

India

**Neutral** (no change)

**Highlighted Companies**

**Blue Dart Express Ltd**

**REDUCE, TP Rs6000, Rs6175 close**

Over FY24F-26F, we factor in volume/EBITDA CAGR of 10% each, similar to the growth in FY19-24F. We value BDE at 14x EV/EBITDA (12% discount to the five-year average EV/EBITDA of 15.9x). We believe the discount is warranted, considering the likely muted growth over FY24F-26F.

**Summary Valuation Metrics**

P/E (x)	Mar24-F	Mar25-F	Mar26-F
Blue Dart Express Ltd	54.89	49.22	44.92
P/BV (x)	Mar24-F	Mar25-F	Mar26-F
Blue Dart Express Ltd	10.88	9.57	8.48
Dividend Yield	Mar24-F	Mar25-F	Mar26-F
Blue Dart Express Ltd	0.56%	0.64%	0.74%

# Transport Infra - Overall

## What ails domestic air cargo growth?

- We explore why BDE's air cargo growth lags passenger airlines in FY15-19.
- Fuel cost/tkm of payload is Rs25-30 (for a cargo plane), but the marginal cost is just Rs6-8 (applicable for a passenger plane carrying belly cargo).
- BlueDart Express (BDE) has a niche business but lacks strong growth.

### Snapshot of domestic air cargo over FY15-24F and the key questions

Domestic cargo of passenger airlines (belly cargo) grew by 8% p.a. over FY15-19 (pre-Covid) but was flat over FY19-24F (in line with the number of flights due to muted passenger demand). The volume carried by freighter planes of BlueDart Express (BDE) rose by just 0.5% p.a. (FY15-19). In FY19-22, BDE's air cargo grew by 7% p.a. due to the stymied operations of passenger airlines. Once normalcy returned in 9MFY24, BDE's air cargo volume fell 9% from FY22. The key questions are (a) why did BDE's air cargo growth lag that of passenger airlines in FY15-19, and (b) why BDE's air cargo grew by just 2% p.a. (FY19-24F) when passenger airlines' operations were hamstrung by the Covid-19 pandemic. We explore the fuel intensity of air cargo for passenger airlines and cargo planes for the answers.

### Analysis of fuel consumption per trip for various airlines

Based on the fuel cost per flight {fuel cost (FY23)/ number of flights} and blended fuel cost, we arrive at the fuel consumption per flight (L). IndiGo's planes consumed 3.5 kilolitre or kL per flight of average distance of 1,015km. The key factors in fuel consumption per flight are (a) flight distance, (b) size of the planes, and (c) age of the fleet. BDE's fuel consumption per flight is 71% more than that of IndiGo due to a 7% higher distance/flight, older fleet (average age of 27.6 years) and larger planes (36% higher payload per flight than IndiGo).

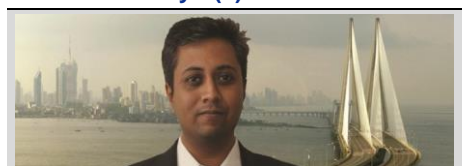
### Fuel cost/tkm of payload is Rs25-30 but marginal cost is just Rs6-8

For a passenger aircraft, ownership cost, salary and fuel costs are fixed. The only incremental cost to carry extra belly cargo is the extra fuel cost (marginal cost). While it is ~2x more expensive than road transport, the speed of travel via air is at a fraction of the speed of road travel. For cargo aircraft, the key factor for carrying cargo is fuel cost/ tkm of payload, which is 4x the marginal cost. The large difference in fuel cost/ tkm of payload and the fuel cost/ tkm of total weight is because the payload is just 27% of total weight for an aircraft. The ratio of payload to total weight for an aircraft is significantly worse (lower) than for trucks & trains. In FY23, for BlueDart Aviation (BDAL), its 100% subsidiary, overall cost/ tkm of payload was Rs73 (~20x more expensive than road transport cost of Rs3-4/tkm). Assuming the road express cost/ tkm is Rs6-8, BDAL's cost/tkm is 10x that of road express.

### BlueDart Express – niche business but lacks strong growth

Despite the overall cargo growth of ~9% p.a. (FY15-25F), revenue growth was 10% p.a. despite the announced annual tariff hikes. We believe this is due to the sluggish growth in the core air cargo segment (1.5% p.a.). The growth in EBITDAR at 12% p.a. is at odds with the rich valuation (16x FY25F EV/EBITDA). The return ratios are healthy. We believe that BDE has a niche business but is likely to report tepid growth over FY24F-26F. The stock trades at close to our target price of Rs6,000.

