJet is not present in Bombay Nagpur route	Jet has the lowest fare for a brief time period
The companies tend to capitalize during the long weekend of Holi in end-March.	IndiGo, again, offers the lowest fare	Air India, GoAir has low fares for significant time
GoAir has comparatively higher rates than IndiGo/SpiceJet	The only standalone high fare airline is Jet, but a low dispersion results in lower difference in fares	IndiGo is mostly the second lower but lowest on certain time periods as well
During the 7-15 week window		
Air India charges are typically much lower than Jet Airways		
The lowest fares are held by SpiceJet, IndiGo and Air India		
GoAir is at the lower end, but does not offer the lowest fares		
The lowest fare is held by different entities within the time spectrum, initially by SpiceJet, followed by indigo and later joined by Air India		
In the 16 to 25 week window		
The lowest fares are consistently held by IndiGo and Air India.		
GoAir offers lower fare than SpiceJet		
SpiceJet is only lower than Jet on this window		

Source: Cleartrip, I-Sec research

We have also illustrated the fare distribution below only for Delhi-Mumbai route spread across timelines.

Airlines (show all) :
- Air India
- Air India IC
- GoAir
- IndiGo
- Jet Airways
- JetLite
- Kingfisher
- Kingfisher Red
- Jet Konnect
- Paramount
- SpiceJet

Chart 21: Mumbai Delhi Fare in the next 5 weeks as of March16

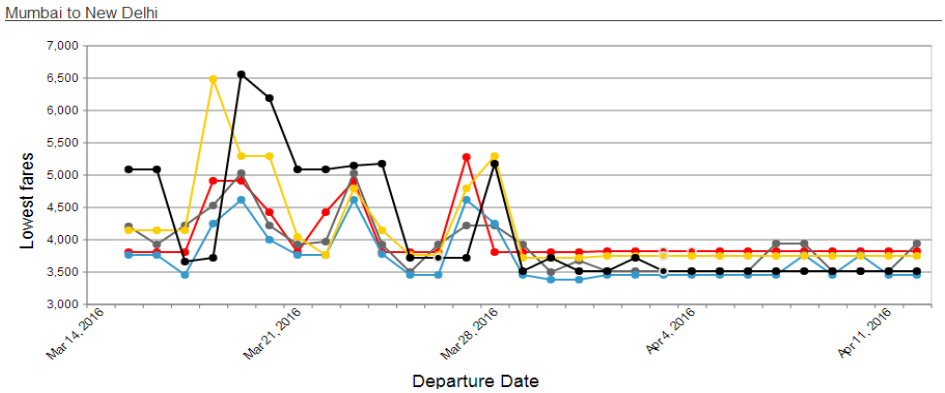


Chart 22: Mumbai Delhi Fare in June 16 as of March16

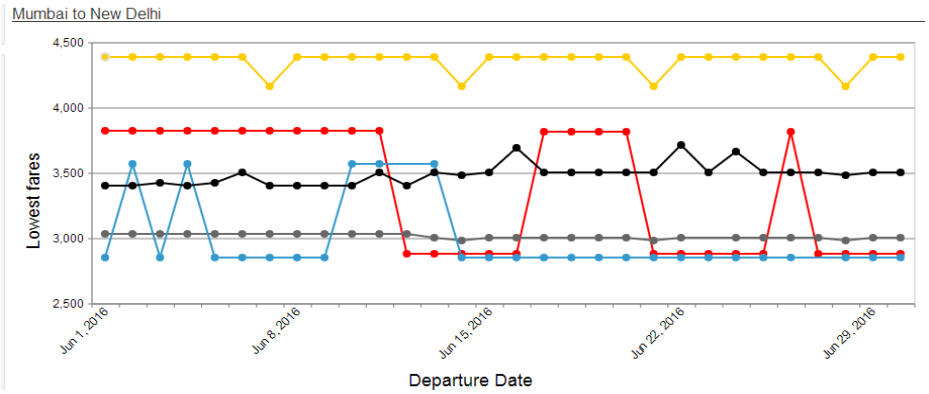


Chart 23: Mumbai Delhi Fare in July 16 as of March 16

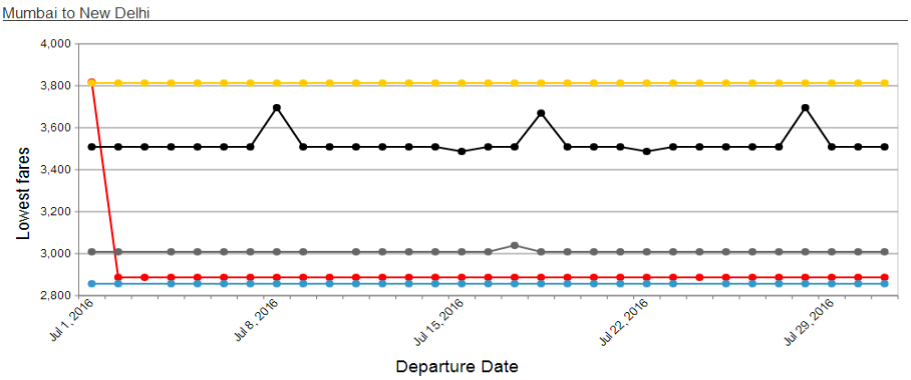
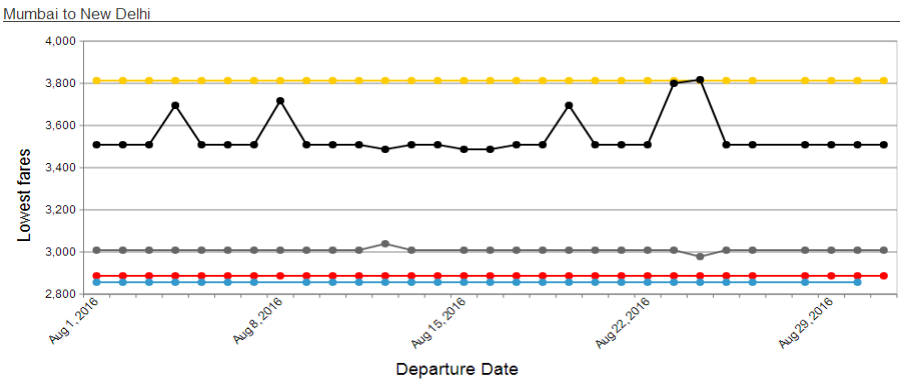


Chart 24: Mumbai Delhi Fare in Aug 16 as of March 16



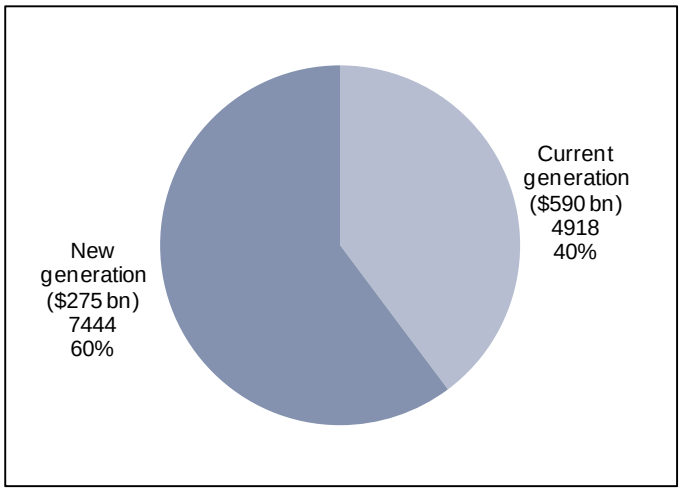
Source: Cleartrip

The A320neo advantage of IndiGo

In this section, we discuss the value proposition of A320 neo, which is the aircraft of choice for IndiGo. The importance of the market for A320 neo lies in the asset play which IndiGo offers through its bulk orders. We believe that A320 neo is one of the most popular aircraft and offers safe value to IndiGo. IndiGo has clearly gained a structural advantage with the high order book of 430 neos. We believe that the next generation aircrafts like neo and max are going to rule the aircraft market in coming future.

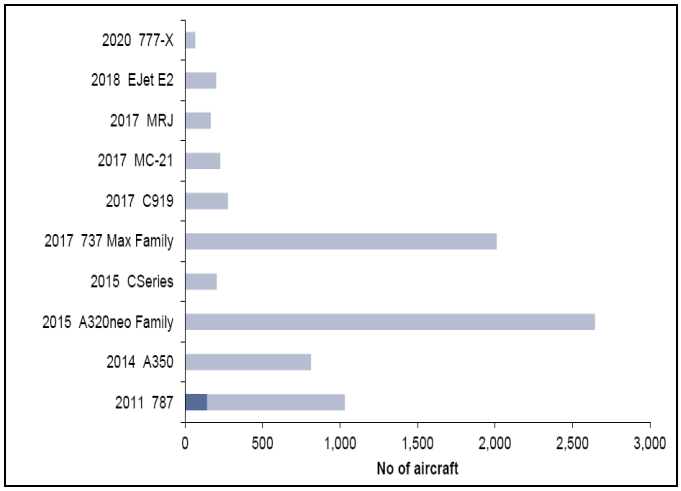
- **Dominance of neo/max in order book.**60% of the order backlog is dominated by next generation aircrafts like neo and max, with neo having a significant larger orderbook than max. In value wise, the share of next generation aircrafts are even larger at around 70%. As such, neo is likely to be one of the most liquid aircrafts in the near future. However, the transition to the next gens can still be accompanied with lot of issues as history has shown us. Yet, one has to keep in mind that the A320 ceo and neo are likely to retain the similar fuselage and may have a relative easy transition.

Chart 25: Next generation dominating the backlog



Source: Ascend

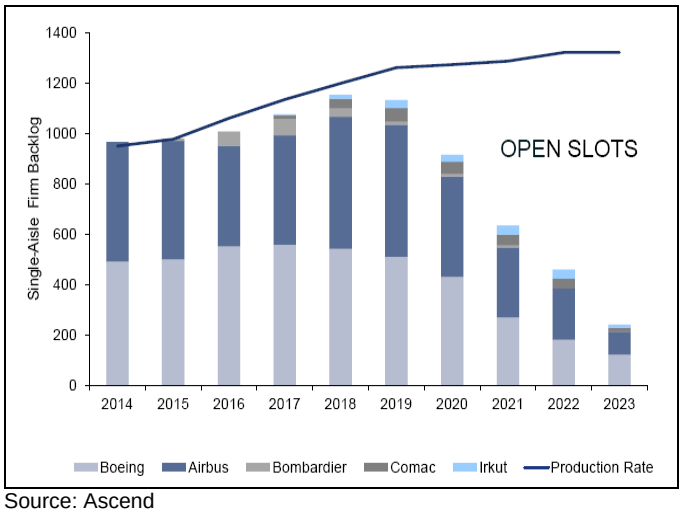
Chart 26: Transitioning to next generation; orderbook details



Source: Ascend

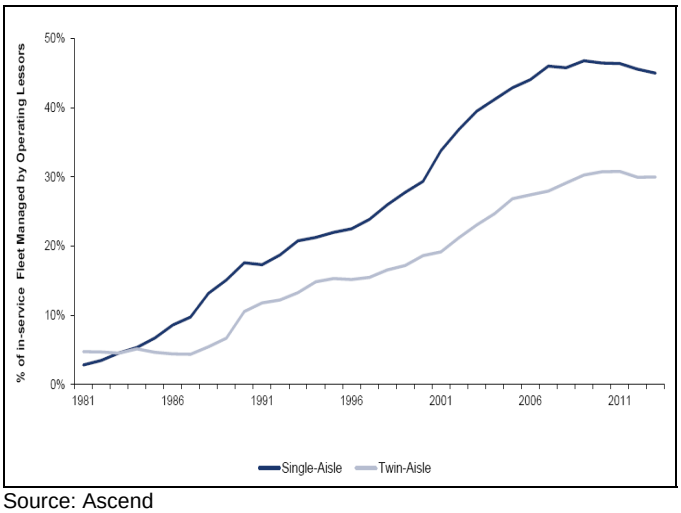
- **No available slots for fresh orders of neo/max available for the next 5 years.** There will be a couple of years through which the manufacturing lines of Boeing and Airbus completely transform to the next gen airframes. Post that, there is no free single aisle open slots available for 5 years indicating someone who has not yet ordered is likely to resort to lessors for neo/max. Higher demand will generate higher value.

Chart 27: Single-aisle demand largely committed over next five years



Source: Ascend

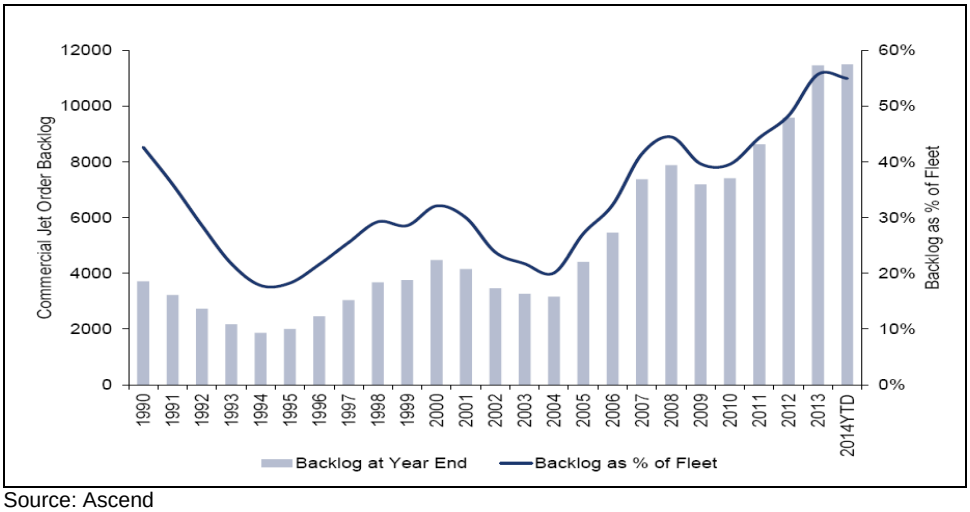
Chart 28: Aircraft leasing penetration by class



Source: Ascend

- **Burgeoning lessor market now almost 45% of the current fleet size.** Higher lessor market result in higher values for lessor friendly aircrafts and A320 neo has the right parameters for the same. For one, lessors prefer single aisle narrow body aircrafts as they offer lower risk with their inherent lower value and they gain higher share among the LCC markets. Around 50% of the single aisle fleet is being managed by operating lessors compared to 30% for that of twin aisle aircrafts. Secondly, higher number of operators increases liquidity and lessor acceptance, thus pushing up the aircraft value. A320neo has the highest order book.

Chart 29: Backlog as a % of fleet



Source: Ascend

In the recent conference call of Indigo, the management underlined a 13% savings in fuel recorded by Neos.

The point that we strive to make is that even in a situation of an asset bubble resulting from such high aircraft orderbook, the next-gen aircraft with their popularity among operators and cost efficient features are likely to have the least value erosion.

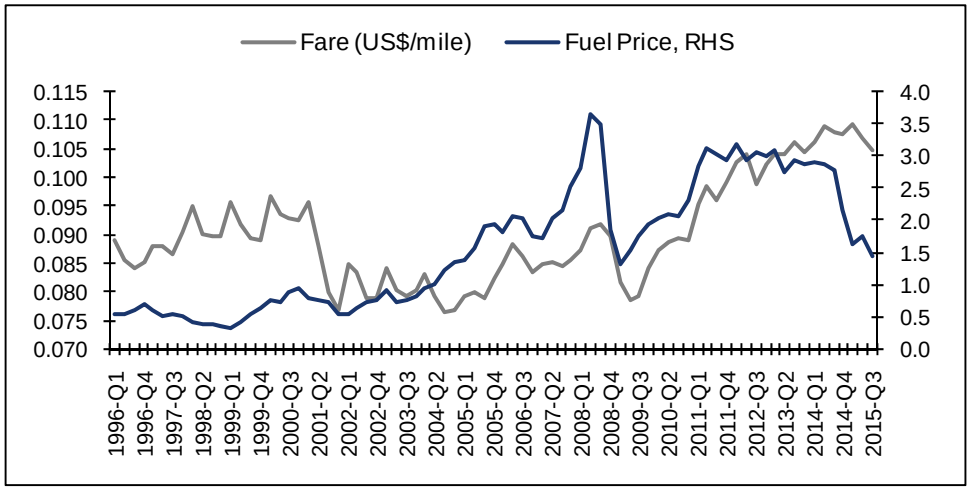
There are certain risks though; including supply chain challenges post the transition to next generation aircrafts. Significant decline in oil prices which render the increased rentals of next generations futile compared to the benefits from fuel efficiency and increase in interest rates which typically favor mid-life aircrafts with lower value more attractive. However, the benefits are likely to outweigh the risks. Essentially, in due time, these neo will offer an additional cost advantage, something which is of the paramount importance in a price driven industry.

The fuel factor- Neos will provide another cost differential in time

The greatest sensitivity to the airline model is that of passenger fares. The passenger fares in turn depend on the fuel prices, passenger growth and competition. **Typically, the fares vary with fuel prices. The airlines pass some of the benefits of low oil prices to the passengers and similarly pass some of the increase in case of rising fuel prices. As such, the correlation of fares and fuel prices is only modestly positive (~0.5). We did an exercise on the top-100 domestic routes in the US for the past 20 years based on the average fare and the fuel prices and found that the correlation between average fares and fuel prices to be 0.5, indicating an indecisive relation. While there are other factors to be considered, such as hedging practices, we derive an interesting observation of rather sticky fares in the wake of falling crude prices. It can be seen that while increasing fuel price scenario has forced average fares to rise, fall in crude prices have not seen equally enthused fall in fares. The two periods of fall in crude prices (1996-99) and (2014-current) have seen sticky fares. This can be attributed to the opportunistic profit booking tendency enjoyed by airlines in the wake of falling crude prices and inability of some airlines to take fare cuts due to hedged positions.** This raises a question of the extent of fall in fares that Indian markets can witness in this falling crude price atmosphere. A key difference between Indian and US airlines is that the latter is quite matured and has gone through a series of consolidations to achieve a more predictable and steady state of affairs. Hence, with high competition in a growing market, Indian airlines are likely to cut the fares and pass some benefits of low crude prices to the consumer to gain some market share.

The correlation between fares and fuel prices is 0.5, based on the domestic US air traffic data for the past 20 years.

Chart 30: Trend of fuel prices and average fares – indecisive correlation



Source: Bureau of Transportation Statistics, USA

Indigo has indicated a fuel saving of 15% achievable with the neo fleet. We factored 12-13% fuel savings over a 3 year period. In the recent conference call, the company affirmed that the delivered neos have been 13% more efficient from the current A320 ceo fleet.

Strength of the balance sheet is a key strategic advantage for IndiGo

Table 17: Balance sheet comparison across major airlines

(Rs mn)	SpiceJet FY16	Jet FY16	Air India-FY14	Indigo FY16
Net Worth	(6,316)	(52,104)	(166,466)	18,238
Gross Debt	12,882	114,210	484,095	57,431
Cash	1,085	19,881	6,566	61,836
Net Debt	11,797	94,329	477,530	(4,405)
EBITDA	4,322	22,361	(55,344)	30,055
Net Debt to EBITDA	2.73	4.22	NM	(0.15)
Net Debt to Equity	NM	NM	NM	(0.24)

Source: Company data, I-Sec research

Balance sheet strength is one of the structural reasons that have made it possible for IndiGo to make those big orders. Apart from the deep pocket which can help undercut competition, the characteristic big orders from IndiGo require significant upfront cash. **IndiGo has relied on cash from internal accruals and borrowings to finance the aircraft pre-delivery payments under the 2011(part) and 2015(all of it) aircraft purchase agreements with Airbus.**

From a cost perspective, imported fuel is much cheaper than domestic fuel on account of taxes. However, imported fuel payment happens in advance and will not enjoy credit facilities as with domestic suppliers. Hence, imported fuel procurement capability is also dependent on the liquidity position of the company – again an advantage for IndiGo.

Working capital remains non-issue. With advanced payment structure of passenger tickets, IndiGo has negative working capital days and no working capital debt. This is one of the strengths in the general airlines business model. IndiGo has generated sufficient cash through its operations to provide for working capital requirements. The company also has a number of fund-based working capital financing facilities totaling Rs1,500mn which remain undrawn. **The company has mentioned its liquidity position has consistently enabled it to get supplier discounts.**

Table 18: Working capital details of IndiGo

(Rs mn)	FY10	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
Net Working Capital	(4,971)	(6,002)	(10,410)	(14,310)	(18,015)	(19,621)	(22,881)	(29,763)	(34,618)
Inventory days	6	5	2	2	2	4	4	4	4
Receivable Days	3	2	3	3	3	3	4	3	3
Other current Assets	6	6	5	4	5	7	9	7	7
Other Current Liabilities	41	37	48	41	44	41	41	42	42
Payable days	11	10	10	11	13	12	17	17	17

Source: Company data, I-Sec research

Component cost accounting to result in higher depreciation, but lower volatility in R&M costs: IndiGo has started component cost accounting effective Apr'15. Now the major inspection cost related to engine and aircraft components and other heavy maintenance are identified as a separate component for aircraft on finance lease and depreciated over their expected life between major overhauls estimated to be in the region of 4-12 years. This has resulted in higher depreciation compared to the previous years when component accounting was not mandated. So, prior to component accounting, all the major repairs, etc. would be taken as and when they incurred pertaining to aircraft on finance lease. Effective 1-Apr'15, post adoption of component accounting, the company will identify these major repairs, set them up as a component and depreciate it over a period of 4-12 years, which means that in the future, as and when the company incurs these costs, it will be capitalizing it and then depreciating it over the same 4-12 years period.

RoCE to remain attractive even adjusting for operating leases

Table 19: IndiGo profitability / return ratios without adjusting for operating leases

Return/Profitability Ratio (%)	FY10	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
Recurring Net Income Margins	18.4	15.1	2.5	8.5	4.3	9.4	12.3	10.3	13.1
RoCE	**33.1**	**34.6**	**5.2**	**25.0**	**8.5**	**23.6**	**29.5**	**27.9**	**35.3**
RoNW	166.3	564.0	57.8	201.4	112.5	306.0	109.1	68.4	58.5
Dividend Payout Ratio	-	99.4	-	82.2	93.4	96.4	77.6	33.9	22.5
EBITDA Margins	20.4	18.6	0.9	9.7	4.6	13.4	18.6	15.9	19.1

Source: Company data, I-Sec research

Though these return ratios look very attractive, one must not forget the asset-light model of leasing in airlines. Equating the rental outgo in an operating lease as an interest expense towards asset acquisition, the RoEs should not change in principle. RoEs would remain high on the back of an extremely high leveraged business. However, the comparison is different in case of RoCE. The operating lease rentals should be added back to EBIT, while the equivalent asset should be added to capital employed. In a growing phase, when an increasing number of aircraft are being acquired, equivalent asset can be estimated at 7x/8x the current rental (operating +finance). So, while the finance lease asset is already factored in the assets, we add 7x operating lease rentals to the assets to derive adjusted RoCEs in line with the global practice for equivalent debt estimation.

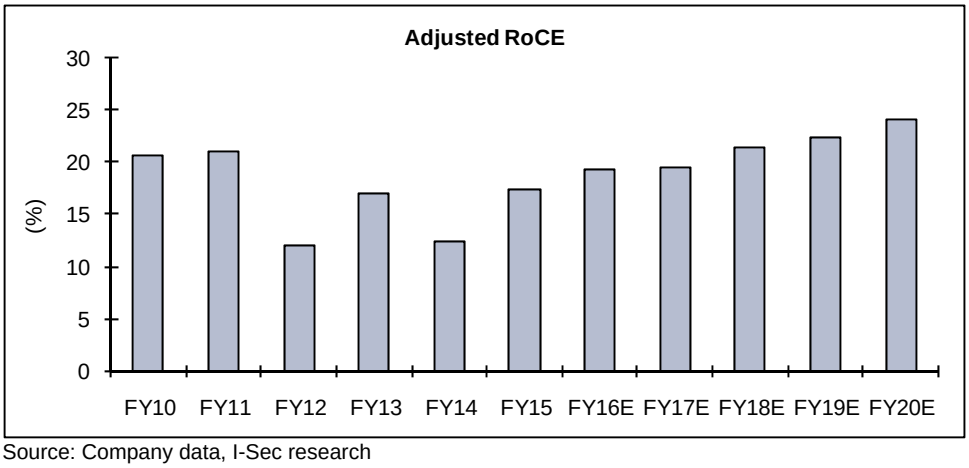
While the rentals paid by IndiGo will be mostly long-term operating leases (5-7 years), it does have 12 aircraft on short-term operating leases, which will be retired with the addition of neos. So, basing debt estimation on 7x the current operating rentals will have an upward bias since typically short-term leases are higher and will not have the benefits of incentives likely from neos. Even if we adjust for the off balance sheet assets under operating lease, the company would retain attractive RoCEs (20%).