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**Figure 1: Estimated fuel cost/tkm of payload and fuel cost/tkm of total weight**

		IndiGo A320Neo	BlueDart B757-200	BlueDart B737-800
Flying distance (km)	A	868	1,031	1,031
Tkm performed/ t of fuel	B	21,266	16,249	18,956
Fuel consumed (t)	C = H/ B	2.5	4.9	3.3
Operating empty weight (t)	D	44.3	52.4	41.4
Payload (t)	E	13.7	21.2	16.5
Fuel reserve (t)	F	0.8	1.6	1.1
Average weight (t)	G=C/2+D+E+F	60.0	77.8	60.6
Total tkm performed	H=A * G	52,126	80,210	62,555
Payload tkm performed	I=A *E	11,888	21,903	17,014
Fuel consumed (L)	J = C *1000/.8	3,064	6,171	4,125
Price of ATF (Rs/L)	K	103	103	103
Fuel cost/ tkm of payload (Rs)	L = K * J/ I	26.5	29.0	25.0
Fuel cost/ tkm of total weight (Rs)	M = K * J/ H	6.1	7.9	6.8

SOURCE: INCRED RESEARCH, COMPANY REPORTS

## What ails domestic air cargo growth?

### Snapshot of domestic air cargo over FY15-24F ▶

Domestic air cargo grew by 3% p.a. (FY15-24F), below the 6% p.a. rise in the number of flights. In India, only BlueDart Express (BDE) is a dedicated cargo carrier. The others primarily carry cargo in passenger flights in the belly of planes.

**Figure 2: Domestic air cargo – key metrics**

	FY15	FY19	FY20	FY23	FY24F	CAGR %		
						FY15-19	FY19-24F	FY15-24F
Number of flights (000)	617	1,055	1,059	1,016	1,065	14.4	0.2	6.2
Aircraft km (m)	529	962	973	936	962	16.2	(0.0)	6.9
Passengers (m)	70	140	142	137	154	19.0	1.8	9.1
PLF %	79	86	86	83	88			
Cargo (kt)	592	761	733	737	767	6.5	0.2	2.9

SOURCES: INCRED RESEARCH, COMPANY REPORTS

**Passenger airlines carrying belly cargo – domestic segment:** Air cargo grew at contrasting rates prior to the Covid-19 pandemic (FY15-19) and thereafter (FY19-24F). Over FY15-19, air cargo grew at a healthy rate of ~8% p.a., albeit at a lower rate than the growth in number of flights (14% p.a.) or passengers (19% p.a.).

Over FY19-24F, cargo growth was flat, similar to a 0.2% p.a. growth in the number of flights. Passengers are the core segment of passenger airlines and cargo is an add-on. Thus, it is understandable that while passenger demand was muted in FY19-24F (1.8% p.a. growth), the growth in belly cargo was muted. Going ahead, we expect belly cargo growth to revert to 7% p.a., similar to FY15-19.

**Figure 3: Domestic air cargo excluding BDE – key metrics**

	FY15	FY19	FY20	FY23	FY24F	CAGR %		
						FY15-19	FY19-24F	FY15-24F
Number of flights (000)	611	1,049	1,053	1,010	1,058	14.4	0.2	6.3
Aircraft km (m)	524	956	967	929	955	16.3	(0.0)	6.9
Passengers (m)	70	140	142	137	154	19.0	1.8	9.1
PLF %	79	86	86	83	88			
Cargo (kt)	473	640	607	592	632	7.8	(0.3)	3.3
Pax weight / trip (t)	10.0	11.8	10.9	11.9	12.8			
Distance per flight (km)	856	912	918	920	903			
Passengers/ flight	115	134	135	135	145	3.9	1.7	2.7
Cargo/ trip (t)	0.77	0.61	0.58	0.59	0.60	(5.8)	(0.4)	(2.8)

SOURCE: INCRED RESEARCH, COMPANY REPORTS

**BDE's domestic cargo:** Over FY15-19, BDE's air cargo grew by 0.5% p.a., lower than the 8% p.a. growth in domestic cargo carried by passenger airlines. In FY19-22, BDE's air cargo grew by 7% p.a. BDE's EBITDA margin rose to 21.8% (FY21-22) vs. 15.6%/15.9% in FY20/ 9MFY24, respectively. We believe BDE's strong volume growth and margin in FY21-22 was due to its competitors (passenger airlines) being hamstrung due to the Covid-19 pandemic. Once normalcy returned in 9MFY24, BDE's air cargo volume declined by 9% from FY22 and margin reverted to the FY20 level.