Table 20: RoCEs post adjustment for operating leases

(Rs mn)	FY10	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
Total Assets	16,517	21,976	24,476	41,884	69,834	83,154	100,321	113,454	133,062
7x gross operating rentals	32,927	44,607	74,441	120,047	142,172	161,529	207,812	283,808	317,931
Total adjusted asset	49,443	66,583	98,917	161,930	212,006	244,682	308,134	397,261	450,993
EBIT	5,468	7,597	1,263	10,451	5,962	19,621	29,638	31,684	47,036
Adding gross rentals	4,704	6,372	10,634	17,150	20,310	23,076	29,687	40,544	45,419
Adjusted EBIT	10,171	13,970	11,898	27,601	26,272	42,696	59,326	72,228	92,455
Adjusted RoCE	**20.57**	**20.98**	**12.03**	**17.04**	**12.39**	**17.45**	**19.25**	**18.18**	**20.50**

Source: I-Sec research, Company data

Chart 31: Lease-adjusted RoCE for IndiGo



Source: Company data, I-Sec research

Average fares will move up with crude

Low fuel prices have already been captured in the falling average fares. IndiGo has seen an average fare decline of 14% in FY16. We factor an average fare of Rs4298 in FY17 (gain of 2% Y-Y) and Rs4427 in FY18 (increase of 3% Y-Y). This is against a backdrop of rising crude price assumption of US$55/60 per barrel in FY17/FY18 respectively. We assume a constant INR/USD assumption of 67 and no change in the current tax structure. We are factoring the higher excise duty of 14% on ATF as introduced in the FY17 Union Budget.

Why do we believe that there is a case for rising fares in FY17-18E? Yes, the crude prices will remain under a low bias, but the current prices have already factored that. Hence, as crude steadily increases back, the average fares will also increase. Secondly, there will be case for dropping profitability of airlines like SpiceJet, Jet and GoAir with increasing crude prices which will force them to take price hikes. The limiting condition of airline fares has to be the profitability of the weaker airlines. IndiGo is likely to benefit from the same. Last, but not the least, the intrinsic growth of Indian aviation sector should easily accommodate 5-10% passenger fare hikes as verified by our domestic passenger capacity model coupled with the already constrained metro routes.

Our domestic supply demand model shows implied growth rate of 14%. The average fare is a key determinant of profits for an airline, but it depends on two key factors of crude and competition. While we have discussed crude, another parameter is the competition. Our supply demand model of domestic air traffic in India has a consolidated average growth of 14% over the next four years. This is the implied growth rate based on the capacity addition program of domestic airlines. This model accounts for all the operating airlines in India along with the planned capacity addition and hence reflects competition. We have already established the fact that barring a perilous way of short term operating lease/wet lease, the capacity addition options are fairly limited. Another constraint will be the fact that the PLFs typically tend to be stable or modestly increasing at an aggregate level, thanks to the modern day yield management practices adopted by airline industry. Therefore, when we arrive at an average industry growth of 16% with increasing PLFs and factoring all the capacity additions, it is but the implied growth rate of the system.

Actual growth would likely outrun this implied growth rate indicating increase fare trajectory. This implied growth rate of 14% is low considering that the average annual growth rate of passengers in India has been more than 20% since 2000 excluding three years of the 2001-02 US terrorist attacks and subsequent global crisis, the great 2009 financial recession and 2012 when Kingfisher went bankrupt.

Hence at an implied growth rate of 14% and an incrementally increasing oil price scenario, our average air fare growth of 2-3% for IndiGo over FY17/18E is conservative.

Sensitivity analysis

It is only at the levels of US$70/bbl, that IndiGo target prices recede below Rs1,000 per share, keeping fare growth constant.

Combined factors of crude and currency: The sensitivity of airlines will largely depend upon the fares which is again a function of several external factors like competition and demand. However, the two factors which are external but significantly determine the results of airline operations are crude prices and currency. Typically, currency has a ripple effect across cost items starting from rentals, maintenance contracts, redelivery expenditure as well as crude. As such, while it is less volatile than crude, it has higher sensitivity to currency.

Table 21: The sensitivity of Target Price with Crude and INR

	(Rs)					
	TP	64	66	68	70	72
Crude (US$/bbl)	45	1,687	1,616	1,546	1,441	1,370
	50	1,600	1,527	1,453	1,344	1,271
	55	1,513	1,437	1,361	1,247	1,171
	60	1,426	1,347	**1,268**	1,150	1,072
	65	1,339	1,257	1,176	1,054	972
	70	1,251	1,167	1,083	957	873

Source: I-Sec Research

Combined factor of crude and passenger fare: The sensitivity shows high dependence of the airline business model on passenger fares. This reflects the high operating leverage nature of the airline business which has high fixed costs, including lease and other aircraft acquisition charges, engineering and maintenance charges, financing commitments, staff costs and IT costs. Significant operating expenses, such as airport charges, do not vary according to passenger load factors.

Table 22: Sensitivity of crude and passenger fare growth (FY18E)

	Crude (US$/bbl)						
	TP	45	50	55	60	65	70
Fare Growth (%)	-10%	977	884	792	699	607	514
	-5%	1,196	1,103	1,011	918	825	733
	0%	1,415	1,322	1,230	1,137	1,044	952
	3%	1,546	1,453	1,361	**1,268**	1,176	1,083
	5%	1,634	1,541	1,448	1,356	1,263	1,171
	10%	1,853	1,760	1,667	1,575	1,482	1,389

Source: I-Sec Research

The number of instances where Target Price goes below Rs1000 significantly increases indicating the high sensitivity to fare hikes.

Combined factor of passenger fare growth and currency: Even higher sensitivity is seen here as higher numbers of cost items including crude depend on currency.

Table 23: Sensitivity of INR and passenger fare growth

	(Rs)						
	TP	65	68	70	72	74	76
Fare Growth (%)	-10%	857	778	699	581	503	424
	-5%	1,075	997	918	800	721	643
	0%	1,294	1,216	1,137	1,019	940	862
	5%	1,426	1,347	**1,268**	1,150	1,072	993
	10%	1,513	1,435	1,356	1,238	1,159	1,080
	15%	1,732	1,653	1,575	1,457	1,378	1,299

Source: I-Sec Research

Assumptions

Table 24: The Key assumptions in our model

Assumptions	FY16E	FY17E	FY18E	FY19E	FY20E
Fare Growth	-14%	2%	3%	1%	1%
Average Ticket (Rs)	4,214	4,298	4,427	4,471	4,516
US$	65.3	67.0	67.0	67.0	67.0
Crude Prices(US$/bbl)	46.0	55.0	60.0	60.0	60.0
Realized ATF prices (Rs/kl)	47,748	54,366	57,363	57,363	57,363
Scheduled Passengers (mn)	33.1	41.0	47.0	53.8	61.7
RPK(mn)	35,968	44,124	50,296	57,379	65,512
ASK(mn)	42,826	54,785	59,355	65,872	74,572
PLF(%)	84.0	80.5	84.7	87.1	87.9
Ancillary Revenue (Rs mn)	21,223	28,646	35,075	43,521	53,703
Total Revenue(Rs mn)	161,399	205,627	243,776	284,959	333,111
EBITDA (Rs mn)	30,055	32,594	46,446	60,245	75,295
EBITDAR (Rs mn)	56,176	68,691	86,594	106,408	129,524
PAT (Rs mn)	19,897	21,260	32,034	43,332	55,045

Source: I-Sec research

Valuation

Low-Cost Carriers (LCCs) tend to trade at higher multiples compared to FSCs, and Asian LCCs enjoy additional premium on account of their low cost structure and high traffic growth. High volatility in crude prices and global economy have a direct bearing on the airline stock prices and, as such, it is best to consider the average 1-year forward EV /EBITDAR for the last 5years/10years to ascertain an average cycle multiple.

The average 1-year forward EV/EBITDAR for LCCs is 7.5 while the same for Asian LCCS is 9.5. As such, we ascribe 8x EV/EBITDAR to IndiGo based on FY18E to arrive at a target price of Rs1,268 per share.

Table 25: Valuation based on 8x EV/EBITDAR

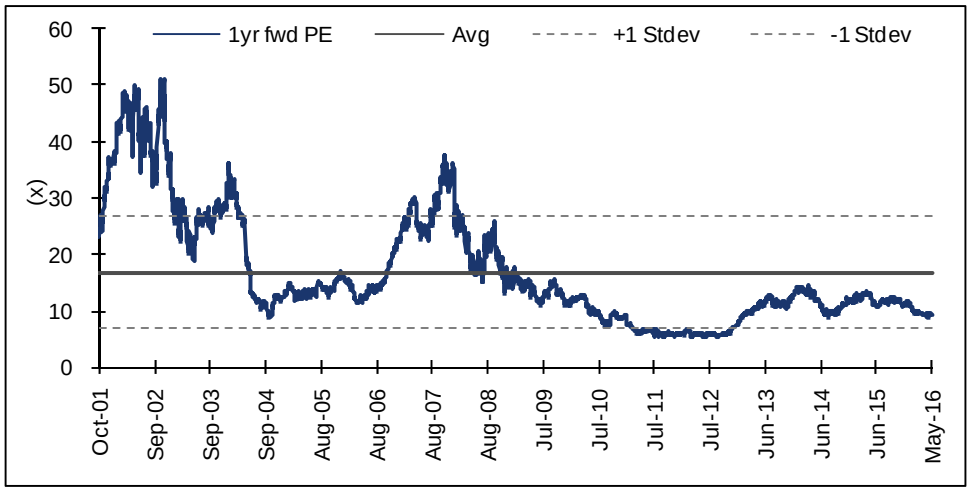
(Rs mn)	FY18E
EBITDAR	86,594
EV@8xEV/EBITDAR	692,752
Gross Debt	53,431
Cash	98,746
Rentals@7x	281,033
Net Debt	235,718
Equity Value	457,034
Shares (mn)	360.4
Equity Value	**1,268**

Source: I-Sec research

Our Target Price implies a PE of 14x based on FY18E earnings which is lower than the average PE band of global airlines. Considering the volatile nature of earnings, long term average multiple is more relevant. This is even more pertinent considering that the aviation sector has different growth triggers at different phases of the industry itself.

We have highlighted the PE charts of four major LCC airlines.

Chart 32: Easy Jet trading average one year forward PE has been 17x with a trading history of 15 years

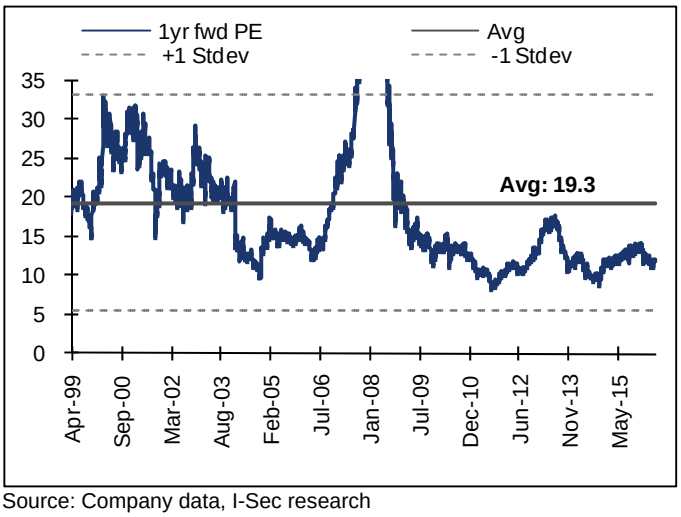


Source: Company data, I-Sec research

Chart 33: SouthWest average one year forward PE has been 22x with a trading history of 30 years

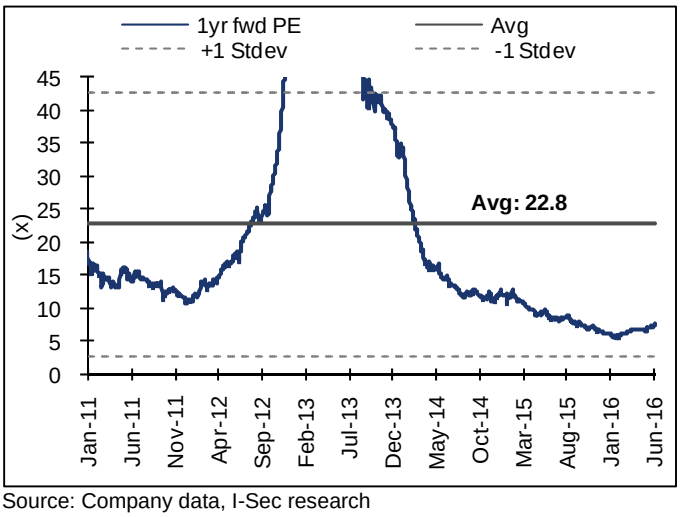
Source: Company data, I-Sec research

Chart 34: Ryan air one year average forward PE has been 19x



Source: Company data, I-Sec research

Chart 35: Cebu Pacific one year average forward PE has been 23x



Source: Company data, I-Sec research

The grey colored airlines are LCCs while the bold ones are Asian

Table 26: Average EV/EBITDAR multiples of Global airlines

EV/EBITDAR	FY1 Average -5AY	FY1 Average -10AY
Southwest Airlines Co.	4.7	4.7
JetBlue Airways Corporation	5.1	5.1
Allegiant Travel Company	7.1	7.1
Controladora Vuela Compania	3.1	3.1
GOL Linhas Aereas Inteligentes SA	8.1	8.1
AirAsia Bhd.	7.7	7.8
Cebu Air Inc.	5.8	5.8
Tiger Airways Holdings Limited	17.3	17.3
SpiceJet Limited	17.7	17.7
Air Berlin PLC	2.7	2.4
easyJet plc	5.9	5.8
Ryanair Holdings Plc	7.6	7.6
Norwegian Air Shuttle ASA	5.4	5.4
InterGlobe Aviation Ltd	5.9	5.9
LATAM Airlines Group SA	8.4	8.7
Aeroflot-Russian Airlines PJSC	3.1	3.2
Avianca Taca Holdings S.A Pfd	4.9	4.9
Thai Airways International Public Co. Ltd.	6.2	6.2
Copa Holdings, S.A. Class A	7.6	7.6
Korean Air Lines Co., Ltd	6.8	6.8
Hawaiian Holdings, Inc.	2.9	2.9
PT Garuda Indonesia (Persero) Tbk Class B	1.7	1.7
United Continental Holdings, Inc.	3.9	3.8
Cathay Pacific Airways Limited	6.4	6.4
Asiana Airlines Inc.	4.5	4.5
Alaska Air Group, Inc.	4.0	4.0
Air Canada	4.1	4.0
China Airlines Ltd.	8.9	8.9
Singapore Airlines Ltd.	3.0	3.3
Qantas Airways Limited	3.1	3.1
Eva Airways Corporation	6.5	6.5
Air France-KLM SA	3.0	3.0
Grupo Aeromexico SA de CV	2.9	2.9
Deutsche Lufthansa AG	3.1	3.1
Delta Air Lines, Inc.	4.7	4.7
American Airlines Group, Inc.	4.6	4.6
Finnair Oyj	2.4	2.4
Air China Limited Class H	6.5	6.5
China Eastern Airlines Corporation Limited Class H	5.9	5.9
Air New Zealand Limited	2.7	2.7
ANA Holdings Inc.	4.7	4.7
International Consolidated Airlines Group SA	3.8	3.7
Japan Airlines Co., Ltd.	3.3	3.3
Virgin Australia Holdings Limited	4.1	4.1
Virgin America, Inc.	3.4	3.4
SAS AB	2.1	2.2
Jet Airways (India) Limited	9.8	9.6
Average-Total	**5.47**	**5.47**
Average(LCC)	**7.49**	**7.49**
Average Asia	**6.55**	**6.56**
Average Asia-LCC	**9.29**	**9.29**

Source: Factset

Financials

Table 27: Profit & Loss statement

(Rs mn, year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
Total operating revenue	**111,166**	**139,253**	**161,399**	**205,627**	**243,776**
Expenses					
Aircraft fuel expenses	55,134	57,485	47,793	66,830	73,339
Aircraft and engine rentals	20,310	23,076	29,687	40,544	45,419
Less: Cash and non-cash incentives	(3,607)	(3,553)	(3,566)	(4,447)	(5,271)
Aircraft and engine rentals (net)	16,703	19,522	26,122	36,097	40,148
Purchase of stock in trade	584	817	1,148	1,000	1,000
Changes in inventories of stock in trade	7	(32)	(11)	(20)	(20)
Employee benefits expense	9,206	11,887	17,899	20,242	23,751
Other expenses	24,466	30,877	38,394	48,884	59,113
-Landing and navigation	8,794	10,901	14,100	17,825	21,964
-Maintenance Costs	3,162	4,175	5,400	7,001	8,627
-Selling and Distribution	6,945	8,730	10,410	13,263	15,724
-Other Expenses	5,564	7,071	8,473	10,795	12,798
Total operating expenses	**106,100**	**120,557**	**131,344**	**173,033**	**197,330**
EBITDA	**5,066**	**18,697**	**30,055**	**32,594**	**46,446**
(Margin%)	4.6	13.4	18.6	15.9	19.1
EBITDAR	**21,769**	**38,219**	**56,176**	**68,691**	**86,594**
(Margin%)	19.6	27.4	34.8	33.4	35.5
Finance costs	1,226	1,155	1,349	1,312	1,274
Depreciation and amortization expense	2,260	3,022	5,031	6,000	6,500
Other Income	3,155	3,946	4,614	5,090	7,090
Finance income	2,864	3,740	4,514	5,000	7,000
Non-operating non finance income	292	206	100	90	90
Profit before tax	**4,736**	**18,465**	**28,290**	**30,372**	**45,762**
Tax (charge)/benefit	(9)	5,424	8,392	9,112	13,729
Profit for the period / year	**4,744**	**13,064**	**19,897**	**21,260**	**32,034**

Source: Company data, I-Sec research

Table 28: Balance sheet

(Rs mn, year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
Equity and Liabilities					
Share capital	344	344	3,604	3,604	3,604
Reserves and surplus	3,874	3,918	14,635	27,499	51,136
Shareholders' funds	**4,217**	**4,262**	**18,238**	**31,102**	**54,740**
Non-current liabilities					
Deferred tax liabilities (net)	529	4,091	5,180	5,180	5,180
Long-term borrowings	30,807	35,884	29,331	27,331	25,331
Other long-term liabilities	12,958	20,170	24,722	24,722	24,722
Long-term provisions	5,013	2,051	7,694	7,694	7,694
Deferred incentives	13,654	13,317	11,778	14,047	12,018
	62,962	**75,514**	**78,705**	**78,974**	**74,945**
Current liabilities					
Short-term borrowings	-	-	-	-	-
Trade payables	3,828	4,755	7,517	9,577	11,354
Other current liabilities	16,149	19,008	21,507	27,039	31,429
-Current Maturity of Debt	2,655	3,378	3,378	3,378	3,378
Deferred incentives	3,878	4,199	4,054	4,054	4,054
Total Current liabilities	**23,855**	**27,962**	**33,079**	**40,670**	**46,837**
Total	**91,034**	**107,738**	**130,022**	**150,746**	**176,521**
Assets					
Non-current assets					
Net Tangible fixed assets	39,407	48,664	47,133	51,133	54,633
Net Intangible fixed assets	152	96	96	96	96
Capital work in progress	-	5	5	5	5
	39,560	**48,765**	**47,234**	**51,234**	**54,734**
Non-current investments	0	0	0	0	0
Deferred tax asset (net)	-	-	-	-	-
Long-term loans and advances	10,243	12,792	14,199	14,199	14,199
Other non-current assets	14,315	16,056	14,978	14,978	14,978
	24,559	**28,848**	**29,178**	**29,178**	**29,178**
	64,119	**77,613**	**76,412**	**80,412**	**83,912**
Current assets					
Current investments	12,715	5,168	9,741	9,741	9,741
Inventories	673	1,306	1,270	1,896	2,163
Trade receivables	891	1,046	1,570	1,690	2,004
Cash and bank balances	11,015	19,994	37,050	53,063	74,027
Other current assets	1,621	2,612	3,980	3,944	4,675
	26,916	**30,125**	**53,611**	**70,334**	**92,610**
Total	**91,034**	**107,738**	**130,022**	**150,746**	**176,521**

Source: Company data, I-Sec research

Table 29: Cashflow statement

(Rs mn, year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
Cashflow from operating activities					
Net profit before tax	4,736	18,357	28,290	30,372	45,762
Adjustments for:					
Depreciation and amortisation expense	2,260	3,022	5,031	6,000	6,500
Provision for redelivery cost (adjusted for provision utilised / reversed during the period / year)	63	63			
PBDDLA	0	71			
Provision for inventory obsolescence	24	21			
Loss / (profit) on sale of fixed asset (net)	(1)	0			
Non cash incentives (net)	26	(1)			
Assets written off	1	0			
Unrealised foreign exchange loss (net)	563	1,192			
Foreign exchange loss on forward contract	-	-			
Amortisation of discount on forward exchange contracts	-	-			
Advances written-off	0	1	(1,407)		
Interest expense	193	107	1,349	1,312	1,274
Finance lease charges	827	929			
Employee stock compensation cost	-	-			
Interest income on fixed deposits	(1,869)	(2,704)	(4,614)	(5,090)	(7,090)
Mark to market (loss) on forward contracts	-	-			
Net gain on sale of current investments	(639)	(1,036)			
Dividend from current investments	(356)	-			
Operating profit before working capital changes	**5,828**	**20,025**	**28,648**	**32,594**	**46,446**
Adjustment for:					
(Increase)/decrease in trade receivables	(210)	(225)	(524)	(120)	(314)
(Increase)/decrease in inventories	(174)	(654)	35	(626)	(266)
(Increase)/decrease in loans and advances and other assets	391	2	(1,368)	36	(732)
Increase/(decrease) in trade payables, other liabilities and provisions	8,987	8,607	10,904	7,591	6,167
Increase/(decrease)in deferred incentives	2,208	35	(1,684)	2,269	(2,029)
Cash generated from operating activities	**17,030**	**27,790**	**36,011**	**41,744**	**49,273**
Taxes paid	(1,075)	(3,951)	(7,304)	(9,112)	(13,729)
Net cash generated from operating activities	**15,955**	**23,839**	**28,707**	**32,633**	**35,544**
Cashflows from investing activities					
Purchase of fixed assets (including capital advances), net of cash incentives	(23,242)	(10,171)	(3,500)	(10,000)	(10,000)
Deposits made with banks due to mature within 12 months from the reporting date (net)	2,051	(7,617)	(3,496)	-	-
Deposits made with banks due to the mature after 12 months from reporting date (net)	(8,908)	(1,504)			
Proceeds from sale of fixed assets	5	2			
Purchase of mutual funds/ shares	(71,176)	(65,075)			
Proceeds from sale of mutual funds	70,483	73,658			
Interest received	1,292	1,303	4,614	5,090	7,090
Dividend received	356	-			
Net cash generated from / (used in) investing activities	**(29,138)**	**(9,405)**	**(2,382)**	**(4,910)**	**(2,910)**
Cashflows from financing activities					
Proceeds from secured loans	18,153	8,137	(2,000)	(2,000)	(2,000)
Repayment of secured loans	(4,516)	(4,320)			
Repayment of unsecured loans	-	-			
Interest paid	(186)	(100)	(1,349)	(1,312)	(1,274)
Finance lease charges paid	(603)	(670)			
Issue of share capital	-	-	12,091		
Dividend paid	-	(13,575)	(18,012)	(8,396)	(8,396)
Tax paid on dividends	-	(2,553)			
Net cash generated from / (used in) financing activities	**12,848**	**(13,081)**	**(9,270)**	**(11,709)**	**(11,670)**
Net increase / (decrease) in cash and cash equivalents during the year / period (A+B+C)	**(334)**	**1,353**	**17,056**	**16,014**	**20,964**

Source: Company data, I-Sec research

Table 30: Key ratios

(Year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
Per Share Data (in Rs.)					
EPS(Basic Recurring)	13.2	36.2	55.2	59.0	88.9
Diluted Recurring EPS	13.2	36.2	55.2	59.0	88.9
Recurring Cash EPS	19.4	44.6	69.2	75.6	106.9
Dividend per share (DPS)	12.3	34.9	42.8	20.0	20.0
Book Value per share	11.7	11.8	50.6	86.3	151.9
Growth Ratios (%)					
EBITDA	(43.3)	269.0	60.7	8.4	42.5
EBITDAR	(3.2)	75.6	47.0	22.3	26.1
Recurring Net Income	(39.4)	174.9	52.6	6.9	50.7
Valuation Ratios (x)					
P/E	76.6	27.9	18.3	17.1	11.3
P/CEPS	51.9	22.6	14.6	13.3	9.4
P/BV	86.1	85.2	19.9	11.7	6.6
EV / EBITDA	73.3	20.4	11.9	10.5	6.8
EV / EBITDAR	17.1	10.0	6.4	5.0	3.7
EV / FCF	(51.0)	27.9	14.2	15.1	12.4
Operating Ratios (%)					
Fuel/Sales	49.6	41.3	29.6	32.5	30.1
Net Rentals/Sales	15.0	14.0	16.2	17.6	16.5
Other Income / PBT	66.6	21.4	16.3	16.8	15.5
Effective Tax Rate	(0.2)	29.4	29.7	30.0	30.0
NWC / Total Assets	8.2	6.7	23.8	29.1	36.9
Inventory Days	2.3	4.0	3.5	4.0	4.0
Receivables (days)	2.9	2.7	3.6	3.0	3.0
Payables (days)	12.6	12.5	17.0	17.0	17.0
Net D/E Ratio (x)	1.99	4.27	(0.24)	(0.72)	(0.83)
Return/Profitability Ratios (%)					
Recurring Net Income Margins	4.3	9.4	12.3	10.3	13.1
RoCE	8.5	23.6	29.5	27.9	35.3
RoNW	112.5	306.0	109.1	68.4	58.5
Dividend Payout Ratio	93.4	96.4	77.6	33.9	22.5
EBITDA Margins	4.6	13.4	18.6	15.9	19.1

Source: Company data, I-Sec research

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Charts

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Equity Research

June 16, 2016

BSE Sensex: 26726

INDIA

SpiceJet

HOLD

Recovery priced in **Rs66**

Reason for report: Initiating coverage

Aviation

Target price Rs64

With a new ownership, SpiceJet (SJET) has emerged like a phoenix from the despair of insolvency, and staged a heartening turnaround in CY15. The company has not only capitalized on benign crude prices, but its earnings profile too has improved on asset utilisation, cost rationalization and innovative pricing to register consecutive quarterly profits since Q4FY15 along with significant improvement in on time performance. We delve into the company's innovative inventory control mechanisms, which have helped it improve its RASK significantly, helped by favourable working capital contracts and lower redelivery expenses. However, the overriding point of despair for SJET remains its lack of any big order with any airframers. This is a missed opportunity for the company considering the exponential stage of growth in the Indian aviation industry. With a 5x rally in share prices over the last one year, we believe that the recovery is fully priced in now.

- **Cost structure remains vulnerable without bulk order.** As SJET resorts to normal leases (wet/dry) which do not fortify its cost structure, we believe the company remains levered to crude prices. Our aircraft market analysis indicates a significant delivery time-lag for any big order from the perspective of at least Airbus or Boeing, which already have significantly committed orderbook. Maintenance costs will remain elevated with higher utilisation and a mixed fleet. Additionally, some of SpiceJet's favorable contracts with convenient payables and redelivery expenses will be temporary in nature and the higher asset utilisation/higher PLF model will have to decelerate in time to become more sustainable.
- **Corporate actions will have a major bearing ahead.** SJET will have to decide on prospective funding for expansion including decision on a prospective strategic partner. While the company has managed to deleverage with Rs6.5bn net debt reduction in FY16, the same will increase with a bulk order. We factor a bulk order for 150 aircrafts in FY17. The pending decision of the warrants issued to the ex-promoters remains another overhang with possible equity dilution of 25-30%.
- **We recommend HOLD on SJET with a target Price of Rs64 based on 7x FY18E EV/EBITDAR.** SJET is slated to increase its ASK/RPK/Pax from 12.9bn/11.7bn/11.9mn in FY16 to 17.3bn/15.3bn/16mn in FY18E, resulting in EBITDAR growth from Rs12.3bn in FY16 to Rs20bn in FY18 (FY18E EBITDAR margin of 28%). The lease adjusted ROCEs will remain ~18-20%. Our revenue model factors an average fare growth of 2%/3% in FY17/FY18 with a rising crude price assumption of US$55/60 in FY17/FY18.

Shareholding pattern

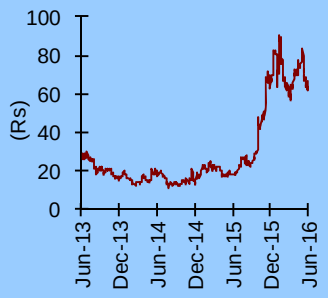
	Sep '15	Dec '15	Mar '16
Promoters	60.3	60.3	60.3
Institutional investors	0.6	1.4	3.1
MFs and UTI		0.1	0.0
Insurance	0.0	0.0	0.0
FIIs	0.6	1.3	3.1
Others	39.7	38.3	36.6

I-Sec vs Bbg* consensus

(%)	FY17E	FY18E
Sales	(4.6)	1.0
EBITDA	(31.8)	(8.6)
Adj. PAT	(43.1)	(16.2)

Source: *Bloomberg, I-Sec research

Price chart



Market Cap	Rs39.8bn/US$593mn
Reuters/Bloomberg	SPJT.BO/SJET IN
Shares Outstanding (mn)	599.5
52-week Range (Rs)	90/17
Free Float (%)	39.7
FII (%)	1.3
Daily Volume (US$/'000)	12,907
Absolute Return 3m (%)	9.4
Absolute Return 12m (%)	267.9
Sensex Return 3m (%)	9.4
Sensex Return 12m (%)	1.9

Year to March	FY15	FY16P	FY17E	FY18E
Revenue (Rs mn)	52,015	50,881	59,272	72,414
Net Income (Rs mn)	(7,484)	3,435	3,667	6,383
EPS (Rs)	(12.5)	5.7	6.1	10.6
% Chg YoY	(25.4)	(145.9)	6.7	74.1
P/E (x)	(5.3)	11.5	10.8	6.2
CEPS (Rs)	(10.4)	7.7	8.3	12.8
EV/E (x)	(8.8)	11.9	11.3	6.1
Dividend Yield (%)	-	-	-	-
RoCE (%)	(62.5)	35.1	14.3	20.5
RoE (%)	59.2	(54.4)	(138.4)	171.0

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Missed opportunity for capacity addition

SpiceJet fleet – a mix of turboprop, Boeing and Airbus: SpiceJet connects its network with fleet of 22 Boeing 737NGs, 7 aircraft on wet lease (A319, 320 and B737) along with 14 Bombardier Q-400s. The two Airbus 320s have been taken on wet lease from Czech company CSA to be deployed on metro routes. Five Boeing 737NGs are also on wet lease. The Bombardier Q400 was acquired under finance lease through an ECB from Export Development Canada. However, in view of overdue payments of interest and repayment of the ECB principal to the lender, SpiceJet entered into an agreement with the lender for the forbearance of defaults and the discharge of overdue amounts of principal and interest aggregating Rs898mn through 12 equal monthly payments from Apr'15. As of FY15-end, the total amount due under this ECB was Rs13.4bn.

Bulk order on the radar, but will have financial implications

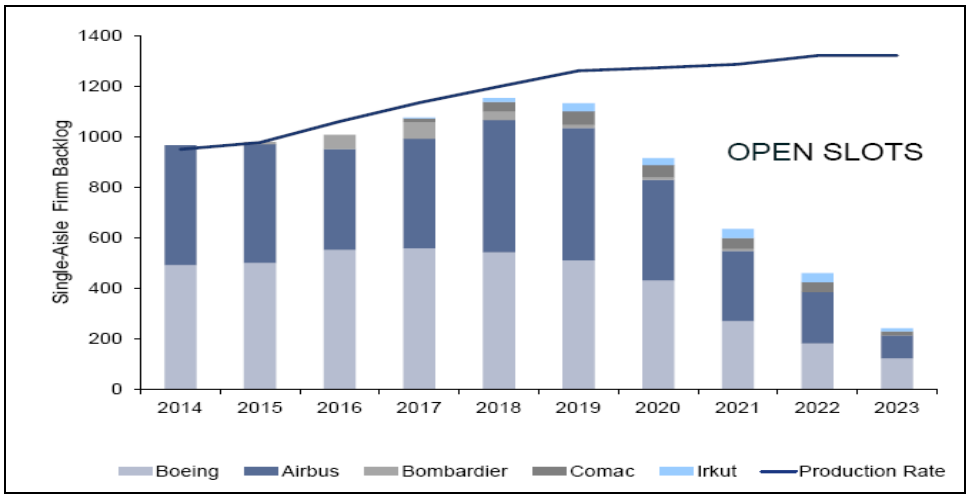
The SpiceJet management is keen to place a big order of more than 100 aircraft and is looking for options. Media has been rife about overtures from Boeing, Airbus as well as other players. We reckon such a big order may be placed sometime in FY17, which will have corresponding financing implications post the necessary advance payment involved in such orders. However, there will be some time gap before the aircraft from the order start getting delivered to SpiceJet. To give an example, let's say, the bulk order ensures a final list price of US$80mn per new aircraft. Assuming SpiceJet will have to pay 4% of the order upfront, it will entail a payment of Rs21.4bn to the airframer.

SpiceJet will receive the aircraft with significant time lag

This is due to the already committed orderbook for the two big airframers – Airbus and Boeing. This is especially the case with next-gen aircraft like Neo and Max. There will be a couple of years through which the manufacturing lines of Boeing and Airbus completely transform to the next-gen airframes. Post that, there is no free single aisle open slots available for five years indicating that a fresh buyer who has not yet ordered is likely to resort to lessors for neo/Max.

SpiceJet ordered 42 737 Max's in Oct'13, but till date there has not even been any date announced for the first delivery, leave aside any delivery schedule. We wonder on the deal dynamics between SpiceJet and Boeing considering there are talks of a new bulk order when such an order is still pending delivery. Considering that SpiceJet went through a restructuring process, does this order get delayed? Typically, the delivery dates are also declared once it has a dedicated slot.

Chart 1: Single aisle demand largely committed over the next three years



Source: Ascend

Missed opportunity for SpiceJet considering the growth in air traffic: SpiceJet's current PLF is above 90%, underlining the high systemic volume growth along with suitable yield management and inventory control. With increase in capacity, PLF will drop to more sustainable 85% levels with passenger growth assumption of 20%. Our model borders on the three boundary assumptions of sustainable PLFs, sustainable passenger growth, and rational increase in capacity. The capacity will increase for SpiceJet primarily through short term leases. Though it has an existing order of 42 Boeing-737Max, the same has no delivery schedule as of date in the Boeing website. The company had earlier guided for 49 aircraft as of FY17 exit. Hence, there is a case of missed opportunity for SpiceJet with respect to fleet size. This is one of the reasons why SpiceJet has opted for wet leases during peak periods. Such short-period operating leases have higher rentals and lead to higher CASK, hence is not sustainable, which is why one of our boundary assumptions includes rational increase in capacity.

Table 1: Passenger and capacity growth for SpiceJet

System	FY16	FY17	FY18	FY19	FY20
Passenger Growth		**15.0**	**20.0**	**20.0**	**20.0**
Passenger Carried	10,670,866	12,271,496	14,725,795	17,670,954	21,205,145
Market Share	12.5	12.5	13.2	13.9	14.6
Avg. km per passenger	874	874	874	874	874
RPK(mn)	9,326	10,725	12,870	15,444	18,533
Departure/plane	2,100	2,100	2,100	2,100	2,100
Effective seats(FY)	5,775	6,567	8,220	10,160	12,780
Avg. km per seat	836	836	836	836	836
ASK(mn)	10,139	11,530	14,432	17,837	22,437
PLF (%)	**92.0**	**93.0**	**89.2**	**86.6**	**82.6**

Source: I-Sec research

Remarkable turnaround story

We analyze SpiceJet's turnaround story in detail in this section. There has been a common perception about the benefits of lower oil prices being the singular factor in the turnaround. However, a detailed deep-dive P&L analysis will reveal other factors as well. A large part of the turnaround has been possible through reworking of redelivery expenses and favorable working capital terms, which we believe will continue in the medium term.

RASK and PLFs have increased simultaneously

With spectacular rise in PLFs, one of the common notions has been to attribute the same to lower tariffs. The easy assumption is that the higher PLFs must be on account of lower tariffs. However, ASK being the basic selling unit, it is imperative that comparison be made on ASK basis. We see that, despite the flash sales and discounts, SpiceJet has managed to increase Revenue per ASK (RASK). On a YoY comparison, it has managed to increase the RASK for past two quarters along with a higher PLF of ~92%. So, one has to give the credit to SpiceJet for the increase in RASK, which is a vital factor in its turnaround story. If we compare with IndiGo, SpiceJet's RASK has been a steady Rs0.24 lower than IndiGo for the past three quarters. We must remember that some part of the lower RASK will be structural on account of SpiceJet's turboprop fleet, which being small won't have comparable passenger fare/cargo revenues/ancillary revenues.

Table 2: Quarterly Revenue per ASK (RASK) has significantly improved for SpiceJet

	Q1FY15	Q2FY15	Q3FY15	Q4FY15	Q1FY16	Q2FY16	Q3FY16	Q4FY16
ASK-domestic (000)	3,822,025	3,823,594	2,931,793	1,886,704	2,222,951	2,282,580	2,754,028	2,879,795
ASK-Int'l (000)	422,080	511,574	589,345	553,858	603,185	598,068	690,376	885377
ASK-Total (000)	4,244,105	4,335,168	3,521,138	2,440,562	2,826,136	2,880,648	3,444,404	3,765,172
Revenue (Rs mn)	16,786	14,499	13,112	7,863	11,063	10,401	14,600	14,750
Total RASK	**3.96**	**3.34**	**3.72**	**3.22**	**3.91**	**3.61**	**4.24**	**3.92**
PLF (%)	78.2	82.6	84.6	81.7	89.8	92.8	91.6	92.1
PAX Revenue (Rs mn)	15,505	12,749	11,973	6,973	10,040	9,095	12,680	12792
Ancillary revenue (Rs mn)	1,275	1,442	1,023	891	1,003	1,205	1,707	1707
PAX RASK	3.65	2.94	3.40	2.86	3.55	3.16	3.68	3.40
Fare (Rs)	4340	3,373	3,968	3,512	3,711	3,192	3,852	3,600
Passengers(mn)	3.57	3.78	3.02	1.99	2.71	2.85	3.29	3.39

Source: Company Data, I-Sec Research

So, how has been SpiceJet been able to increase its RASK in a competitive environment? We believe the answer lies in better utilisation, better coordination between the turboprops and B737s, and inventory control. We delve deeper into the inventory control next.

Inventory control has driven RASK improvement

Revenue management is a process by which airlines manage fares of seats based on category and date of travel between the same origin-destination (O-D) markets. Airlines manage the seat inventory availability to maximize revenues. With the evolution of Low-Cost Carriers (LCCs), the lever of different seat categories has also diluted significantly. Today, the likes of IndiGo/SpiceJet have one plain vanilla seating class. Yet yield management is important with the development of one-dimensional differential pricing mechanism in which same seat can be sold at different prices only

based on time. Leisure travel would involve buying discount tickets with longer time horizon; however, business travelers would pay higher for near time horizon tickets. Hence, a crucial strategy would involve optimum capacity control to protect seats for later booking, high fare business passengers. Without strong restrictions to impose demand segmentation by passengers' willingness to pay, the only way an airline can force those with higher willingness to pay higher fares is to limit the seat availability in lower fare classes. This protection of high-yield seats and at the same time maximizing the PLF is a function of yield management. This is accomplished by forecasting the expected future booking demand for higher-fare classes and performing mathematical optimization to determine the number of seats that should be prevented from low-fare bookings.

An example would be that of SpiceJet fares on the Delhi-Mumbai route. Although, SpiceJet is a low-cost airline, its advance booking tariffs are much higher compared to competition versus the current booking. As we go down the time, it is no longer the lowest air fare airline, a position which it maintains for current bookings. This strategy is an example of yield management through inventory control through yield management again. So, while SpiceJet is happy to be lowest at Rs3,500 per ticket for current bookings, it is not the lowest fare player at Rs2,900/2,800 for subsequent advanced bookings.

This is further illustrated by the 'other current liabilities' in the balance sheet. The 'other current liabilities' carries the forward sales. Adjusting for the current portion of long-term debt, the 'other current liability' of SpiceJet has reduced from Rs10.1bn in FY14 to Rs6.6bn in FY15.

Chart 2: Delhi-Mumbai booking fare for next 5-6 weeks as of Mar'16 (April booking)

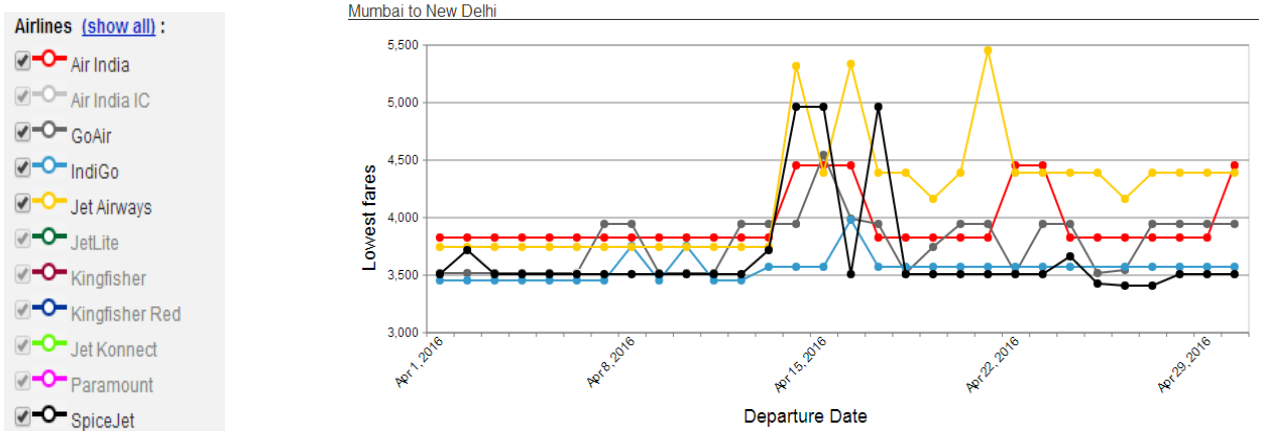


Chart 3: Delhi-Mumbai booking fare for 7-15 weeks as of Mar'16 (June booking)

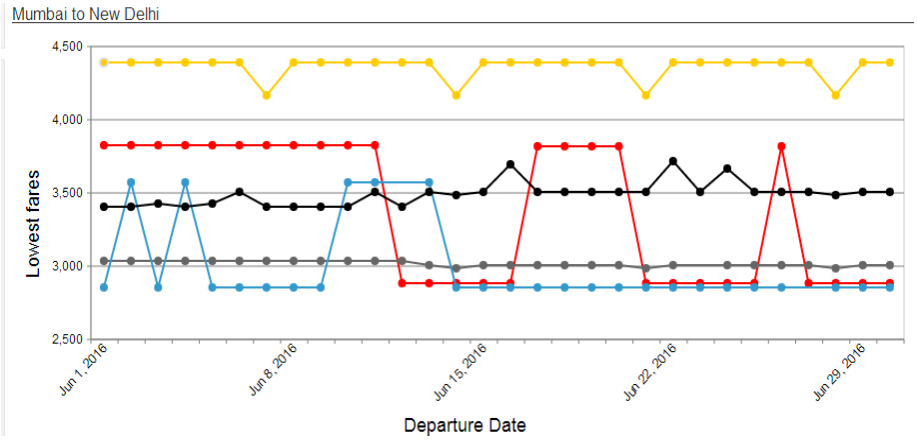
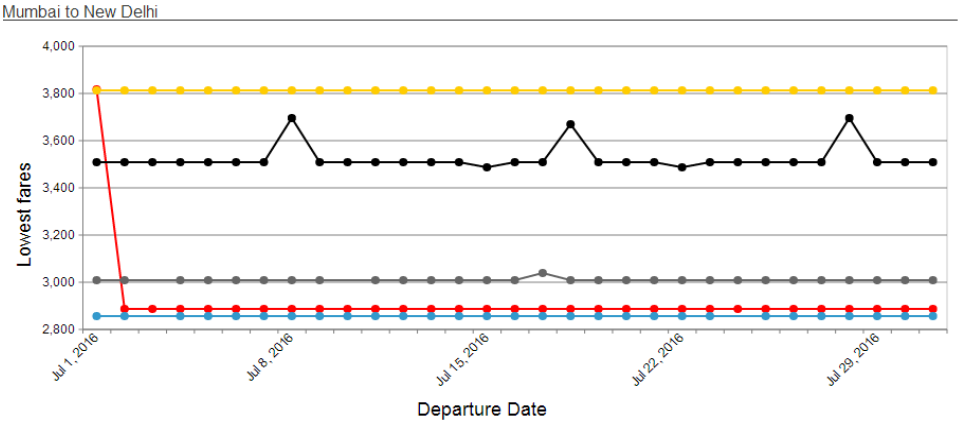
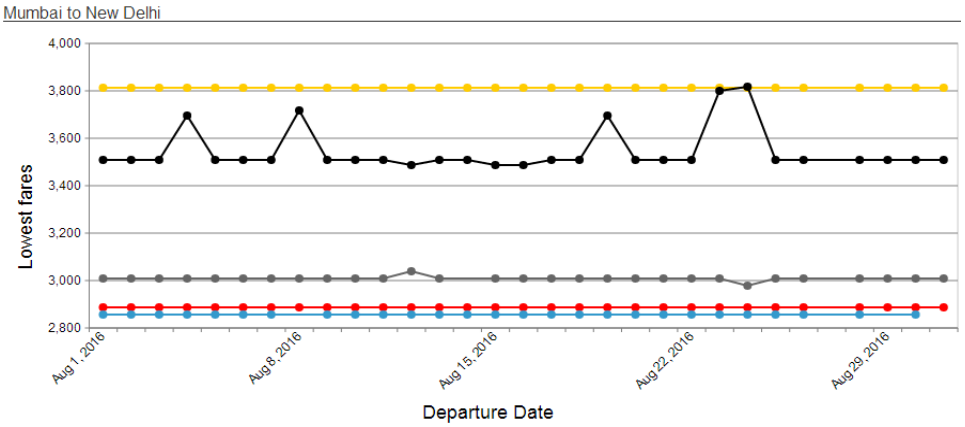


Chart 4: Delhi-Mumbai booking fare for 16-25 weeks as of Mar'16 (July and August bookings)



Source: Cleartrip

Chart 5: Delhi-Mumbai booking fare for 16-25 weeks as of Mar'16 (July and August bookings)



Source: Cleartrip

Inventory Control has corresponding effect on working capital management. While the inventory control strategy of selling higher share of tickets in the immediate future will increase the RASK, it also denies the airline valuable working capital funds which can be earned through advanced sales. So, is the SpiceJet strategy sustainable? Can it sustain this strategy in light of working capital funding? We analyze SpiceJet's working capital status in this light.