**Figure 4: BlueDart Express (BDE) – key air cargo metrics**

	FY15	FY19	FY20	FY23	FY24F	CAGR %		
						FY15-19	FY19-24F	FY15-24F
Number of flights (000)	5.5	5.8	5.7	6.8	6.6	1.6	2.6	2.1
Aircraft km (m)	5.0	5.8	5.7	7.4	6.8	3.7	3.2	3.4
Cargo (kt)	119	121	126	145	135	0.5	2.3	1.5
Distance per flight (km)	920	1,001	995	1,086	1,031			
Cargo/ trip (t)	22	21	22	21	20	(1.1)	(0.3)	(0.7)

SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Key questions** ➤

- During FY15-19 (pre-Covid), why did BDE's (cargo carrier) air cargo volume rise by just 0.5% p.a. while air cargo of passenger airlines rose faster at ~8 p.a.?
- During FY19-24F, why did BDE's air cargo rise by just 2% p.a., even though passenger airlines (BDE's competitors in air cargo) were stymied due to weak passenger demand and were unable to handle more cargo?

We explored the fuel intensity of air cargo for passenger airlines and cargo planes. The price of air turbine fuel for domestic flights in India is, on average, 1.8x more expensive than the price of ATF in Singapore.

**Figure 5: Price of domestic air turbine fuel (ATF) and Singapore ATF**

	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	1QFY24	2QFY24
Crude oil (USD/ barrel)	105	63	43	50	64	69	55	51	84	95	78	88
USD/ INR exchange rate	61	61	65	67	65	70	71	74	75	80	82	83
Crude oil (INR/L) A	40	24	18	21	26	30	24	24	39	48	40	46
Domestic ATF (INR/L) B	76	68	48	50	56	68	65	41	79	122	96	102
Singapore ATF (INR/L) C	43	37	27	27	30	37	34	25	42	63	48	59
Multiplier (x) B/A	1.9	2.8	2.7	2.4	2.1	2.3	2.7	1.8	2.0	2.5	2.4	2.2
Multiplier (x) B/C	1.7	1.8	1.8	1.8	1.9	1.8	1.9	1.6	1.9	1.9	2.0	1.7

SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Analysis of fuel consumption per trip for IndiGo, Vistara, SpiceJet, Air India and BlueDart Express** ➤

Three ATF prices are relevant for Indian airlines (India domestic trip, India international trip, prices of ATF overseas). To calculate the blended cost of ATF, we assume that half of the fuel requirement for international trips is purchased abroad and the remaining in India. The entire requirement for domestic trips is purchased from India.

**Figure 6: Price of air turbine fuel**

	FY23
Price Domestic ATF (Rs/L)	122.0
Price International ATF (Rs/L) - India	91.9
Price Singapore ATF (Rs/L)	62.6

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Based on the fuel cost per flight {fuel cost (FY23)/ number of flights} and blended fuel cost, we arrive at the fuel consumption per flight (L). IndiGo's planes consumed 3.5 kilo litre or kL per flight of average distance of 1,015km.

**Figure 7: Fuel consumption in FY23 per flight for IndiGo, Vistara, Air India, SpiceJet and BlueDart Express**

		IndiGo	Vistara	% Gap vs. IndiGo	Air India	% Gap vs. IndiGo	SpiceJet	% Gap vs. IndiGo	Bluedart	% Gap vs. IndiGo
Fuel cost/ flight (Rs m)	A	0.40	0.6	40	1.2	199	0.5	17	0.7	82
% International operations	B	22	22		65		28		6	
Distance per flight (km)		1,015	1,276	26	2,221	119	1,227	21	1,086	7
Blended cost of fuel (Rs/L)	C	112	112	0	93	(17)	109	(2)	119	7
Fuel consumed/ flight (L)	D = A/ C *10^6	3,531	4,947	40	12,674	259	4,235	20	6,041	71
Payload/ flight (t)		15.9	15.9	1	20	28	11	(33)	22	36
Seats/ flight		188	180	(5)	212	12	144	(23)	-	na
Seats/ flight (adjusted for FSC/ LCC)		188	207	10	243	29	144	(23)	-	na
Blended age of fleet (yrs)		4.3	3.1		9.5		12.4		27.6	

SOURCE: INCRED RESEARCH, COMPANY REPORTS;

NOTE: FULL-SERVICE CARRIERS (FSC - VISTARA & AIR INDIA) HAVE 15% LESSER SEATS /PLANE THAN LOW-COST CARRIERS (LCC - INDIGO & SPICEJET)

**Vistara's** fuel consumption per flight was 40% higher vs. IndiGo due to:

- 26% longer flight distance vs. IndiGo.
- 14% of IndiGo's planes are turboprops (78 seats/ plane). Vistara does not have any turboprops. Adjusted for Vistara being an FSC vs. IndiGo being an LCC, Vistara has 10% more seats per plane.