Working capital has benefitted from easier payment terms

Typically, airlines would not have any receivable outstanding as all the payments are made on an advanced basis while payments to oil firms and other creditors can be made in due time. We see that SpiceJet's payable days have indeed increased in FY15 when it was 63 days compared to 40 days for FY12-FY13. This might have been due to the favorable terms of payment received by the company as a part of the restructuring plan and the company has rightfully capitalized on the same. We expect this benefit to continue till FY18 post which it may be revoked gradually. However, the key headwind in maintaining a front-loaded inventory distribution is the redelivery cost, which we will discuss in detail later in this report.

Table 3: Working capital schedule for SpiceJet

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
Net WC (Rs mn)	**(790)**	**(2,811)**	**(1,094)**	**(2,221)**	**(2,578)**	**(4,646)**	**(7,077)**	**(7,581)**	**(17,019)**	**(14,579)**	**(10,935)**
Receivable Days	3	3	0	3	3	2	2	7	9	9	3
Inventory Days	3	4	3	2	2	3	3	3	2	3	5
Other CA Days	-	-	-	2	-	-	1	14	8	1	5
Payable Days	40	22	21	27	26	33	38	43	54	63	61
Other CL Days	73	271	150	71	100	57	43	42	52	41	49

Source: Company Data, I-Sec Research

CASK has benefitted from lower crude and redelivery costs

CASK has also improved and obviously benefitted from low crude prices, but there is more. Not harping on the obvious effect and reason for low fuel costs, another item which has reduced for SpiceJet is the redelivery costs. So how did redelivery costs spiral down in H2FY16 and can it remain low?

Lower redelivery costs have relieved a lot of cash expectations from working capital. SpiceJet has been maintaining provisions for redelivery expenses, which stands at Rs1679mn as of FY16 end. The company has been able to rework some of the redelivery expenses based upon revised lease terms and as such, some of the historical accruals have been reversed through other income (e.g. Rs16mn in Q3FY16, Rs654mn in Q2FY16 and Rs71mn in Q1FY16). However, in Q4FY16, the company had made net accrual after write-back of Rs143mn. Hence, the redelivery costs have gone down from an average of Rs674mn each quarter between Q4FY14 to Q4FY15 to an average of Rs160mn in the Q1-Q4FY16. This has eased considerable pressure on working capital as a means of cash generation. **These reworking of contracts is likely to remain in favor of the company through additional orders from Boeing/Bombardiers. In fact, this provides an additional case for new aircraft orders from SpiceJet in favor of Boeing/Bombardier instead of Airbus apart from complementing the existing Boeing and Bombardier fleet.**

Table 4: CASK analysis of SpiceJet

Per ASK	Q1FY15	Q2FY15	Q3FY15	Q4FY15	Q1FY16	Q2FY16	Q3FY16	Q4FY16
Fuel	**1.82**	**1.82**	**1.60**	**1.17**	**1.27**	**1.17**	**1.06**	0.87
Lease rentals	0.65	0.60	0.61	0.47	0.57	0.59	0.66	0.66
Airport Charges	0.26	0.25	0.27	0.28	0.29	0.29	0.28	0.29
Maintenance	0.45	0.48	0.45	0.47	0.51	0.57	0.48	1.05
Redelivery	**0.11**	**0.06**	**0.51**	**0.27**	**0.01**	**0.01**	**0.09**	0.07
Other operating expense	0.10	0.11	0.12	0.12	0.15	0.18	0.16	0.13
Employee	0.33	0.34	0.41	0.44	0.41	0.40	0.37	0.35
Other expense	0.42	0.30	0.35	0.29	0.35	0.38	0.33	0.38
CASK	**4.12**	**3.96**	**4.31**	**3.52**	**3.56**	**3.60**	**3.43**	**3.81**
RASK-CASK	**(0.17)**	**(0.62)**	**(0.59)**	**(0.30)**	**0.35**	**0.01**	**0.81**	**0.11**

Source: Company Data, I-Sec research

CASK structurally higher due to maintenance cost

Our detailed deep-dive cost analysis has been shown earlier in our IndiGo report, hence is not being repeated here. However, while the previous analysis has been on the basis of FY10-FY15, here we present a quarterly analysis for the Q1-Q4 period of FY16. These are the quarters more relevant for SJET as it captures the effect of the restructuring and various measures taken by the new management.

We focus more on costs ex-rental initially for the quarters between Q1-Q4FY16, which will be the period under consideration (PUC) in this section. Is there any other construct for cost differential between the SJET and IndiGo apart from rentals?

In this PUC, SJET actually has lower comparable or lower cost per ASK for parameters like employee, fuel and aircraft landing and en route charges. These lower charges can be explained by the 14 Q400 aircraft in its fleet, which enjoy lower charges compared to bigger aircraft. For example, the Q400 has lower fuel tax rates (~4% compared to 25% for big jets) and lower landing and navigation charges. This is partially offset by the increased departures and landing of the turboprops, which will require more fuel burn.

However, SpiceJet has much higher other expenses compared to IndiGo (refer table 5 below. These other expenses comprise of maintenance charges, supplemental lease charges, redelivery costs, selling and distribution costs, and other expenditures like software charges and insurance. We have clubbed these costs to make an equivalent comparison between IndiGo and SpiceJet. IndiGo has not separately given the cost for these items in their quarterly disclosure. Taking all these costs, combined average quarterly cost during the PUC for SpiceJet was average Rs1.07 per ASK compared to 0.59 for IndiGo (delta of Rs0.48).

Typically, selling and distribution cost per ASK is again much lower for SpiceJet than IndiGo (Rs0.05 delta). It has averaged Rs0.26 for IndiGo in the past five years whereas SpiceJet has managed it at a cost of Rs0.19.

Maintenance cost is indeed lower for IndiGo (Rs0.10 delta). The lower maintenance costs can be on account of IndiGo's well-known uniform fleet factor and a relatively lower fleet age, but the delta suggests it is not the key differentiator compared to the total delta of Rs0.48 for other expenses.

Considering the S&D and maintenance costs, we can only explain a delta of Rs0.5 thus far. So, where is the remaining delta? The answer lies in the supplementary rental charges and redelivery expenses. Again, the redelivery expenses are not significant.

Higher maintenance costs will remain with higher utilisation and mixed fleet

The entire cost differential comes down to the significant supplementary rentals paid by SpiceJet. Similar supplementary rentals are also being paid by Jet Airways (Jet). So, in our answer to the cost differential, this is a key construct apart from incentives which favor IndiGo over other players. The entire

supplementary rentals for IndiGo are included in the rentals and not separately disclosed. Therefore, one has to believe that the supplementary rental for IndiGo is significantly low considering it also includes the supplementary rentals. This is additional to the fact that IndiGo has a younger fleet and all narrow body big jets, which should have implied higher gross rentals.

Supplementary rentals are based on aircraft utilisation and calculated on number of hours flown or cycle operated. So, is SpiceJet/Jet overworking its fleet so that supplementary rentals are being paid? The answer is in the negative since ASK per aircraft is in fact similar for IndiGo/SpiceJet/Jet at around 400mn per year. So, can there be a differential between airlines in payment of supplementary rentals? We discuss it in our next section.

Table 5: Indigo quarterly CASK

	Q1FY16	Q2FY16	Q3FY16	Q4FY16	Comments
RASK	4.15	3.36	4.00	3.60	
Fuel	1.33	1.18	1.08	0.90	Marginally higher for IndiGo
Net Rentals	0.59	0.60	0.63	0.62	
Incentives	0.09	0.08	0.08	0.08	This is not applicable to SpiceJet
Employee	0.38	0.42	0.43	0.43	Higher for IndiGo
Landing fees and en-route charges	0.32	0.32	0.33	0.34	Lower for SpiceJet, concessions for regional aircraft
Other Expenses	**0.57**	**0.61**	**0.60**	**0.60**	**This is significantly lower for IndiGo (Q1-Q3 average of 0.59 compared to 1.07 for SpiceJet)**
CASK	3.19	3.13	3.08	2.89	
CASK without incentives	3.28	3.21	3.16	2.97	
RASK-CASK	0.96	0.22	0.92	0.71	
RASK-CASK without incentives	0.87	0.14	0.84	0.63	

Source: Company Data, I-Sec research

SpiceJet has a significant outlay on account of supplementary rentals. Similar supplementary leases are also paid by Jet Airways.

Table 6: Detailed 'other expenses' between SpiceJet and IndiGo

	SpiceJet				Indigo
Other expenses per ASK	**Q1FY16**	**Q2FY16**	**Q3FY16**	**Q4FY16**	**Average**
Maintenance (avg. 5 years)	0.21	0.21	0.21	0.21	0.118
Supplementary rentals	0.30	0.36	0.26	0.84	
Selling and distribution (avg. 5 years)	0.19	0.19	0.19	0.19	0.237
Insurance (avg. 5 years)	0.08	0.08	0.08	0.08	0.08
Redelivery	0.01	0.01	0.09	0.07	
Software charges (avg. 5 years)	0.04	0.04	0.04	0.04	0.25
Other	0.18	0.25	0.18	0.20	
Total	1.02	1.15	1.05	1.63	0.60

Source: Company data, I-Sec research

Supplementary rentals has been a key drag

Leases, and sometimes loans, often have provisions that require the operator to pay maintenance reserves based on months, flight cycles and flight hours to cover future maintenance costs. This is primarily a risk mitigant in case of default. To avoid issues in case of bankruptcy, such reserves are often substituted by 'supplemental rent'. These are normally collected on a monthly basis and on submission of the relevant claims – when certain defined work is accomplished, the operator will be refunded the cost. Some engine manufacturers or third party maintenance providers offer 'power-by-the-hour' deals, where maintenance is provided against pre-agreed usage fees.

Genesis of maintenance reserves lies in risk mitigation of lessors. Most operating leases provide that the lessee is liable for the ongoing costs related to maintaining an aircraft to the required standard. In the event that an aircraft is forcibly repossessed due to a default by the airline, the aircraft may require expensive investment in outstanding maintenance work before it is in a condition to be re-leased or sold to another airline/investor. Therefore, a lessor's primary risk in relation to maintenance is one where the lessee fails to pay, in whole or in part, for the maintenance utility it consumed.

To mitigate maintenance exposure, most lessors have independent credit departments to evaluate the creditworthiness of lessees. Evaluation of an operator's credit standing generally involves the establishment of some financial test, the failure to meet which would invoke an obligation to establish more stringent collateral security in the form of security deposits and payment of maintenance reserves. **Hence, maintenance reserves are payments made by the lessee to the lessor to accrue for those scheduled major maintenance events that require significant aircraft grounding time and/or turnaround time for certain major component overhauls. Put another way, maintenance reserves are payments for maintenance utility consumed**.

Mathematically, Full-life Maintenance Value = Maintenance Utility Consumed + Maintenance Utility Remaining, or Full-Life Maintenance Value = Maintenance Reserves + Maintenance Utility Remaining, which understandably indicates that Maintenance Reserves = Maintenance Utility Consumed.

Maintenance costs can generate cost asymmetry. Maintenance reserves are often the most contentious part of a lease negotiation; the lessor views reserves as a cost-covering exercise, while the lessee views it as a burden on its cashflow resources. However, it is not this burden which is of the only interest. There is a differential in the levy of these maintenance reserves. **While the maintenance reserves are strictly implemented on most airlines, many airlines have sufficient credit stature and prominence in the marketplace by which means they can reject paying maintenance reserves. Does it imply that IndiGo may get away with lower supplementary rentals compared to its peers? We think so. This is one of the reasons why the maintenance reserves are a part of the loans and advances for SpiceJet/Jet while it is part of other long-term liabilities for IndiGo.**

Maintenance reserves are based on specific metrics and specific events. Maintenance reserve payments are calculated on flight hour, flight cycle, and/or calendar basis and are usually paid on a monthly basis in arrears. Accumulated reserves are reimbursed (subject to limitations) after major maintenance events are completed. In general, reserves become the property of the lessor immediately upon payment. Customarily, the lessee will cause the required maintenance to be completed and then claim reimbursement for the qualified portion of the work from the reserve account held by the lessor. Repayment takes place only if payment into the reserve account is fully up to date, and only up to the amount held in the specific reserve account. Thus, if a particular event is carried out, and the cost of that work exceeds the total in the specific reserve account, the excess cost is the responsibility of the lessee. Funds generally cannot be transferred from other reserve accounts for the same aircraft to cover any shortfall incurred. So, for example, a lessee cannot siphon a fund used for engine maintenance and funnel those proceeds to subsidize the cost of airframe heavy check. In the event a lessee negotiates to not pay maintenance reserves, it may still be required to provide collateral security in the form of an End of Lease Financial Adjustment or through a Letter of Credit (LC).

A lease agreement will specify what maintenance events are to be covered through payment of reserves and for which the lessee may draw down against the accrued amounts. Areas of maintenance typically covered by reserves are as follows:

- Airframe Heavy Structural Inspections
- Landing Gear Overhauls
- Engine Performance Restoration
- Engine Life Limited Parts (LLPs)
- Auxiliary Power Unit (APU) Restoration

The baseline maintenance reserves are derived by each lessor from internally generated reserve claims, industry publications, and manufacturer-published cost data. Maintenance utility calculation for new aircraft will depend upon OEM specifications shared in the Maintenance Planning Document (MPD). The A320neo and Boeing 737Max may fall in this category although they will share lot of similarities between these new generation aircraft with their predecessors. Such a specification will be beneficial for an operator who inducts virgin new aircraft from any OEM –such as Indigo. However, such a benefit is non-relevant considering that IndiGo is likely to use its market position and balance sheet not pay any supplemental rentals/maintenance reserves outgo.

Aircraft age has significant bearing on this maintenance reserve. As an aircraft ages, subsequent airframe heavy checks are expected to require higher levels of non-routine maintenance, which is defined to be the work required to rectify routine maintenance tasks. The non-routine ratio – sometimes referred to as the defect ratio – is the ratio of non-routine manhours to routine manhours, and is a measurement of the incremental time required to correct routine defects.

As an aircraft ages, the non-routine ratio can easily exceed 100%, which explains why successive maintenance checks tend to be more costly. Therefore, when developing airframe maintenance reserves, it is important to adjust the rate to account for the

particular phase within the airframe's maintenance cycle. The airframe's maintenance cycle can be broken into three phases consisting of: first-run, mature run, and aging-run.

- **First-Run** is the initial operating years, often referred to as the honeymoon period and generally considered the first 4-6 years of in-service operation. The structure, systems, and components are new, and there is less non-routine maintenance and material scrap rate.
- **Mature-Run** begins after the newness phase and runs through the first maintenance cycle. This period typically falls between the first heavy maintenance visit and the second maintenance visit.
- **Aging-Run** begins after the end of the first maintenance cycle when the effects of airframe age result in higher non-routine maintenance costs. This period typically begins after the second heavy maintenance visit and continues to increase with time.

Flight Length is another crucial parameter. The impact of lower flight length results in higher cyclical loads on an engine's parts and accessories with the consequence of higher non-routine maintenance. Smaller flight segments also force engines to spend a larger proportion of total flight time using take-off and climb power settings resulting in more rapid performance deterioration, which translates to higher DMC.

This is definitely one of the negative offsets attributable to maintaining a regional aircraft/turboprop feet. SpiceJet/Jet/Air-India all have such fleet and will have to bear the higher maintenance costs on account of the same. IndiGo does not have any such small aircraft fleet.

RoCE to improve ahead

One must not forget the asset-light model of leasing in airlines. Equating the rental outgo in an operating lease as an interest expense towards asset acquisition, the RoEs should not change in principal. RoEs would remain high on the back of an extremely high leveraged business.

However, the comparison is different in case of RoCE. The operating lease rentals should be added back to EBIT, while the equivalent asset should be added to capital employed. In a growing phase, when an increasing number of aircraft are being acquired, equivalent assets can be estimated as a 7x/8x the current rental (operating +finance). So, while the finance lease asset is already factored in the assets, we add 7x operating lease rentals to the assets to derive adjusted RoCEs in line with the global practice for equivalent debt estimation.

Even if we adjust for the off balance sheet assets under operating lease, the company would retain attractive RoCEs (~18-20%)

Table 7: Attractive RoCEs ahead, adjusted for operating lease rentals

(Rs mn)	FY10	FY11	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
EBIT	848	1,394	(5,535)	(754)	(8,666)	(5,849)	4,589	5,268	8,649
Capital Employed	2,436	4,152	9,618	17,177	8,812	9,356	13,072	36,739	42,121
RoCE	34.8	33.6	(57.6)	(4.4)	(98.3)	(62.5)	35.1	14.3	20.5
Rentals	772	1,367	2,526	3,589	3,898	4,285	6,019	8,081	10,532
Op. Lease Debt	5,402	9,569	17,682	25,125	27,287	29,994	42,133	56,567	73,722
Adjusted EBIT	1,619	2,761	(3,009)	2,836	(4,768)	(1,564)	10,608	13,349	19,181
Adjusted CE	7,838	13,721	27,299	42,302	36,099	39,350	55,206	93,306	115,844
Adjusted RoCE	20.7	20.1	(11.0)	6.7	(13.2)	(4.0)	19.2	14.3	16.6

Source: I-Sec research, Company Data

Debt will increase on account of the upcoming bulk order

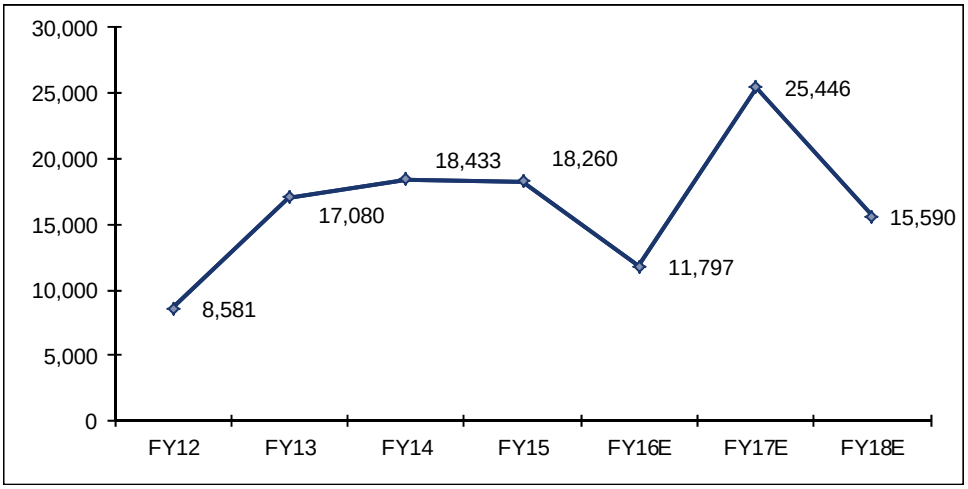
The leverage path for SpiceJet will depend on a key decision to place a bulk order. As explained earlier, bulk order will have an initial outgo of ~Rs2bn. To give an example, let's say, the bulk order ensures a final list price of US$80mn per new aircraft. Assuming SpiceJet will have to pay 4% of the order upfront, it will entail a payment of Rs21.4bn to the airframer. This item is shown in the security deposits in the balance sheet under loans and advances. We assume such a bulk order to be placed by SpiceJet during FY17, which will raise its leverage contour.

Table 8: Leverage portfolio of SpiceJet

(Rs mn)	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
Long-Term Borrowing	6,504	14,300	12,363	11,199	9,237	29,237	28,237
Short-Term Borrowing	2,050	2,482	2,800	2,986	1,050	1,050	1,050
Other Long-Term Liabilities	135	225	291	255	220	220	220
Trade Payables	719	1,003	1,104	1,682	-	-	-
Current maturity of LT debt	1,531	1,241	1,926	2,375	2,375	2,375	2,375
Borrowing	10,940	19,251	18,484	18,496	12,882	32,882	31,882
Cash	2,359	2,171	51	236	1,085	7,436	16,292
Net Debt	**8,581**	**17,080**	**18,433**	**18,260**	**11,797**	**25,446**	**15,590**

Source: Company Data, I-Sec research

Chart 6: *Debt prop-up likely for SpiceJet in FY17 owing to the anticipated bulk order



Source: Company Data, I-Sec research
*The debt does not include the preferance shares given to ex-promoters

Prospective dilution is an overhang

SpiceJet's shareholders, in their meeting held on 24-Sep'14, approved the aggregate issue of 189,091,378 warrants convertible into equivalent number of equity shares having a nominal value of Rs10 each at a premium of Rs6.3 to previous promoters for a consideration aggregating to Rs3,082mn. The ex-promoters paid Rs2,305mn towards this in FY15 making them eligible for 141.1mn shares.

Additionally, in Jan'15, the Board of Directors approved the issue of up to 3,750,000 non-convertible redeemable preference shares of Rs1,000 each on basis of the subscription offer received by the previous promoters subject to the approval of the shareholders and such other approvals as may be required. The ex-promoters paid Rs1,200mn towards this. Being non-convertible, it will not add to dilution but remain as debt.

The ex-promoters also paid Rs500mn in Q1FY16, which might have been toward the non-convertible preference shares. Although the company has not disclosed it, the dilution ratio of earnings per share indicates likewise.

Therefore, on a combined basis, SpiceJet has Rs4bn recorded as advance money received against securities issued and/or proposed to be issued. Among, this considering the dilution prospect incidental from the warrants, additional shares issued to the ex-promoters could be 142mn, assuming there is no further money subscribed by the ex-promoters. This would imply ~24% dilution to SpiceJet's earnings. In case there is full subscription of the warrant program, the ex-promoters can apply for additional 48mn shares on a payment of Rs778mn. This would imply a higher dilution of near 32%. The entire calculation of dilution is based on the price of Rs10 plus a security premium of Rs6.3 (implying a conversion price of Rs16.3).

Table 9: Quarterly earnings of SpiceJet indicating the dilution prospects

(Rs/share)	Q4FY15	Q1FY16	Q2FY16	Q3FY16	Q4FY16
Basic Earnings per share	0.38	1.20	0.40	3.98	1.22
Diluted earnings per share	0.31	0.97	0.32	3.02	0.93
Dilution %	22.6	23.7	25.0	31.8	31.2

Source: I-Sec research, Company data

Table 10: Timeline of the warrants and preference shares issued by SpiceJet to ex-promoters

Date	Event	Comment
Mar'16	Reclassification of Rs1785.92mn from short term borrowing to Advance money against securities to be issued	Total warrant/crdps money now stand as Rs5790.89mn
Oct'15	Additional money received toward CRDPS of Rs500mn.	Addl. money received toward warrants/ CRDPS of Rs500mn. Total warrant/CRDPS money now stands as Rs4, 005mn.
Jan'15	The Board of the Company approved the issue of up to 3,750,000 non-convertible redeemable preference shares of	The Marans have paid Rs1, 200.29mn towards this.
	Rs1,000 each basis the subscription offer received by the previous promoters subject to the approval of the	They can get 1.2mn preference shares on this account.
	Shareholders of the Company and such other approvals as may be required.	Preference shares not convertible.
Nov'14	Allotment of 1,91,69,000 equity shares to Mr. Kalanithi Maran and 4,50,00,000 equity shares to M/s Kal Airways	This was exercised based on warrants issued as in Mar'14.
	Private Limited respectively, having nominal value of Rs10 each against conversion of options attached to	
	warrants issued on a preferential basis.	
Sep'14	The shareholders of the Company in their meeting held on 24-Sep'14 approved the aggregate issue.	The Marans have paid Rs2, 304.68mn toward this.
	of 189,091,378 warrants convertible into equivalent number of equity shares having a nominal value of Rs10	Based on payment made, they will be able to hold 141.4mn shares.
	each at a premium of Rs6.3 to previous promoters for a consideration aggregating to Rs3082.189mn.	

Source: I-Sec research, Company data

Average fares will move ahead with crude

The biggest delta which swings the profitability of any airline is the average fare growth. This is a typical characteristic of the high operating leverage nature of the airline business. We factor 2%/3% growth in average passenger fare for SpiceJet in FY17/FY18.

Increase in fare should never be seen in isolation, but with rising crude price assumption of US$55/60 per barrel for FY17/FY18 and a strong passenger growth. We assume a constant INR/USD assumption of 67 and no change in the current tax structure. We are factoring the higher excise duty of 14% on ATF as introduced in the FY17 Union Budget.

Our domestic supply-demand model shows an implied growth rate of 14%. The average fare is a key determinant of profits for an airline, but it depends on two key factors, namely, crude prices (which we have discussed) and competition. Our supply-demand model of domestic air traffic in India has a consolidated average growth of 14% over the next four years. This is the implied growth rate based on the capacity addition program of domestic airlines. This model accounts for all the operating airlines in India along with their planned capacity additions, hence reflects competition. We have already established that, barring a perilous way of short-term operating lease/wet leases, the capacity addition options are fairly limited. Another constraint will be that PLFs typically tend to be stable or modestly increasing at an aggregate level, thanks to the modern-day yield management practices adopted by the airline industry. Therefore, when we arrive at an average industry growth of 14% with increasing PLFs and factoring all the capacity additions, it is but the implied growth rate of the system.

Actual growth would likely outrun this implied growth rate indicating increased fare trajectory. The implied growth rate of 14% is low considering that the average annual growth rate of passengers in India has been more than 20% since 2000 excluding the three years of the 2001-02 US terrorist attacks and subsequent global crisis, the great 2009 financial recession, and 2012 when Kingfisher Airlines went insolvent.

Hence at an implied growth rate of 14% and an incrementally increasing oil price scenario, our average air fare growth estimate of 2/3% for SpiceJet over FY17/FY18 is conservative.

Table 11: Domestic air traffic supply and demand

System	FY16	FY17	FY18	FY19	FY20
Passenger growth		**15.5**	**13.0**	**14.1**	**14.7**
Passenger carried	85,197,675	98,363,142	111,189,886	126,879,624	145,505,253
Avg km per passenger	950	954	956	956	956
RPK (mn)	80,938	93,838	106,298	121,297	139,103
Departure/plane	1,980	2,000	2,030	2,040	2,050
Effective seats (FY)	56,044	64,504	70,043	78,812	90,916
Avg km per seat	881	890	885	881	881
ASK (mn)	97,761	114,817	125,836	141,644	164,199
PLF (%)	**82.8**	**81.7**	**84.5**	**85.6**	**84.7**

Source: I-Sec research

Sensitivity analysis

These sensitivities should be not be looked in isolation since there are countermeasures adopted between the three factors of in crude, dollar and fares.

Combined factors of crude and currency: The sensitivity of airlines will largely depend upon the fares which is again a function of several external factors like competition and demand. However, the two factors which are external but significantly determine the results of airline operations are crude prices and currency. Typically, currency has a ripple effect across cost items starting from rentals, maintenance contracts, redelivery expenditure as well as crude. As such, while it is less volatile than crude, it has higher sensitivity to currency.

Table 12: Sensitivity of target price with crude prices & INR-USD exchange rate

	(Rs)					
	TP	**63**	**65**	**67**	**70**	**72**
Crude (US$/bbl)	**40**	132	122	111	96	85
	45	121	110	100	83	73
	50	110	99	88	71	60
	55	99	87	76	59	47
	60	88	76	**64**	46	35
	70	66	53	41	22	9

Source: I-Sec research

It is at the crude price levels of US$60-70/bbl that our target price for SpiceJet recedes below Rs60 per share.

Combined factor of crude price and passenger fare: The sensitivity analysis shows high dependence of the airline business model on passenger fares. This reflects the high operating leverage nature of the airline business, which has high fixed costs, including lease and other aircraft acquisition charges, engineering and maintenance charges, financing commitments, staff costs and IT costs. Significant operating expenses, such as airport charges, do not vary by passenger load factors.

Table 13: Sensitivity of crude prices and passenger fare growth

	Crude (US$/bbl)					
	TP	40	45	50	55	60	70
Fare growth (%)	-10%	35	24	12	(0)	(12)	(35)
	-5%	65	53	41	29	17	(6)
	0%	94	82	70	58	47	23
	3%	111	100	88	76	**64**	41
	5%	123	111	99	88	76	52
	10%	152	140	129	117	105	81

Source: I-Sec Research

The number of instances where target price goes below Rs60 significantly increases, indicating the high sensitivity to fare hikes.

Combined factor of passenger fare growth and currency: Even higher sensitivity is seen here as higher numbers of cost items including crude depend on currency.

Table 14: Sensitivity of INR-USD exchange rate and passenger fare growth

	(Rs)						
	TP	63	65	67	70	72	74
Fare growth (%)	-10%	12	(0)	(12)	(30)	(41)	(53)
	-5%	41	29	17	(0)	(12)	(24)
	0%	70	58	47	29	17	5
	3%	88	76	**64**	46	35	23
	5%	99	88	76	58	46	34
	10%	129	117	105	87	75	64

Source: I-Sec research

Valuation

LCCs tend to trade at higher multiples compared to FSCs. Asian LCCs enjoy additional premium on account of their low cost structure and high traffic growth. High volatility in crude prices and the global economy have a direct bearing on airline stock prices and, as such, it is best to consider the average 1-year forward EV /EBITDAR for the last 5/10 years to ascertain an average cycle multiple.

The average 1-year forward EV/EBITDAR for LCCs is 7.5 while the same for Asian LCCS is 9.5. As such, we ascribe 7X EV/EBITDAR to SpiceJet based on FY18 estimates to arrive at a target price of Rs80 per share without dilution. Post dilution, our target price comes to be Rs64 per share.

We value SJET at 7x compared to 8x for IndiGo to account for the better balance sheet, significantly higher market share and lower cost structure of IndiGo compared to SJET. Higher leverage and smaller scale also makes SJET more sensitive to crude and other cost escalations.

Table 15: Valuation based on 8x EV/EBITDAR

(Rs mn)	**FY18E**
EBITDAR	20,086
EV @7x EV/EBITDAR	140,605
Gross debt	31,882
Cash	16,492
Rentals @7x	77,162
Net debt	92,552
Equity value	48,053
Shares (mn)	599.5
Equity Value	**80**
Post dilution	**64**

Source: I-Sec research

Assumptions

Table 16: Key assumptions in our model

Assumptions	**FY16E**	**FY17E**	**FY18E**	**FY19E**	**FY20E**
Fare Growth	-14.8%	2.0%	3.0%	5.0%	5.0%
Average ticket (Rs)	3,744	3,819	3,933	4,130	4,337
INR-US$	65.3	67.0	67.0	68.0	68.0
Crude Prices(US$/bbl)	46.0	55.0	60.0	60.0	60.0
Realized ATF prices (Rs/kl)	47,748	54,366	57,363	58,116	58,116
Scheduled Passengers (mn)	11.9	13.5	16.0	19.0	22.6
RPK (mn)	11,699	13,146	15,339	17,963	21,102
ASK (mn)	12,916	14,363	17,321	20,784	25,444
PLF (%)	90.6	91.5	88.6	86.4	82.9
Ancillary Revenue (Rs mn)	6,274	7,565	9,403	11,829	14,860
Total Revenue (Rs mn)	50,881	59,272	72,414	90,261	112,655
EBITDA (Rs mn)	4,322	5,732	9,063	14,437	22,630
EBITDAR (Rs mn)	12,376	15,675	20,086	26,989	36,597
PAT (Rs mn)	4,072	3,667	6,383	11,893	19,942

Source: I-Sec research

Financials

Table 17: Profit & Loss statement

(Rs mn, year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
Revenue	**63,042**	**52,015**	**50,881**	**59,272**	**72,414**
Operating Expenses	60,082	48,058	37,009	42,669	50,307
Aviation turbine fuel	32,527	24,096	13,920	17,271	21,977
Lease charges	10,532	8,644	8,054	9,942	11,023
Aircraft R&M	4,758	2,660	2,613	3,320	3,789
Supplemental lease charges	4,245	3,340	5,329	3,561	4,380
Consumption of stores and spares	929	721	763	916	1,152
Aviation insurance	329	212	199	241	270
Landing, navigation and other airport charges	4,740	3,815	3,710	4,474	5,148
Cost of inflight food and beverages	535	244	390	552	750
Aircraft navigation software expenses	742	705	662	781	849
Aircraft redelivery costs	291	3,185	640	1,000	200
Other operating expenses	454	435	729	611	768
Employee wages	5,757	5,375	4,928	6,213	7,251
Selling expenses	3,521	2,794	2,544	2,845	3,476
Other expenses	2,194	2,372	2,077	1,814	2,317
Total Expenses	**71,554**	**58,598**	**46,559**	**53,540**	**63,351**
EBITDA	**(8,512)**	**(6,582)**	**4,322**	**5,732**	**9,063**
EBITDAR	**2,020**	**2,062**	**12,376**	**15,675**	**20,086**
Other Income	944	1,803	1,313	500	500
Interest Income	385	197	130	320	400
D&A	1,483	1,266	1,176	1,284	1,314
Interest expense	1,366	1,635	1,154	1,602	2,267
Extraordinary	-	614	637		
PBT	**(10,032)**	**(6,871)**	**4,072**	**3,667**	**6,383**
Tax	-	-	-	-	-
PAT	**(10,032)**	**(6,871)**	**4,072**	**3,667**	**6,383**
Adjusted PAT	(10,032)	(7,484)	3,435	3,667	6,383

Source: Company data, I-Sec research

Table 18: Balance sheet

(Rs mn, year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
Share Capital	5,353	5,995	5,995	5,995	5,995
Advanced money received against securities/proposed to be issued	583	3,505	5,791	5,791	5,791
Reserves and Surplus	(15,881)	(22,145)	(18,102)	(14,435)	(8,052)
Networth	**(9,945)**	**(12,645)**	**(6,316)**	**(2,650)**	**3,733**
Long Term Borrowing	12,363	11,199	9,237	29,237	28,237
Short Term Borrowing	2,800	2,986	1,050	1,050	1,050
Other Long Term Liabilities	291	255	220	220	220
Trade Payables	1,104	1,682	-	-	-
Current maturity of LT debt	1,926	2,375	2,375	2,375	2,375
Borrowing	**18,484**	**18,496**	**12,882**	**32,882**	**31,882**
Provisions	**273**	**3,506**	**6,506**	**6,506**	**6,506**
Trade Payables	10,515	10,105	7,762	10,268	12,150
Others	10,143	6,604	6,204	6,601	7,810
Current Liability	**20,658**	**16,710**	**13,966**	**16,869**	**19,960**
Total Equity and liability	**29,470**	**26,066**	**27,038**	**53,607**	**62,081**
Gross Fixed Assets	21,734	21,138	21,196	21,396	21,896
-Depreciation	2,959	3,999	5,175	6,459	7,773
Net Fixed Assets	**18,774**	**17,138**	**16,021**	**14,937**	**14,123**
Loans and advances	**4,393**	**6,453**	**6,739**	**27,739**	**27,739**
Other LT assets	**2,665**	**344**	**1,247**	**1,247**	**1,247**
Current Investments			200	200	200
Inventories	452	451	665	440	521
Trade Receivables	1,557	1,217	434	1,462	1,786
Cash	51	236	1,085	7,436	16,292
Other current Assets	1,579	227	647	147	174
Current Assets	**3,638**	**2,131**	**3,031**	**9,684**	**18,972**
Total Assets	**29,470**	**26,066**	**27,038**	**53,607**	**62,081**

Source: Company data, I-Sec research

Table 19: Cashflow statement

(Rs mn, year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
CASHFLOW FROM OPERATING ACTIVITIES					
Profit / (Loss) before tax	(10,032)	(6,871)	4,072	3,667	6,383
Adjustments to reconcile profit before tax to net cash flows					
Depreciation and Amortization	1,483	1,266	1,176	1,284	1,314
Provision for doubtful claims / advances	133	505			
Provision for doubtful debts	92	-			
Interest income	(385)	(197)	(130)	(320)	(400)
Interest expense	1,366	1,635	1,154	1,602	2,267
Loss / (profit) on sale of assets (net) / assets written off	17	(585)			
Translation loss / (gain) on monetary assets and liabilities	(54)	(53)			
Profit on sale of aircraft under sale and leaseback arrangement	-	-			
Operating profit / (loss) before working capital changes	**(7,380)**	**(4,299)**	**6,272**	**6,232**	**9,563**
Movements in working capital:					
(Increase) / Decrease in trade receivables	(507)	428	783	(1,028)	(324)
(Increase) / Decrease in other current assets	422	(281)	(420)	500	(27)
(Increase) / Decrease in inventories	5	0	(214)	225	(81)
Increase / (Decrease) in trade payables and other liabilities	8,013	(3,122)	(2,744)	2,903	3,091
Increase / (Decrease) in provisions	82	3,233			
Cash generated / (used) in operations	**635**	**(4,041)**	**3,677**	**8,833**	**12,223**
Income taxes paid (net of refunds)	(45)	(68)	-	-	-
Net Cashflow from / (used) in operating activists (A)	**590**	**(4,109)**	**3,677**	**8,833**	**12,223**
CASHFLOW FROM INVESTING ACTIVITIES					
Purchase of fixed assets (including capital advances)	(821)	(118)	(440)	(200)	(500)
Sale of fixed assets	5	1			
Margin money deposits placed	(12,847)	(2,000)			
Margin money deposits withdrawn	12,803	4,313			
Interest received	363	295	130	320	400
Investments change			(864)	(21,000)	-
Net Cashflow from / (used) in investing activities (B)	**(497)**	**2,491**	**(1,174)**	**(20,880)**	**(100)**
CASHFLOW FROM FINANCING ACTIVITIES					
Proceeds from issue of share capital (including share premium)	407	999			
Money received against share warrants	333	-	500		
Advance received against share warrants	250	2,055			
Advance money towards subscription of NCCRPS	-	1,200			
Proceeds from long term borrowings			(1,000)	20,000	(1,000)
Proceed from issue of 13% CCD					
Proceeds from short-term borrowings	1,250	1,545			
Repayment of short-term borrowings	(932)	(1,377)			
Repayment of long-term borrowings	(2,177)	(1,164)			
Interest paid (including ancillary cost for arranging the borrowings)	(1,345)	(1,454)	(1,154)	(1,602)	(2,267)
Net Cashflow from / (used) in financing activities (C)	**(2,213)**	**1,804**	**(1,654)**	**18,398**	**(3,267)**
NET INCREASE IN CASH AND CASH EQUIVALENTS (A + B + C)	**(2,120)**	**185**	**849**	**6,351**	**8,856**

Source: Company data, I-Sec research

Table 20: Key ratios

(Year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
Per Share Data (in Rs.)					
EPS(Basic Recurring)	(16.7)	(12.5)	5.7	6.1	10.6
Diluted Recurring EPS	(16.7)	(12.5)	5.7	6.1	10.6
Recurring Cash EPS	(14.3)	(10.4)	7.7	8.3	12.8
Dividend per share (DPS)	-	-	-	-	-
Book Value per share	(16.6)	(21.1)	(10.5)	(4.4)	6.2
Growth Ratios (%)					
EBITDA	333.7	(22.7)	(165.7)	32.6	58.1
EBITDAR	(67.0)	2.1	500.3	26.7	28.1
Recurring Net Income	425.0	(25.4)	(145.9)	6.7	74
Valuation Ratios (x)					
P/E	(3.9)	(5.3)	11.5	10.8	6.2
P/CEPS	(4.6)	(6.4)	8.6	8.0	5.1
P/BV	(4.0)	(3.1)	(6.3)	(14.9)	10.6
EV / EBITDA	(6.8)	(8.8)	11.9	11.3	6.1
EV / EBITDAR	28.7	28.0	4.2	4.1	2.7
EV / FCF	41.1	(14.5)	12.5	7.2	4.3
Operating Ratios (%)					
Fuel/Sales	51.6	46.3	27.4	29.1	30.3
Net Rentals/Sales	23.4	23.0	26.3	22.8	21.3
Other Income / PBT	(13.2)	(26.7)	42.0	22.4	14.1
Effective Tax Rate	-	-	-	-	-
NWC / Total Assets	(193.1)	(155.8)	(83.7)	(19.6)	(2.3)
Inventory Days	2.3	2.8	5.2	3.0	3.0
Receivables (days)	9.0	8.5	3.1	9.0	9.0
Payables (days)	53.6	62.9	60.8	70.0	70.0
Net D/E Ratio (x)	(1.85)	(1.44)	(1.87)	(9.60)	4.18
Return/Profitability Ratios (%)					
Recurring Net Income Margins	(15.9)	(14.4)	6.8	6.2	8.8
RoCE	(98.3)	(62.5)	35.1	14.3	20.5
RoNW	100.9	59.2	(54.4)	(138.4)	171.0
Dividend Payout Ratio	-	-	-	-	-
EBITDA Margins	(13.5)	(12.7)	8.5	9.7	12.5

Source: Company data, I-Sec research

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Tables

Charts

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Equity Research

June 16, 2016

BSE Sensex: 26726

Aviation

Target price Rs621

Shareholding pattern

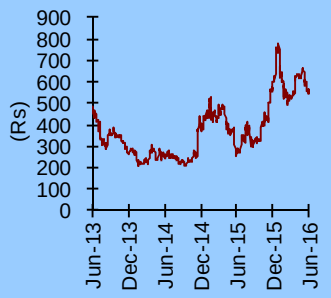
	Sep '15	Dec '15	Mar '16
Promoters	51.0	51.0	51.0
Institutional investors	38.1	38.0	38.6
MFs and UTI	7.7	7.5	7.8
Banks/FIs	0.2	0.2	0.1
Insurance	2.1	2.1	2.1
FIIs	28.1	28.1	28.6
Others	10.9	11.1	10.4

I-Sec vs Bbg* consensus

(%)	FY17E	FY18E
Sales	5.4	6.0
EBITDA	(34.9)	(33.6)
Adj. PAT	(49.5)	(31.1)

Source: *Bloomberg, I-Sec research

Price chart



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INDIA

Jet Airways (India)

ADD

Sustainability of turnaround remains key — Rs561

Reason for report: Initiating coverage

Jet Airways (Jet) is a one of the strongest players in the Indian aviation sector with the second-highest market share in the Indian domestic space (21%) and highest international market share of 20% when measured along with its global partner Etihad Airways (Etihad). With India's second-highest fleet strength of 116 aircraft, Jet is well poised to ride the strong air traffic growth coupled with the benign oil price outlook. Jet's history has been riddled with continual losses from FY08 to FY15 driven by high cost of operations amidst aggressive pricing by LCCs along with elevated fuel prices and a leverage driven-expansion, further exacerbated by acquisitions. As Jet manages to return to profits in FY16, the positives for the company stem from its turnaround plan, which has a few structural initiatives that we think can give a meaningful sustainability to earnings, in addition to the benefits from a low crude price outlook. Jet's net debt has significantly reduced (by 25% in the past three years) with the equity infusion by Etihad. However, a levered balance sheet will not allow expansion of fleet and such ASKs are likely to remain flattish for Jet during FY17/FY18. Systemic troughs in utilisation remain a risk.

- **The turnaround strategy has been successful for Jet** based on certain structural changes. These structural initiatives include cost synergies from the strategic alliance with Etihad, strong increase in utilizations, cost deceleration driven by third-party maintenance contracts, dollarization of debt, homogenization of the B737 fleet and reorientation of routes centered on strong growth in codeshare traffic.
- **Cost structure has improved in line with the strategy.** The most important factors driving the reduction in costs include higher utilisation, synergies realized from the Etihad alliance and reduction in leverage. The higher utilisation though difficult to improve can remain elevated driven by higher feeder traffic to and from Middle East beneficiated by the wider codeshare programs. The cost synergies through Etihad alliance is generated through better bargaining power for contracts along with driving shared programs. Between FY12 and FY16, Jet has pared down Rs32bn of net debt, largely driven by strategic sale of assets and equity infusion by Etihad.
- **Recommend ADD with a target price of Rs621 based on 7x FY18E EV/EBITDAR.** Jet is expected to increase its ASK/RPK/Pax from 50.1bn/41.4bn/25.8mn respectively in FY16 to 51.9bn/44.4bn/28.7mn in FY18E, with EBITDAR of Rs43.1bn in FY18E (FY18E EBITDAR margin of 17%). The lease-adjusted RoCEs will remain at ~20%. Our revenue model factors fare growth of 2%/3% in FY17/FY18 with a rising crude price assumption of US$55-60/bbl in the two years.

Market Cap	Rs63.8bn/US$950mn
Reuters/Bloomberg	JET.BO/JETIN IN
Shares Outstanding (mn)	113.6
52-week Range (Rs)	776/253
Free Float (%)	49.0
FII (%)	28.6
Daily Volume (US$/'000)	50,212
Absolute Return 3m (%)	5.8
Absolute Return 12m (%)	121.8
Sensex Return 3m (%)	9.4
Sensex Return 12m (%)	1.9

Year to March	FY15	FY16P	FY17E	FY18E
Revenue (Rs mn)	209,656	222,070	240,198	255,894
Net Income (Rs mn)	(20,974)	12,117	5,771	8,484
EPS (Rs)	(184.6)	106.7	50.8	74.7
% Chg YoY	(49.2)	(157.8)	(52.4)	47.0
P/E (x)	(3.0)	5.3	11.0	7.5
CEPS (Rs)	(117.3)	194.4	128.3	154.4
EV/E (x)	(48.2)	7.5	9.7	7.6
Dividend Yield (%)	-	-	-	-
RoCE (%)	(6.0)	27.7	18.9	20.6
RoE (%)	33.2	(23.3)	(12.5)	(22.4)

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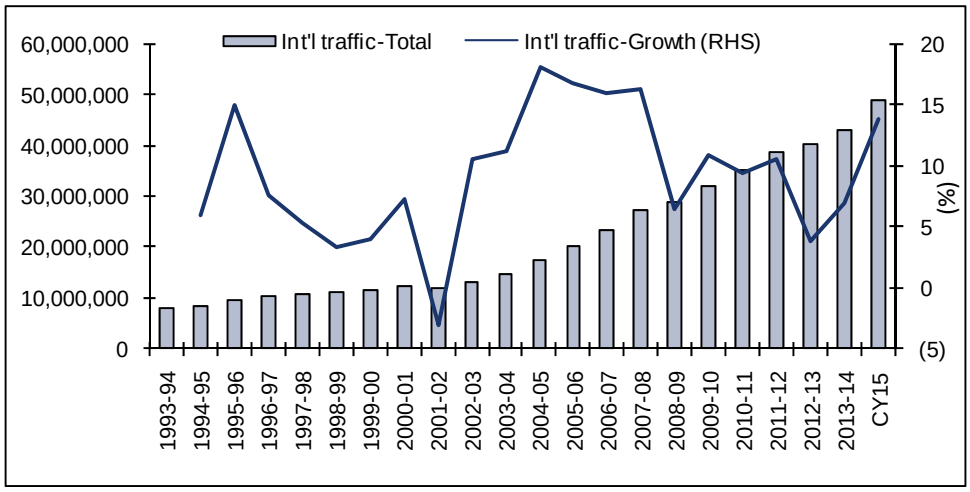
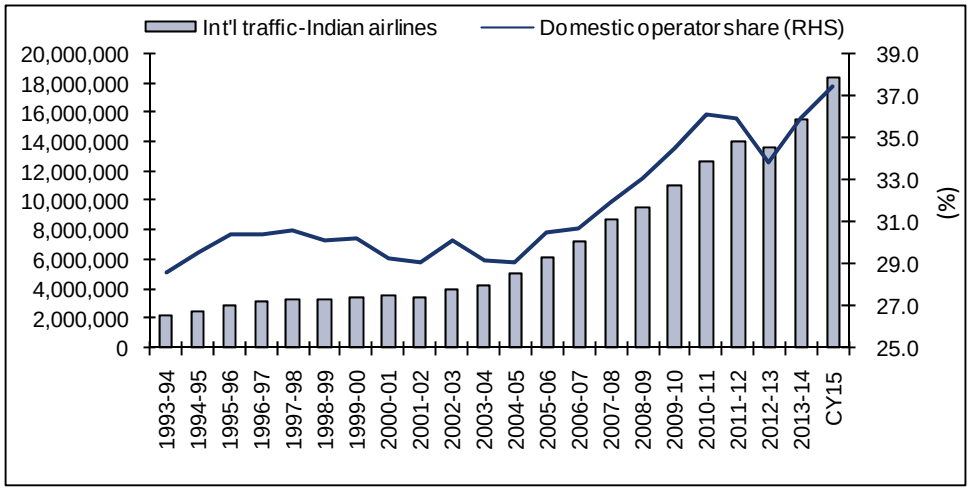
Chart 1: International traffic growth has been robust



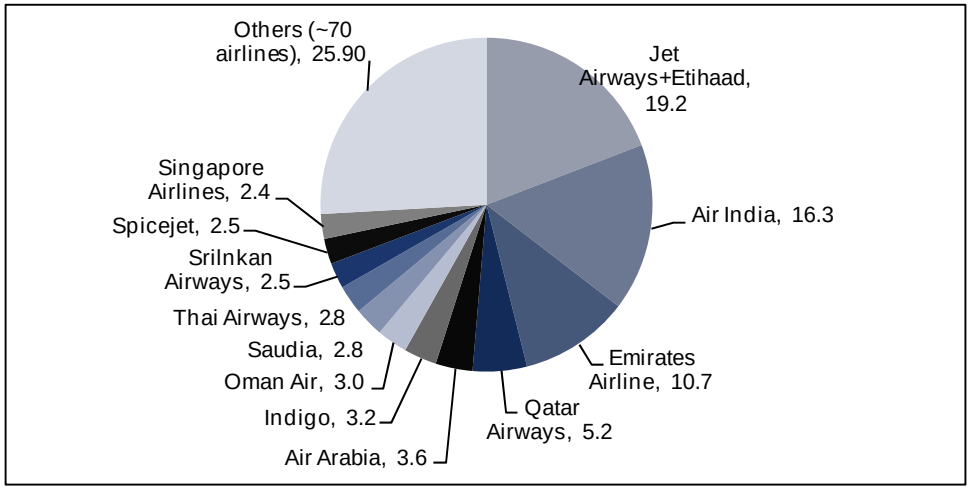
Source: DGCA

Chart 2: Domestic operators' have continually increased int'l traffic share



Source: DGCA

Chart 3: Jet plus Etihad holds ~20% of the total international traffic of India



Source: DGCA

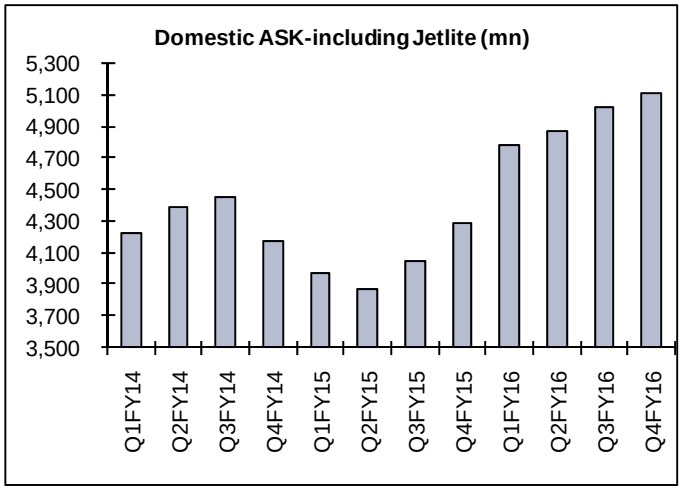
Jet's turnaround strategy has worked – a look at the five key components

The company started a 3-year turnaround program in 2015, which has seen some broad strategy adoption that has yielded positive results. We appreciate the capacity increase and cost reductions which have happened for the company under these strategies as they are incremental to the fuel cost savings. So. what were these strategies?

Increase in utilisation

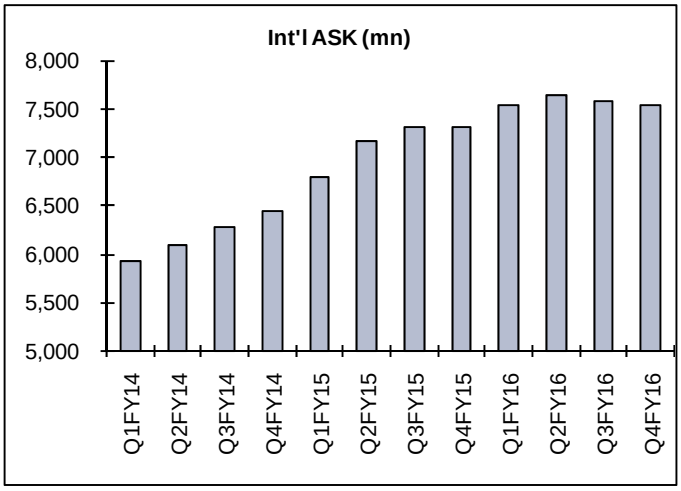
Jet has increased its utilisation to more than 13 hours. This is one of the highest utilizations at the global level. If we compare between domestic and international segments, the capacity measured in ASKs have increased for both. To give a sense, over the last two calendar years ending Dec'15, international capacity has increased 21% and domestic capacity has increased 13%. The increase in domestic capacity was more in focus during 2015, when domestic/international ASKs increased by 24%/4% respectively.

Chart 4: Domestic capacity expansion gathered momentum largely in 2015



Source: Company Data, I-Sec Research, DGCA

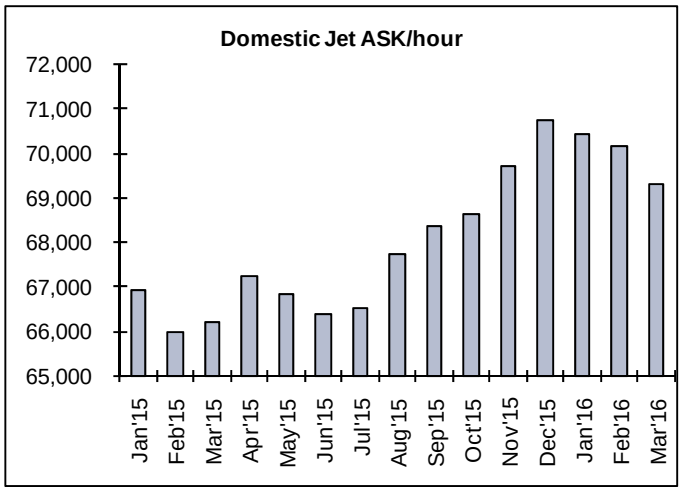
Chart 5: International capacity expansion has now stabilised



Source: Company Data, I-Sec Research, DGCA

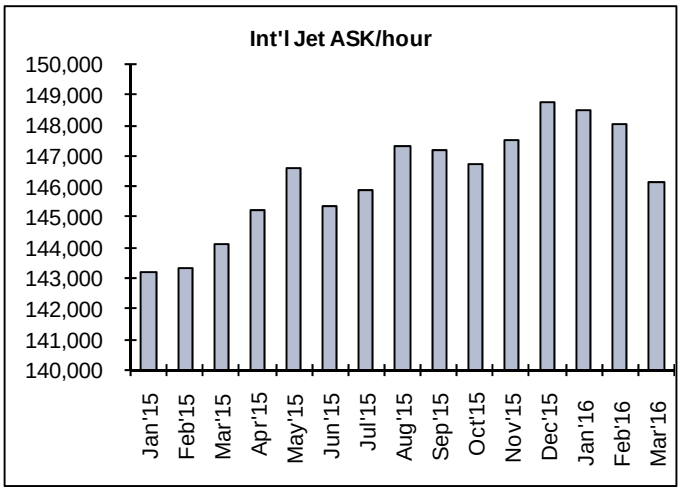
How much room is there for further increase in capacity based on utilisation ? We feel limited. The 13-hour utilisation per aircraft is already an industry-high. While international ASKs had bulk of their increase in 2014, domestic ASKs increased in 2015.

Chart 6: Domestic ASKs per hour



Source: DGCA

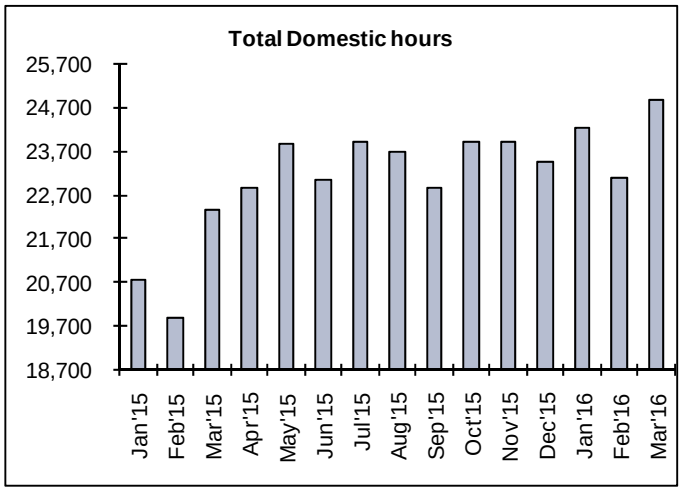
Chart 7: International ASKs per hour



Source: DGCA

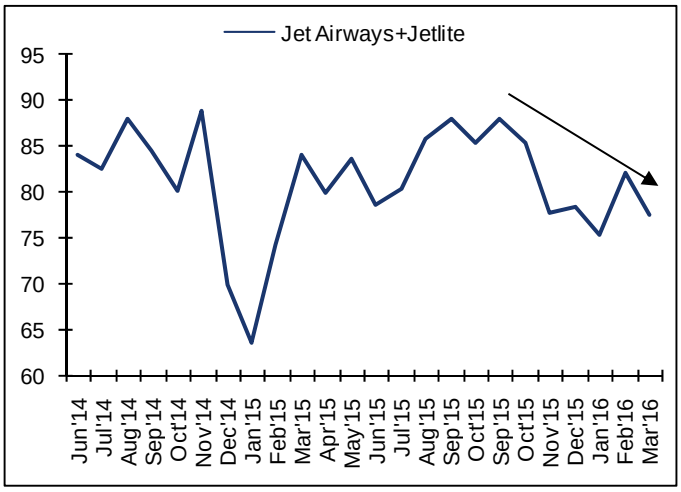
One must take note of the already declining ASKs in both domestic and international routes during Jan-Mar'16 which should be looked against the context when both of them were increasing in Jan-Mar'15.

Chart 8: Domestic hours recorded – including Jetlite (Subsidiary of Jet)



Source: DGCA

Chart 9: Monthly OTP performance of Jet+JetLite



Source: DGCA

While this increase in utilisation may be looked in sync with the hedged maintenance costs under third-party contracts, the factor of On-Time Performance (OTP) will also have to be monitored for sustainable higher utilisation. OTP has declined for Jet in recent months.

Even if we check with US airlines, it is only LCCs which have managed an elongated strech of higher utilisations (considering more than 12 hours as higher utilisation) in the past 13 years.

Table 1: Average daily block hour utilisation at all airlines in the US

(Hours)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
American	10.04	9.65	9.54	9.57	10.31	9.91	9.94	10.01	9.83	9.71	9.63	9.58	9.78	9.85
Continental	10.48	10.26	9.59	9.59	9.91	10.58	11.12	11.65	11.04	10.60	10.69	10.72	-	-
Delta	10.34	9.58	9.17	9.19	12.53	12.35	12.75	11.06	11.12	10.40	10.24	10.39	10.21	10.25
Northwest	9.67	9.12	8.69	8.67	8.83	9.00	9.40	9.42	9.49	9.22	-	-	-	-
United	10.53	9.95	9.58	9.18	10.31	10.86	11.15	11.17	10.72	10.79	11.01	10.71	10.65	10.46
US Airways	10.07	12.32	9.71	9.47	9.41	9.64	9.48	9.83	9.86	9.47	9.52	9.78	9.60	11.89
America West	10.99	9.73	12.84	10.04	10.91	10.95	11.00	11.14	-	-	-	-	-	-
Sub Network	**10.23**	**9.95**	**9.49**	**9.32**	**10.30**	**10.41**	**10.65**	**10.55**	**10.33**	**10.04**	**10.16**	**10.19**	**10.14**	**10.41**
Southwest	10.98	10.81	10.92	10.83	10.88	11.13	11.22	11.19	10.95	10.26	10.20	10.46	11.46	11.65
JetBlue	11.99	11.60	12.69	13.34	13.58	13.39	12.74	12.84	9.45	11.28	11.66	11.68	11.81	11.96
AirTran	10.65	9.91	10.57	10.95	10.94	11.55	11.13	11.04	11.05	10.99	11.04	11.04	-	-
Frontier	12.80	11.84	20.40	10.24	12.40	11.59	12.33	12.54	18.80	8.80	13.31	24.02	9.94	10.08
Virgin America-	-	-	-	-	-	-	-	10.11	11.89	12.75	13.92	17.42	18.43	12.43
Sub LCC	**11.04**	**10.78**	**11.29**	**11.01**	**11.28**	**11.49**	**11.50**	**11.51**	**11.20**	**10.50**	**10.84**	**11.35**	**11.68**	**11.66**
Alaska	10.76	6.52	10.60	10.56	11.02	11.63	11.00	10.93	10.63	9.75	9.94	10.70	10.66	10.64
Hawaiian	7.57	7.34	9.02	7.69	8.44	8.95	9.38	9.50	9.29	9.18	8.96	9.69	9.63	9.79
Allegiant	5.23	2.05	6.57	10.49	6.71	6.87	12.80	7.03	6.42	6.68	6.20	5.71	5.50	5.32
Sub Other	**9.95**	**6.61**	**10.26**	**9.98**	**10.32**	**10.80**	**10.85**	**10.09**	**9.61**	**9.01**	**8.87**	**9.23**	**9.08**	**9.06**
Total All Sectors	**10.31**	**9.88**	**9.74**	**9.59**	**10.46**	**10.62**	**10.84**	**10.74**	**10.51**	**10.10**	**10.26**	**10.44**	**10.47**	**10.64**

Source: I-Sec research

The Etihad connection- structural positive for Jet

The US$750mn that Etihad assisted Jet with, is broken down into US$70mn coming in from through the sale and lease-back of the London-Heathrow slot, US$380mn in the form of equity, US$150mn as a guarantee which was given to an ECB borrowing, and the balance US$150 was in the form of Etihad's 50% equity subscription to Jet Privilege Private Limited. However, the consolidation has helped Jet in renegotiating contracts and achieving cost-efficiencies in a host of items including fleet acquisition, maintenance, joint purchasing opportunities for fuel, spare parts, equipment and catering supplies, as well as external services such as insurance and technology support. Other areas of cooperation include joint training of pilots, cabin crew and engineers, as well as maintenance of common aircraft types and consolidation of guest loyalty programs.

Etihad is executing a turnaround plan for its Global alliance members. Etihad has a unique business model, which has its supporters as well as detractors. Nonetheless, it has a plan. Global alliance is at the center of the business model. Etihad launched the 'equity alliance' strategy in 2011 when it came to the rescue of loss-making Air Berlin by purchasing a 29% stake. At first, that deal raised a few eyebrows. But, as further minority stakes were acquired in other airlines, the thinking behind the strategy became apparent. Next up was Air Seychelles, in which Etihad took a 40% stake after Abu Dhabi was approached to help out. Etihad has subsequently taken stakes in Virgin Australia (24%), Air Serbia (49%), India's Jet Airways (24%), Alitalia (49%) and Darwin Airlines (34%).In recent financial postings all of these investments have experienced significant turnarounds and, in some cases, moved into profitability for the first time in many years, although Air Berlin reported losses on account of its fuel hedging at a massive cost to its bottom-line. Each of these airlines have detailed their turnaround plan based on more generic business

parlances of more customer focus, improving customer services, efficient pricing models, rebranding and cost controls.

However, cost synergies and more efficient traffic routing are apparently benefitting the alliance members. There have been instances of intra-alliance aircraft rentals. There has been reported renegotiation of engineering and maintenance contracts with the likes of GE Aviation, Air France Industries, KLM Engineering and Maintenance, Lufthansa Technik and many other service providers. Even management expertise has been shared between alliance members. The current Jet CEO Cramer Ball is moving to Alitalia, another loss-making strategic member in the Etihad alliance. The alliance has also helped shore up increased benefits in frequent flyer programs.

In the case of Jet, apart from these cost benefits, the basic operational model has changed itself to a more focused feeder operation for Etihad. This alliance is the leader in the Indian international traffic market. We believe the Jet-Etihad combination is unique in the way that fellow Indian airlines (IndiGo and SpiceJet) cannot divert significant traffic to international routes due to their domestic focus and that no other international airlines can expect to tap into a wide network of Indian cities without a considerable gestation period.

Table 2: PLF distribution for Jet

Routewise PLFs	Q2FY14	Q3FY14	Q4FY14	Q1FY15	Q2FY15	Q3FY15	Q4FY15	Q1FY16	Q2FY16	Q3FY16	Q4FY16
Domestic PLF	70.3	69.4	71.2	71.9	70.7	82.0	87.6	80.3	79.9	80.5	81.5
International PLF	82.6	81.6	82.6	84.5	82.7	82.0	87.8	83.7	83.1	83.4	84.6
-UK	84.6	80.3	85.8	83.1	87.8	86.3	91.3	86.0		85.5	
-ASEAN	77.5	77.6	77.0	83.9	81.3	83.3	86.1	84.3		88.1	
-Gulf	83.5	85.6	84.9	88.7	82.2	83.6	90.8	85.0		84.2	
-SAARC	74.9	77.3	78.7	74.1	76.0	79.2	83.3	67.6		74.7	
-Europe (Paris)				68.5	71.0	70.4	86.4	81.3		71.4	
-Brussels	86.2	83.0	84.6	84.4	87.5	82.7	85.3	84.3		84.5	
-Abu Dhabi	80.9	80.5	76.8	84.6	74.9	72.3	84.5	81.9		78.2	

Source: Company data, I-Sec research

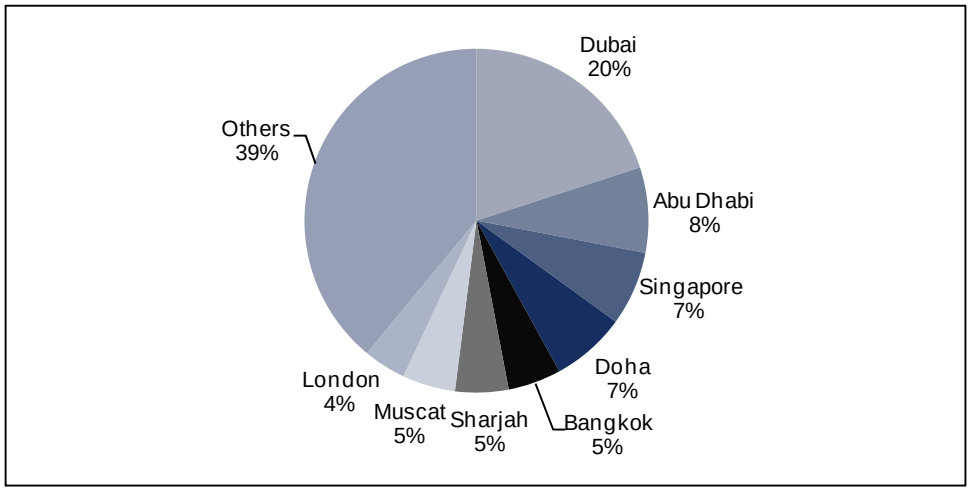
Importance of the India-UAE route

India-UAE routes accounted for the bulk of international air passenger traffic -- about one-third -- in the first nine months of FY16. This is an effect of the increasing trade between India and UAE which was over US$59bn in FY15, making the UAE one of India's top trading partners. India was the UAE's third-largest trading partner in 2014-15 after China and the US. In Sep'15, the UAE and India agreed to boost bilateral trade by 60% over the next five years, which implies increase in air travel between the two countries. Accordingly, the India-UAE route will continue to lead growth in international passenger traffic.

Among India-UAE routes, India-Dubai route is expected to continue to dominate international passenger traffic growth; it constituted about one-fifth of total international traffic in the first nine months of FY16. The route predominantly features business travelers and Indian expatriates in Dubai, who undertake frequent trips to India (a sizeable NRI population works in the Middle East). Other heavy overseas traffic routes include India-Singapore, India-London and India-Bangkok.

Jet has a strategic presence in the Middle East route through its partner Etihad managing to provide a strong global connectivity through codeshares.

Chart 10: Destination-wise distribution of international traffic



Source: Crisil

Adoption of third party maintenance contracts

Known as the **Power by the hour** contracts, this is aimed at more predictable maintenance expenses, which have been very bumpy for the company in the past.

Service agreements are primarily designed to provide an operator with a predetermined fixed cost per flight hour over a period or volume of shop visits. Agreements are often signed as part of an aircraft order – i.e. the airline commits to an engine service agreement in order to get a bigger discount on the new engine sale price. For smaller airlines, being enrolled on such a programme mitigates the risk of unexpected maintenance events that can lead to extensive downtime and unforeseen costs.

There are many forms of service agreements, covering from very little to almost everything, but the two most common types that must be distinguished from each other are:

- **Fixed-term plans** – a fixed period of operation for each engine, over a fixed term, usually the first 10-12 years or first lease. The cost of all anticipated shop visits within that fixed term is amortized over the duration of the term.
- **Life-plans** – this programme takes into account all of the shop visits during an engine's life (essentially mature engine shop visit cost) and spreads the cost over the life of the engine. The hourly rate on such plans is normally higher than fixed-term plans because the user is slowly paying towards higher maintenance costs later in the engine's life from day one.

Historically, lessors have collected maintenance reserves as a method of protecting their assets' residual value, especially with operators of weaker credit. Yet with the rising popularity of service agreements, airlines are already paying the engine OEM an hourly rate toward maintenance and therefore reluctant to pay maintenance reserves in addition to their service agreement fees. In the beginning, this left aircraft owners exposed in the event of a default, because most of the time they had no recourse to fees collected by the engine OEM. In more recent years, lessors and some OEMs started working together more to form tripartite agreements, in which the lessor will gain some access to funds held by the OEM in the service agreement. Initially this was in the form of a credit towards the next shop visit, but more recently with advanced service agreements, lessors may even get access to some cash, even if not the full amount collected by the OEM

Dollarization of debt leading to lower interest expense

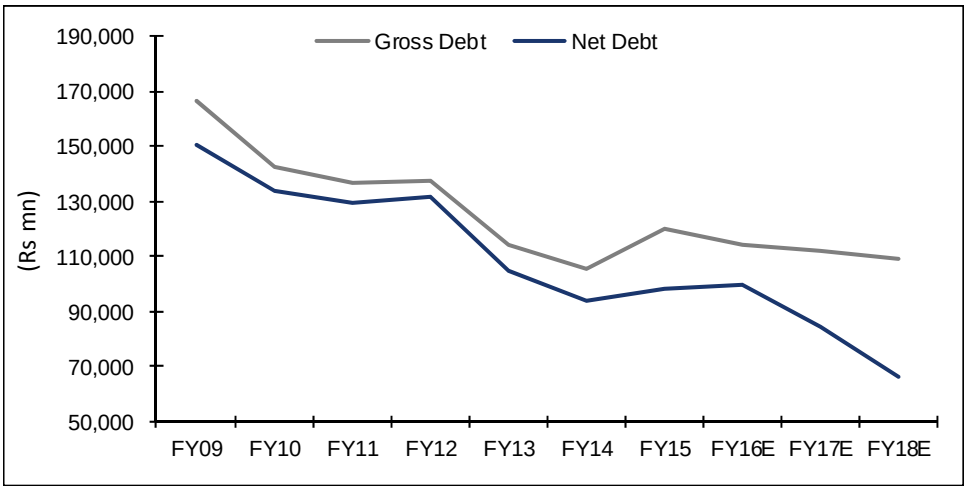
Currently, 80% of Jet's debt is in US dollars, which used to ~50% two years back. This has been enabled by the ECB guarantees offered by Etihad. We consider interest in finance lease payments as a part of the rental cost for better comparison. As such, dollarization has lowered that cost.

To give a sense, between FY12 and FY16, the company has pared down Rs32bn of debt. A large portion of the repayment has been enabled by the sale and leaseback of aircraft/slots and sale of Jet Privilege stake to Etihad, apart from the equity infusion by Etihad. The company still has 24 owned aircraft with substantial equity left in them. So, between FY12 and FY15, Jet has brought down its total gross fixed assets from Rs191bn to Rs160bn.

In our debt calculation, we have also taken other long-term liabilities ex the money received from the JPPL slump sale and advance received from Godrej Buildcon against property leased out. Along with reduction in debt, Jet has also dollarized the debt portfolio to reduce the interest burden. Currently, 83% of the debt is in US dollars.

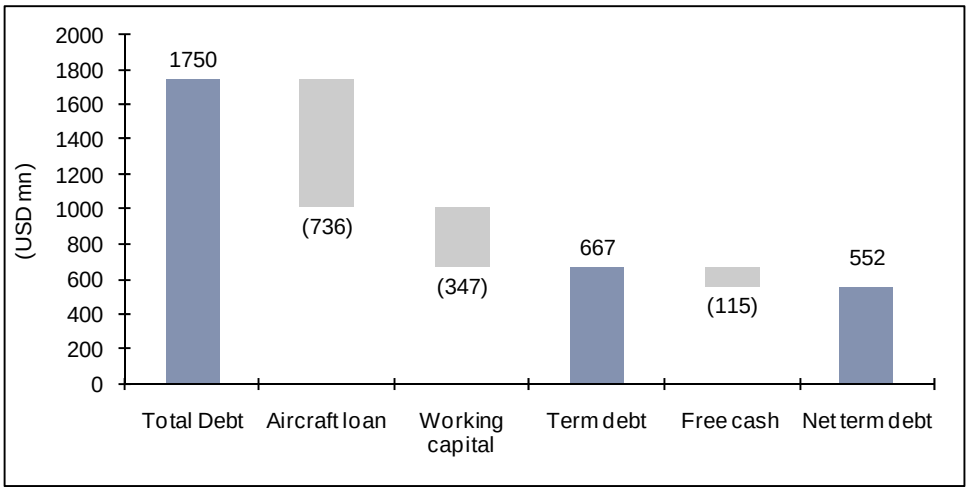
We believe the peak debt burden is behind us with earnings support to bring down the debt further ahead.

Chart 11: Total borrowings of Jet Airways



Source: I-Sec research

Chart 12: Debt breakup as of Q3FY16



Source: I-Sec research

Integration of domestic and international fleet

The Etihad connection has allowed smooth deployment of narrow-body B737s in the international market, A330s in the Delhi-Mumbai corridor and better utilisation of resources in general. A common configuration of 12 cabin and 156 economy seats across the B737 fleet has also helped in this cause.

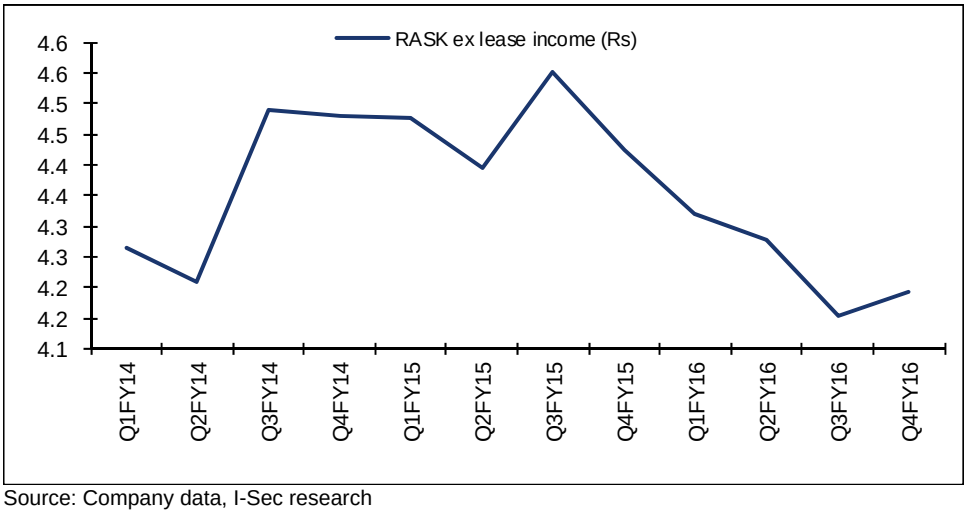
Has Jet managed to stem the costs?

We analyze each cost item for Jet over the past 12 quarters to assess the strength of the company in terms of cost positioning and the resultant fixed-cost profile.

Rentals have decreased with higher utilizations

It is important to underline that Jet's rental costs declared in the quarterly numbers are exclusive of the supplemental rentals that the company provides towards maintenance reserves. As such, these will depend on the number of aircraft which have not significantly changed over the past two years, although more of them are now being utilized under operating leases as the company has made sale and leasebacks of several of them to raise cash. Additionally, to arrive at a per ASK basis, one should also adjust the lease rental income, which Jet receives from several wide-body aircraft which they have let off to Turkish Airlines / Etihad Airways. We have also added the interest component of the finance leases to arrive at true rental cost per ASK. The variability will increase on adjusting for lease income, which will have certain milestone-related payments that may not match with the rental outgo. Needless to mention, the cost should be looked at in USD terms for true comparison across periods.

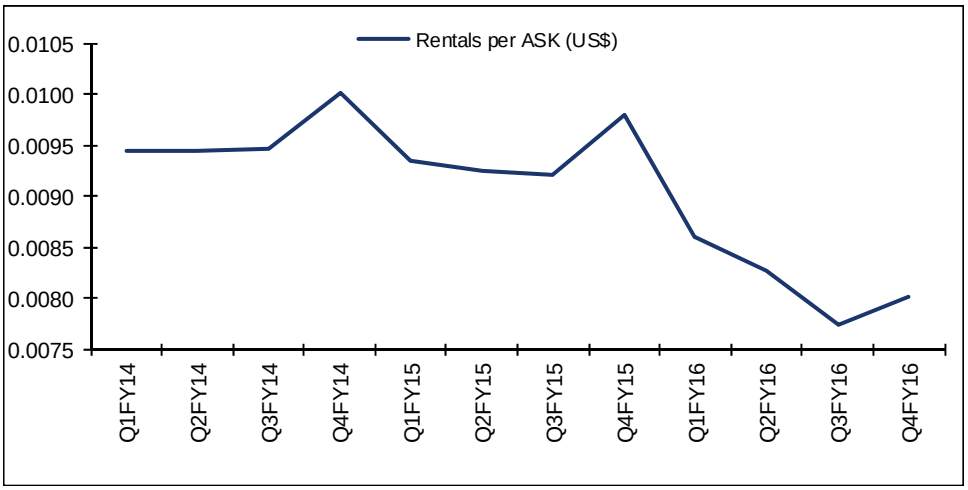
Chart 13: Rentals per ASK not adjusted for lease income including finance lease outgo



Source: Company data, I-Sec research

Clearly the costs have come down due to two reasons – one being higher utilisation and the other being dollarization of debt and repayment of aircraft-related loans. Jet's operations have changed post the alliance with Etihad with increasing narrow-bdies of Jet being offered to the Abu Dhabi/Europe gateway as feeders to the Etihad network and vice versa on return routes. Such feeder networks can be operated with narrow-body aircraft, hence the deployment of wide-body aircraft to other airlines might have worked for Jet. It remains to be seen whether the increase in international traffic post the network sharing can be high enough for Jet to recall some of the wide-body aircraft. We don't think wide-body dynamics would make sense in domestic routes, although there has been much clamorr about it considering the traffic growth, especially keeping in light the traffic congestion in Mumbai.

Chart 14: Rentals per ASK adjusted for lease income with finance lease outgo

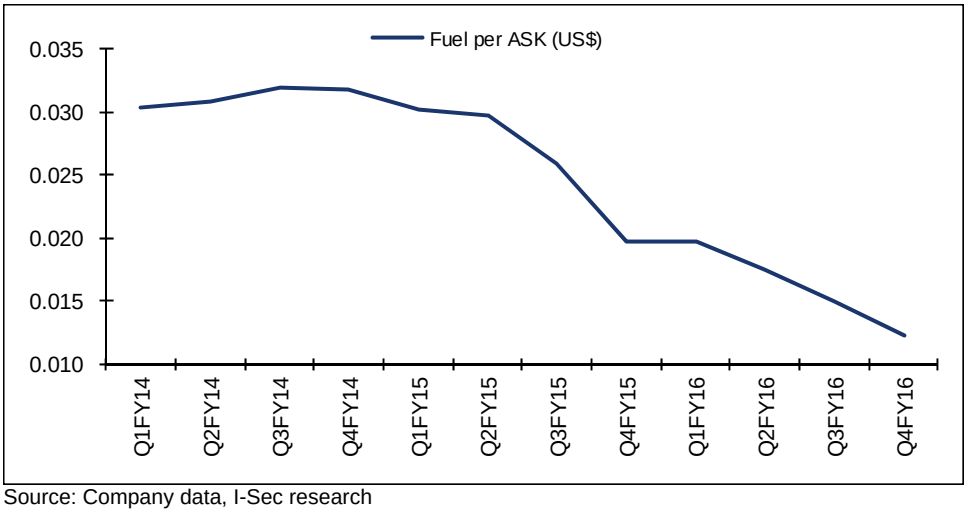


Source: Company data, I-Sec research

Fuel cost has reduced with crude and higher utilisation

With 30-40% of fuel procurement denominated in USDs, essentially outside India, the reduction in costs of Jet is higher than that of domestic airlines like Indigo/SpiceJet due to the tax structure of India.

Chart 15: Fuel cost per ASK in USD terms

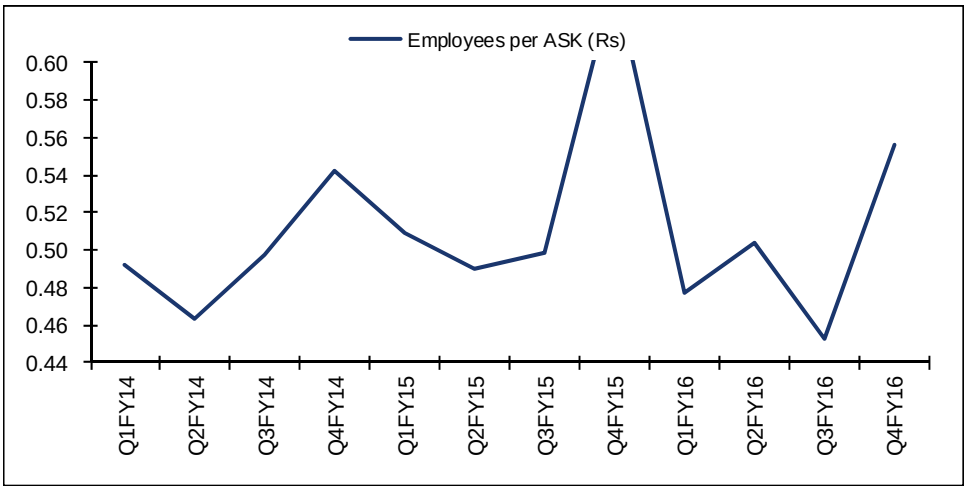


Source: Company data, I-Sec research

Employee costs, though down remain volatile

With a variety of aircraft, comes the typical problem of managing employee costs effectively in line with the returns provided by the various aircraft. Notwithstanding the HR issues, international operations will also involve expat pilots with typical severance-related payments and clauses and conditions, which can be a burden if not managed effectively. However, Jet has managed to control these costs effectively after increasing the utilisation on to 13-hour levels.

Chart 16: Employee cost per ASK



Source: Company Data, I-Sec Research

Spikes in employee costs in the past

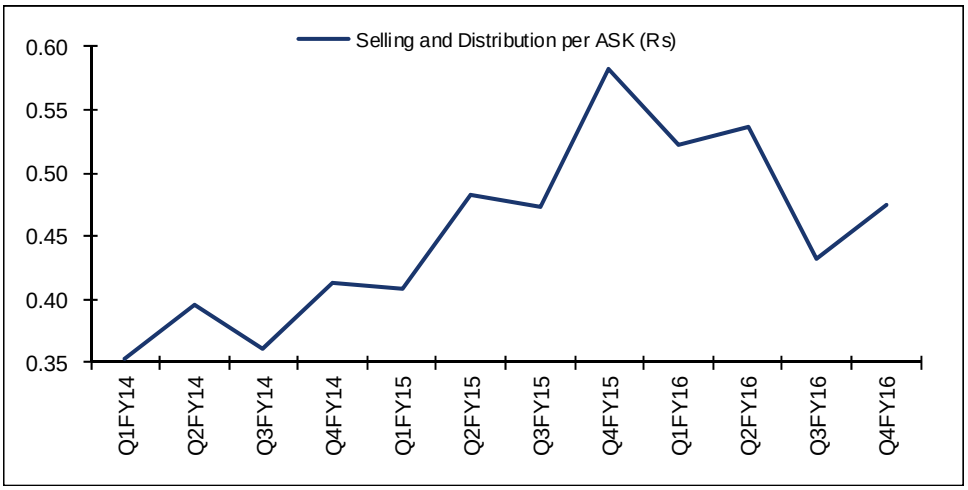
- Q4FY15 saw higher employee costs due to one-offs involved in reducing expat pilots. During FY15, the company reduced closer to 50 employees on expat pilots as a result of which it had to pay their retrenchment compensation. Additionally, some excess payment was also required to be made to domestic employees in line with increased capacity and there was a small increase on the headcount apart from increase in gratuity due to the decrease in the discount rate.
- Higher employee costs in Q4FY14 was on account of lower ASKs as several wide-body aircraft remained grounded on account of lower profitability of international operations.

S&D costs have increased, but expected to cool off

This is typically driven by higher sales, fees given to GDS systems and commissions payable for corporate bookings. One would expect synergies driven by the alliance with Etihad to take the costs down, though the management has been guiding for 10-11% of revenue for S&D costs. This is higher compared to international full-service players as well as domestic players like Indigo/SpiceJet.

S&D costs have increased steadily from a quarterly run rate Rs3.3bn in FY14 to Rs6.3bn in H1FY16 and is now on the declining trend.

Chart 17: Selling and Distribution (S&D) cost per ASK



Source: Company data, I-Sec research

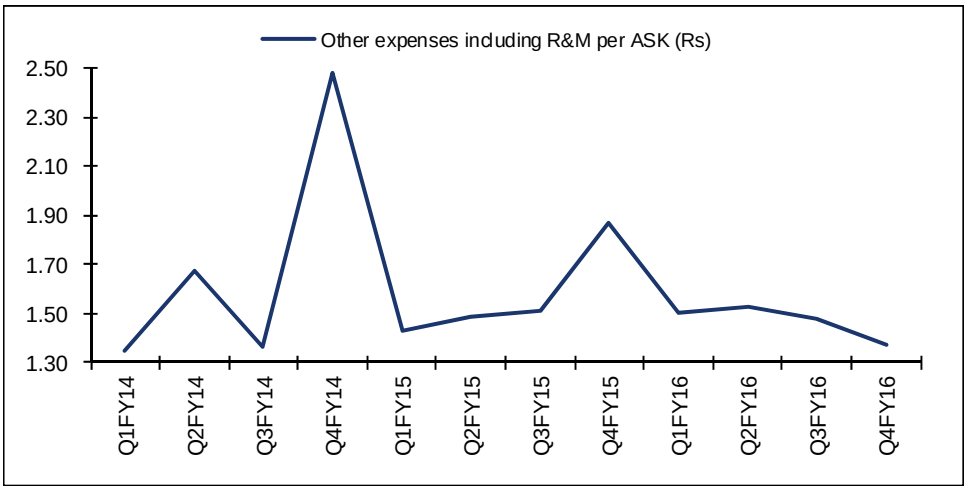
Jet's S&D costs increased for a variety of reasons – from higher computer reservation system costs to higher incentive schemes to prop up sales, and due to higher forward sales. This is in line with efforts to boost the PLFs, which have risen accordingly. The highest S&D cost recorded in Q4FY15 was also due to change in the accrual method of miles associated with the Jet Privilege program, since it got hived off to a subsidiary company. The selling cost started including the frequent flying miles cost, which increased with increasing members on the frequent flyer program. Annual inflationary cost of the global GDS system along with depreciating currencies have also accounted for the higher costs.

Though structurally higher for Jet, S&D costs have declined due to increasing utilisation and are expected to progressively decline due to synergies derived from the Etihad alliance. The recent decline in S&D costs has been in line with increased negotiations, which have resulted in significant discounts for the company.

Maintenance /other costs remain volatile, but declined as well

The quantum has remained steady at Rs12bn-13bn quarterly with certain exceptions resulting in higher spikes in some quarters. However, these spikes were mostly related to maintenance costs in the form of variable rentals which used to increase depending on engine shop visits. The company has entered into third-party contracts with regards to maintenance, which will even out the costs going ahead. **Jet has entered in *Power by the Hour* contracts, which will result in scheduled maintenance-related costs paid regularly to third-party MRO providers and the same will be accounted under P&L. The supplementary rentals payable towards maintenance reserves will be provided under loans and advances as receivables from lessors.**

Chart 18: Other expenses including repair and maintenance per ASK



Source: Company data, I-Sec research

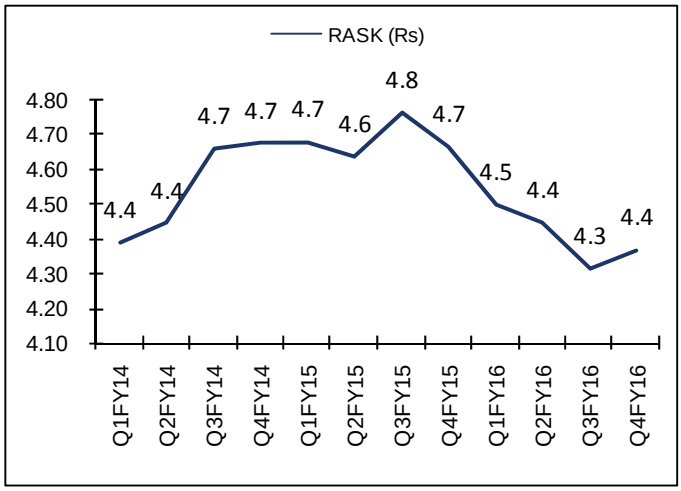
The spikes in other expenses:

- **The higher other expenses in Q4FY14 were due to a host of reasons, which have been addressed.** There was an increase in variable rentals because more aircraft were on operating lease. There was also a one-off aircraft maintenance provision related to catch-up in costs post transfer to *Power by the Hour* agreement regime as well as higher redelivery provisioning. There was also an increase in expenditure related to food and cabin and the passenger amenities and also the landing and navigation; which has the full year's impact sitting herein, because a majority of airports revised their tariff effective February 2013. It was just a one and a half months impact in the last fiscal versus the full year's impact in FY14.
- **The higher other expenses in Q4FY15** was due to provision for penalties related to TDS and one-off configuration costs due to homogenization of seating configuration to 12 cabin and 156 economy seats.

How have yields fared for the company – and the resultant spreads?

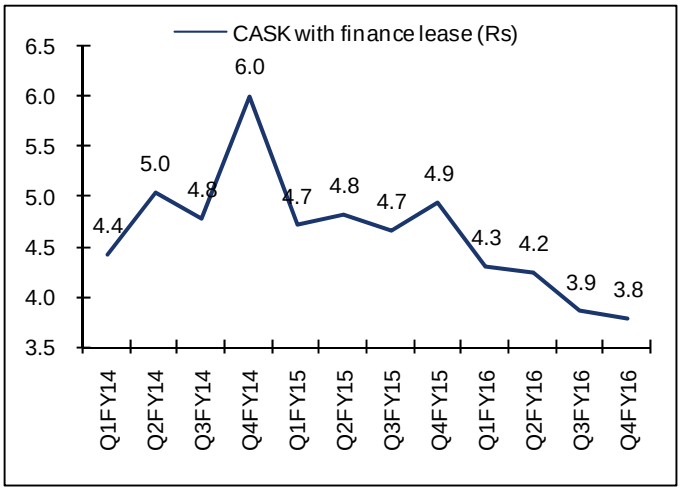
While competition and subsequently lower fares have kept yields under pressure, spreads have been positive for the company on account of both oil and non-oil related savings. Surely, the airlines have not passed the entire benefit of lower crude prices, which is an industry-wide phenomenon, but the synergistic benefits of alliance with Etihad and higher USD debt along with higher utilizations remain the key drivers of a positive spread.

Chart 19: RASK including lease income has declined in line with price cuts



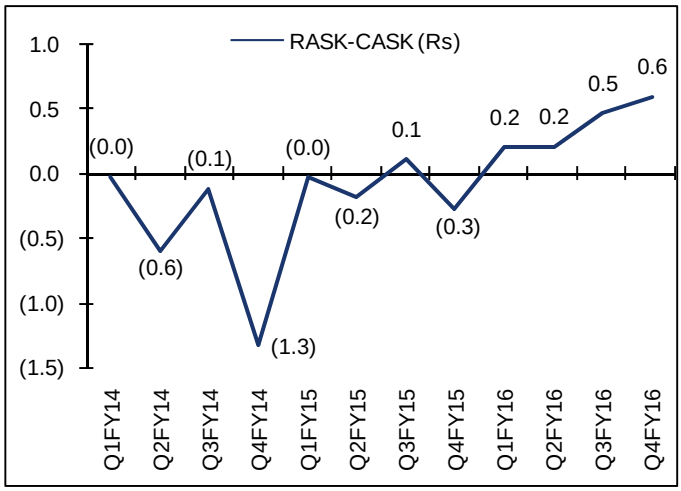
Source: Company Data, I-Sec research

Chart 20: CASK with finance lease interest has decreased



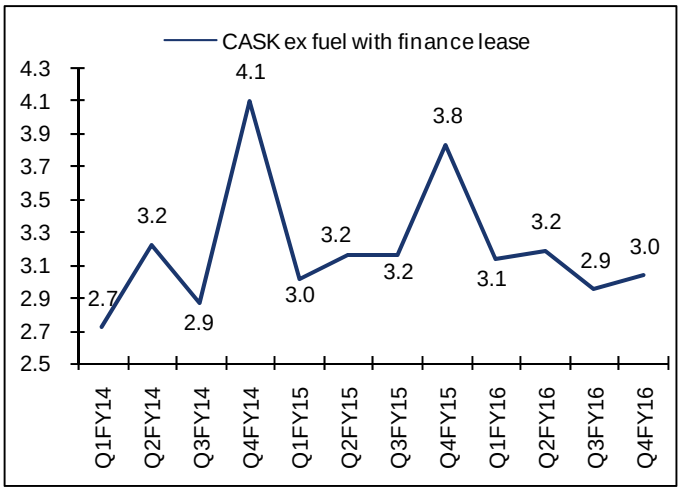
Source: Company Data, I-Sec research

Chart 21: Spread thereafter (RASK-CASK) has increased



Source: Company Data, I-Sec research

Chart 22: CASK ex-fuel, including finance lease, has decreased



Source: Company Data, I-Sec research

International operations have historically been more profitable for Jet. Hence, we believe that a strong focus on international operations needs to be maintained keeping the domestic travel infrastructure intact. No doubt, it is a difficult balancing act, but is incrementally better achievable with the global codeshare programs and alliance partners. How do we find out that international operations have been more profitable? The segmental numbers shared by Jet have a huge un-allocable cost, which makes it difficult to ascertain the profitability of domestic compared to international operations. We look back at history to find out the (RASK-CASK) spread, which the three distinct segments of Jet used to book before it stopped disclosing them separately, namely Jet-domestic, Jet-International and JetLite.

Table 3: Jet (international operations) per ASK statistics

Jet (international)	Q1FY14	Q2FY14	Q3FY14	Q4FY14	Q1FY15
Employee	0.27	0.29	0.31	0.33	0.37
Fuel	1.52	1.79	1.86	1.88	1.85
S&D	0.27	0.30	0.28	0.28	0.31
Others	1.13	1.49	1.25	1.65	1.53
Operating lease rentals	0.30	0.34	0.34	0.36	0.38
Jet Int'l CASK	**3.49**	**4.21**	**4.03**	**4.49**	**4.44**
Jet Int'l RASK	**3.87**	**4.24**	**4.19**	**4.12**	**4.20**
Jet Int'l RASK-CASK	**0.38**	**0.03**	**0.16**	**(0.38)**	**(0.24)**

Source: Company Data, I-Sec Research

Table 4: Jet (domestic operations) per ASK statistics

Jet (domestic)	Q1FY14	Q2FY14	Q3FY14	Q4FY14	Q1FY15
Employee	0.90	0.83	0.95	1.05	0.91
Fuel	2.01	2.35	2.55	2.47	2.22
S&D	0.50	0.61	0.58	0.75	0.70
Others	1.77	2.17	1.94	2.06	1.82
Operating lease rentals	0.58	0.72	0.70	0.78	0.60
Jet Domestic CASK	**5.76**	**6.67**	**6.71**	**7.11**	**6.26**
Jet Domestic RASK	**5.53**	**5.03**	**5.74**	**6.09**	**5.87**
Jet Domestic RASK-CASK	**(0.23)**	**(1.64)**	**(0.97)**	**(1.01)**	**(0.39)**

Source: Company data, I-Sec research

Table 5: Jetlite per ASK statistics

JetLite	Q1FY14	Q2FY14	Q3FY14	Q4FY14	Q1FY15
Employee	0.49	0.45	0.44	0.51	0.54
Fuel	2.14	2.38	2.56	2.61	2.51
S&D	0.24	0.18	0.19	0.29	0.31
Others	0.92	0.99	0.81	1.74	0.81
Operating lease Rentals	0.66	0.65	0.73	0.82	0.72
JetLite CASK	**4.45**	**4.65**	**4.72**	**5.97**	**4.88**
JetLite RASK	**4.49**	**3.63**	**4.60**	**4.77**	**4.67**
JetLite RASK-CASK	**0.04**	**(1.02)**	**(0.12)**	**(1.20)**	**(0.21)**

Source: Company data, I-Sec research

With lower fuel prices, Jet's international operations will derive a higher benefit of lower crude prices coupled with increasing traffic from alliance codeshare programs, which should incrementally favor the international business. However, increased deployment of narrow-body aircraft in international operations and leasing out wide-bodies to other airlines would mean some benefits of economies achievable in long haul operations have been sacrificed.

Jet Airways fleet details

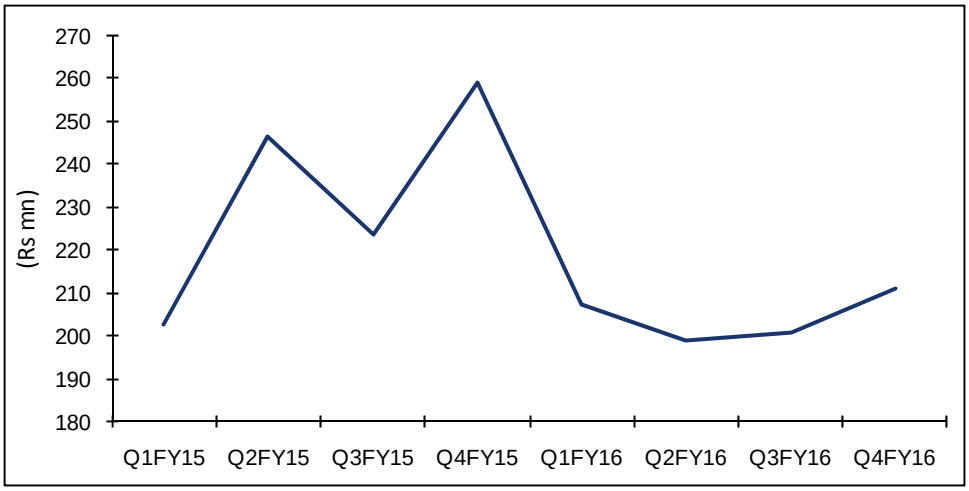
The company has a total fleet size of 116 aircraft of which 24 are owned and the rest are on operating lease.

- Jet's fleet has a total of 86 narrow-body aircraft (68-B737 and 18-ATRs).
- Jet's total wide-body fleet comprises 22 aircraft – split between 10 B777s and 12 A330s.
- Jetlite has a total of eight narrow-body B737s

The company has given 10 aircraft on lease. Two A330-200s have been sub/(dry)-leased to Etihad Airways PJSC and three A330-200s have been sub/(dry)-leased to Turkish Airlines. Five B777-300ER aircraft have been sub/(dry)-leased to Etihad. The Turkish Airlines sub-lease is long-term – till 2020. One A330 given to Etihad is also long-term (till 2020) while B777 leases are nearing expiry.

Rental income is around Rs200mn per aircraft per quarter

Chart 23: Quarterly rental income from leases per aircraft



Source: Company Data, I-Sec research

RoCE to improve ahead

One must not forget the asset-light model of leasing in airlines. Equating the rental outgo in an operating lease as an interest expense towards asset acquisition, the RoEs should not change in principle. RoEs would remain high on the back of an extremely high leveraged business.

However, the comparison is different in case of RoCE. The operating lease rentals should be added back to EBIT, while the equivalent asset should be added to capital employed. In a growing phase, when an increasing number of aircraft are being acquired, equivalent assets can be estimated as a 7x/8x the current rentals (operating +finance). So, while the finance lease asset is already factored in the assets, we add 7x operating lease rentals to the assets to derive adjusted RoCEs in line with the global practice for equivalent debt estimation.

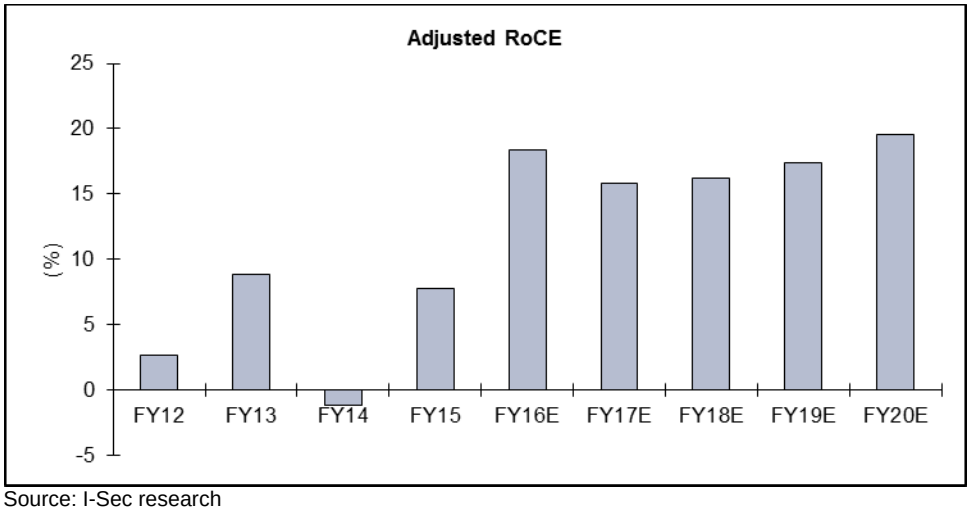
Even if we adjust for the off balance sheet assets under operating lease, Jet would retain attractive RoCEs (~15-20%)

Table 6: Adjusted RoCEs

(Rs mn)	FY12	FY13	FY14	FY15	FY16E	FY17E	FY18E
Total Assets	139,102	102,332	71,660	70,742	69,873	73,144	79,128
7x gross operating rentals	84,349	106,819	146,295	152,076	160,000	167,996	173,559
Total adjusted asset	223,451	209,151	217,955	222,818	229,874	241,140	252,687
EBIT	(6,073)	3,196	(23,278)	(4,277)	19,389	13,796	16,334
Gross rentals	12,050	15,260	20,899	21,725	22,857	23,999	24,794
Adjusted EBIT	5,977	18,456	(2,379)	17,449	42,246	37,796	41,128
Adjusted RoCE	2.67	8.82	(1.09)	7.83	18.38	15.67	16.28

Source: I-Sec research, ROCE based on pre tax EBIT

Chart 24: Improving ROCEs ahead



Source: I-Sec research

Sensitivity analysis

Combined factors of crude and currency: The sensitivity of airlines will largely depend upon the fares which is again a function of several external factors like competition and demand. However, the two factors which are external but significantly determine the results of airline operations are crude prices and currency. Typically, currency has a ripple effect across cost items starting from rentals, maintenance contracts, redelivery expenditure as well as crude. As such, while it is less volatile than crude, it has higher sensitivity to currency fluctuations.

These sensitivities should be not be looked in isolation since there are countermeasures adopted between the three factors of in crude, dollar and fares.

Table 7: Sensitivity of target price with crude prices & INR-USD exchange rate

		INR				
	TP	63	65	67	70	72
Crude (US$/bbl)	40	1,970	1,757	1,544	1,224	1,011
	45	1,753	1,533	1,313	983	763
	50	1,536	1,309	1,082	742	515
	55	1,319	1,085	851	500	266
	60	1,102	861	**621**	259	18
	70	668	414	159	(223)	(478)

Source: I-Sec research

Combined factor of crude price and passenger fare: The sensitivity analysis shows high dependence of the airline business model on passenger fares. This reflects the high operating leverage nature of the airline business, which has high fixed-costs, including lease and other aircraft acquisition charges, engineering and maintenance charges, financing commitments, staff costs and IT costs. Significant operating expenses, such as airport charges, do not vary by passenger load factors.

Table 8: Sensitivity of crude prices and passenger fare growth

		Crude (US$/bbl)					
	TP	40	45	50	55	60	70
Fare Growth (%)	-10%	(185)	(416)	(647)	(878)	(1,109)	(1,570)
	-5%	480	249	18	(213)	(443)	(905)
	0%	1,145	914	683	452	222	(240)
	3%	1,544	1,313	1,082	851	**621**	159
	5%	1,810	1,579	1,348	1,117	887	425
	10%	2,475	2,244	2,013	1,782	1,552	1,090

Source: I-Sec research

Combined factor of passenger fare growth and currency: Even higher sensitivity is seen here as higher numbers of cost items including crude depend on currency.

Table 9: Sensitivity of INR-USD exchange rate and passenger fare growth

		INR					
	TP	63	65	67	70	72	74
Fare Growth (%)	-10%	(627)	(868)	(1,109)	(1,470)	(1,711)	(1,952)
	-5%	38	(203)	(443)	(805)	(1,046)	(1,286)
	0%	703	462	222	(140)	(381)	(621)
	3%	1,102	861	**621**	259	18	(222)
	5%	1,368	1,127	887	525	284	44
	10%	2,033	1,793	1,552	1,190	950	709

Source: I-Sec research

Valuation

LCCs tend to trade at higher multiples compared to FSCs. Asian LCCs enjoy additional premium on account of their low cost structure and high traffic growth. High volatility in crude prices and the global economy have a direct bearing on airline stock prices and, as such, it is best to consider the average 1-year forward EV /EBITDAR for the last 5/10 years to ascertain an average cycle multiple

In line with the long-term average EV/EBITDAR multiple for Asian airlines, we value Jet Airways at 7x FY18 EV/EBITDAR at Rs621 per share. Recommend **ADD** on the stock.

We value Jet at 7x compared to 8x for IndiGo to account for the better balance sheet, significantly higher market share and lower cost structure of IndiGo compared to Jet. Higher leverage and higher cost structure also makes Jet more sensitive to crude and other cost escalations compared to IndiGo.

Table 10: Valuation based on 8x EV/EBITDAR

(Rs mn)	FY20E
EBITDAR	43,111
EV@7xEV/EBITDAR	301,780
Gross Debt	109,210
Cash	51,490
Rentals@7x	173,559
Net Debt	231,279
Equity Value	70,501
Shares (mn)	113.6
Equity value	**621**

Source: I-Sec research

Assumptions

Table 11: Assumptions for our estimates

Assumptions	FY16P	FY17E	FY18E	FY19E	FY20E
Fare Growth	-7%	2%	3%	5%	5%
Average Ticket (Rs)	7,374	7,521	7,747	8,134	8,541
US$	65.3	67.0	67.0	68.0	68.0
Crude Prices(US$/bbl)	46.0	55.0	60.0	60.0	60.0
Realized ATF prices (Rs/kl)	32,469	36,969	39,007	39,519	39,519
Scheduled Passengers (mn)	25.8	27.5	28.7	31.0	34.2
International	7.4	7.5	7.7	7.8	8.0
Domestic	16.0	17.2	17.8	19.9	22.9
Jetlite	2.4	2.4	2.4	2.4	2.4
RPK(mn)	41,387	43,162	44,393	47,041	50,449
ASK(mn)	50,116	51,310	51,969	55,026	59,664
PLF(%)	82.6	84.1	85.4	85.5	84.6
Ancillary Revenue (Rs mn)	32,093	33,132	33,425	39,222	44,580
Total Revenue(Rs mn)	222,070	240,198	255,894	291,710	336,843
EBITDA (Rs mn)	22,361	16,074	18,317	24,490	37,074
EBITDAR (Rs mn)	45,218	40,074	43,111	51,667	67,131
PAT (Rs mn)	12,117	5,771	8,484	16,128	28,401

Source: I-Sec research, Company data

Financials

Table 12: Profit & Loss statement

(Rs mn, year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
Revenue	**190,358**	**209,656**	**222,070**	**240,198**	**255,894**
Aircraft Fuel Expenses	81,253	73,656	54,034	62,359	66,308
Employee Benefit Expenses	20,778	24,191	25,323	27,018	28,909
Selling and Distribution Expenses	15,304	21,244	23,608	24,020	25,589
Aircraft and Engine Lease Rentals	20,899	21,725	22,857	23,999	24,794
Other Expenses	70,719	72,425	73,887	86,728	91,975
-Aircraft Variable rentals	11,474	7,739	5,893	8,594	8,705
-Insurance	919	938	966	1,002	1,002
-Landing, navigation, airport charges	15,725	16,924	18,794	20,203	21,486
-Aircraft maintenance	22,474	23,184	24,930	27,859	29,252
-Others	20,129	23,640	23,318	29,070	31,531
Total Expenditure	**208,953**	**213,240**	**199,709**	**224,124**	**237,576**
EBITDA	**(18,595)**	**(3,584)**	**22,361**	**16,074**	**18,317**
Margin (%)	(9.77)	(1.71)	10.07	6.69	7.16
EBITDAR	**2,304**	**18,141**	**45,218**	**40,074**	**43,111**
Margin(%)	1.2	8.7	20.4	16.7	16.8
Other Income	4,095	6,961	6,991	6,530	7,075
Depreciation	8,778	7,653	9,962	8,808	9,058
EBIT	**(23,278)**	**(4,277)**	**19,389**	**13,796**	**16,334**
Finance Cost	10,836	9,205	8,850	8,075	7,900
Exceptional items	(7,174)	(7,532)	1,480		
PBT	**(41,288)**	**(21,014)**	**12,020**	**5,721**	**8,434**
Tax	(1)	0			
Share of Associates	(11)	40	97	50	50
PAT	**(41,298)**	**(20,974)**	**12,117**	**5,771**	**8,484**

Source: Company data, I-Sec research

Table 13: Balance sheet

(Rs mn, year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
Share Capital	1,136	1,136	1,136	1,136	1,136
Reserves and Surplus	(42,885)	(64,384)	(53,240)	(47,469)	(38,985)
Networth	**(41,749)**	**(63,248)**	**(52,104)**	**(46,333)**	**(37,849)**
Short Term Borrowing	21,679	36,443	30,211	30,211	30,211
Long Term borrowing	65,461	66,073	62,103	59,603	57,103
Other LT liabilities	3,650	11,484	9,035	9,035	9,035
Advance from Developer	3,650	3,650	3,650	3,650	3,650
Advance from Customers		985			
Deferred Revenue (Refer note 38)		6,849			
Current portion of LT liabilities	18,625	16,511	16,511	16,511	16,511
Borrowings	**109,415**	**130,511**	**117,860**	**115,360**	**112,860**
Provisions,DTL	**3,993**	**3,479**	**4,118**	**4,118**	**4,118**
Trade Payables	51,609	57,879	61,200	61,404	65,089
Other Current liabilities	47,832	42,351	41,905	44,825	47,515
-Forward Sales	26,539	31,330			
-JPPL sales	255	3,652			
Current Liabilities	**99,441**	**100,230**	**103,105**	**106,229**	**112,605**
Total Equity and liability	**171,101**	**170,972**	**172,979**	**179,373**	**191,733**
Gross Assets	158,727	162,631	168,163	176,163	181,163
Depreciation	62,281	70,093	80,055	88,864	97,922
Net Fixed Assets	**96,446**	**92,538**	**88,107**	**87,299**	**83,241**
Goodwill	11,724	-	-	-	-
LT investments	6,657	6,697	7,176	7,176	7,176
Loans and advances	22,743	26,563	30,636	30,636	30,636
Other Current Assets			260	260	260
Current Investments			5,000	5,000	5,000
Inventories	8,594	9,635	10,641	9,825	10,414
Trade Receivables	12,872	13,911	16,277	15,794	16,826
Cash	12,065	21,628	14,881	23,383	38,179
Current Assets	**33,530**	**45,175**	**47,059**	**54,261**	**70,679**
Total Assets	**171,101**	**170,972**	**172,979**	**179,373**	**191,733**

Source: Company data, I-Sec research

Table 14: Cashflow statement

(Rs mn, year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
Cash flow from Operating Activities :					
Net Loss Before Tax	(412,988)	(209,740)	12,020	5,721	8,434
Adjustment for :					
Exceptional Items	71,739	75,322			
Depreciation and Amortisation	87,778	76,531	9,962	8,808	9,058
Provision for Stock Obsolescence	10,469	16,031			
Profit on Sale of Fixed Assets (Net)	(9,171)	(12,334)			
Loss on Scrapping of Fixed Assets	665	14			
Profit on Sale of Investments	(37)	(90)			
Finance Cost	108,360	92,047	8,850	8,075	7,900
Interest on Income Tax Refund	(1,228)	(180)			
Other Income	(7,354)	(9,030)	(6,894)	(6,480)	(7,025)
Provision No Longer Required Written Back	(13,058)	(2,416)			
Provision for Compensated Absences and Gratuity	3,194	3,536			
Unrealised Foreign Exchange Losses (Net)	-	5,176			
Provision for Doubtful Debts	2,350	4,609			
Provision for Doubtful Deposit / Advances	11,643	789			
Bad Debts Written Off	287	66			
Provision for Wealth Tax	12	12			
Recognition upon fulfillment of commitment	-	(26,248)			
Inventory Scrapped During the Year	1,801	2,366			
Marked to Market-Derivatives (Gain)					
Contribution Receivable from Lessors					
Exchange Difference					
Operating Profit / (Loss) Before WC	**(145,538)**	**16,461**	**23,938**	**16,124**	**18,367**
Adjustment for :					
Inventories	(13,192)	(28,811)	(1,006)	816	(590)
Trade Receivables	(1,120)	(13,985)	(2,365)	483	(1,032)
Loans and Advances	61,729	(35,144)			
Trade and Other Payables	204,967	135,333	2,875	3,123	6,376
Cash Generated from Operations	**106,846**	**73,854**	**23,442**	**20,547**	**23,122**
Direct Taxes (Paid) / Refund (Net)	(5,665)	304	-	-	-
Net Cash from Operating Activities	**101,181**	**74,158**	**23,442**	**20,547**	**23,122**
Cash Flow from Investing Activities					
Purchase of Fixed Assets (Including CWIP)	(40,043)	(171,048)	(7,000)	(8,000)	(5,000)
Proceeds from Sale of Fixed Assets	83,149	169,841			
Purchase of Current Investments	(110,000)	(188,995)			
Sale of Current Investments	110,037	189,085			
Sale of Non-Current Investments	1	4			
Investment in Equity Shares of Associate	(66,365)	(391)			
Changes in Fixed Deposits with Banks	(9,410)	(29,509)	(18,830)		
Interest Received on Bank and Other Deposits	6,025	8,941	6,991	6,530	7,075
Net Cash Flow used in Investing Activities	**(26,606)**	**(22,072)**	**(18,839)**	**(1,470)**	**2,075**
Cash Flow from Financing Activities					
Net Increase in Short Term Loans	3,713	147,636			
Proceeds from Long Term Loans during the year	171,914	153,599			
Repayment of Long Term Loans during the year	(328,269)	(192,331)	(2,500)	(2,500)	(2,500)
Share Issue	205,562	-			
Finance Cost	(110,137)	(94,946)	(8,850)	(8,075)	(7,900)
Unclaimed Dividend Paid	(6)	(3)			
Net Cash from / (used for) Financing Activities	**(57,223)**	**13,955**	**(11,350)**	**(10,575)**	**(10,400)**
Net Increase in Cash and Cash Equivalents	**17,352**	**66,041**	**(6,747)**	**8,502**	**14,796**
Cash at the beginning of the year	14,537	31,889	21,628	14,881	23,383
Cash at end of the year	**31,889**	**97,930**	**14,881**	**23,383**	**38,179**

Source: Company data, I-Sec research

Table 15: Key ratios

(Year ending March 31)

	FY14	FY15	FY16P	FY17E	FY18E
Per Share Data (in Rs.)					
EPS(Basic Recurring)	(363.5)	(184.6)	106.7	50.8	74.7
Diluted Recurring EPS	(363.5)	(184.6)	106.7	50.8	74.7
Recurring Cash EPS	(286.3)	(117.3)	194.4	128.3	154.4
Dividend per share (DPS)	-	-	-	-	-
Book Value per share	(367.5)	(556.8)	(458.7)	(407.9)	(333.2)
Growth Ratios (%)					
EBITDA	(373.3)	(80.7)	(723.9)	(28.1)	14.0
EBITDAR	(89.6)	687.2	149.3	(11.4)	7.6
Recurring Net Income	429.6	(49.2)	(157.8)	(52.4)	47.0
Valuation Ratios (x)					
P/E	(1.5)	(3.0)	5.3	11.0	7.5
P/CEPS	(2.0)	(4.8)	2.9	4.4	3.6
P/BV	(1.5)	(1.0)	(1.2)	(1.4)	(1.7)
EV / EBITDA	(8.7)	(48.2)	7.5	9.7	7.6
EV / EBITDAR	69.9	9.5	3.7	3.9	3.2
EV / FCF	1.1	0.7	5.5	5.5	4.9
Operating Ratios (%)					
Fuel/Sales	42.7	35.1	24.3	26.0	25.9
Net Rentals/Sales	17.0	14.1	12.9	13.6	13.1
Employee/Sales	10.9	11.5	11.4	11.2	11.3
Selling cost/sales	8.0	10.1	10.6	10.0	10.0
NWC / Total Assets	(92.0)	(77.8)	(80.2)	(71.0)	(53.0)
Inventory Days	15.0	16.5	16.0	16.0	16.0
Receivables (days)	24.7	24.2	24.0	24.0	24.0
Other Current Liabilities Days	83.6	72.5	73.0	73.0	73.0
Payables (days)	90.2	99.1	100.0	100.0	100.0
Net D/E Ratio (x)	(2.33)	(1.72)	(1.98)	(1.99)	(1.97)
Return/Profitability Ratios (%)					
Recurring Net Income Margins	(21.7)	(10.0)	5.5	2.4	3.3
RoCE	(32.5)	(6.0)	27.7	18.9	20.6
RoNW	98.9	33.2	(23.3)	(12.5)	(22.4)
Dividend Payout Ratio	-	-	-	-	-
EBITDA Margins	(9.8)	(1.7)	10.1	6.7	7.2

Source: Company data, I-Sec research

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Charts

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