**Air India's** fuel consumption per flight was 259% higher vs. IndiGo due to:

- 119% longer flight distance vs. IndiGo.
- Larger planes of Air India. Adjusted for Air India being a FSC vs. IndiGo being an LCC, Air India has 29% more seats per plane.
- Older fleet of Air India (average age of 9.5 years vs. 4.3 years of IndiGo).

**SpiceJet's** fuel consumption per flight is 20% more than IndiGo due to:

- 21% longer flight distance of SpiceJet vs. IndiGo.
- While the average size of SpiceJet's planes is 23% lower vs. IndiGo, this is offset by the older fleet of SpiceJet (average age of 12.4 years).

**BlueDart Express or BDE's** fuel consumption per flight is 71% more than IndiGo due to a 7% higher distance/ flight, older fleet (average age of 27.6 years) and larger planes (36% higher payload per flight than IndiGo).

### Estimating tkm performed/t of fuel for aircraft ►

Aircraft models have a maximum range (distance flown by consuming entire fuel except reserve fuel), operating empty weight (aircraft weight excluding fuel and payload), fuel capacity and maximum takeoff weight.

The total weight of the aircraft reduces over the journey due to fuel burn during the journey. We calculate the average weight of the aircraft as the sum of operating empty weight, payload and average weight of fuel.

**Figure 8: Estimating the tkm performed/t of fuel consumed for A320Neo, B757-200 and B737-800 aircraft models**

		IndiGo A320Neo	BlueDart B757-200	BlueDart B737-800
Mimum Range (km)	A	6,300	5,435	5,436
Operating empty weight (t)	B	44	52	41
Payload (t)	C	13	29	17
Fuel consumed (t)	D	20	33	20
Fuel reserve (t)	E	1	1	1
Maximum take off weight (t)	F	79	116	79
Average weight (t)	$G=B+C+D/2+E$	68.8	99.1	69.1
Total tkm performed	$H=A * G$	4,33,490	5,38,543	3,75,667
Tkm performed/ t of fuel	$I = H / D$	21,266	16,249	18,956

SOURCE: INCRED RESEARCH, COMPANY REPORTS

We calculate total tkm performed as the product of average weight of aircraft and the range. **The tkm performed/t of fuel consumed is a proxy for the fuel efficiency of a particular aircraft model.**

**Fuel cost/tkm of payload is Rs25-30 but fuel cost/tkm of total weight (marginal cost) is just Rs6-8 ➤**

Based on tkm performed/t of fuel for a particular aircraft (calculated in the previous section) and tkm required (based on actual flying distance in domestic flights in India), we calculate the fuel consumption for the aircraft.

Based on fuel consumed (L), price of ATF (Rs/Lt), payload (tkm) and total tkm, we arrive at fuel cost/tkm of payload (Rs25-30) and fuel cost/tkm of total weight (marginal cost: Rs6-8). For passenger aircraft, ownership cost, salary and fuel costs are fixed, irrespective of the incremental cargo. The only incremental cost to carry extra belly cargo is the extra fuel cost (marginal cost).

**We expect belly cargo of airlines to witness a 7-8% growth p.a. (similar to FY15-19 – pre-Covid level). While it is ~2x more expensive than road transport, the speed of travel via air is at a fraction of the speed of road travel. Note:** If the price of domestic ATF had been at par with Singapore ATF, the marginal cost/ tkm for carrying belly cargo would be Rs3-4, similar to the cost of road transport.

**Figure 9: Estimating fuel cost/tkm of payload and fuel cost/tkm of total weight**

		IndiGo A320Neo	BlueDart B757-200	BlueDart B737-800
Flying distance (km)	A	868	1,031	1,031
Tkm performed/ t of fuel	B	21,266	16,249	18,956
Fuel consumed (t)	C = H/ B	2.5	4.9	3.3
Operating empty weight (t)	D	44.3	52.4	41.4
Payload (t)	E	13.7	21.2	16.5
Fuel reserve (t)	F	0.8	1.6	1.1
Average weight (t)	G=C/2+D+E+F	60.0	77.8	60.6
Total tkm performed	H=A * G	52,126	80,210	62,555
Payload tkm performed	I=A *E	11,888	21,903	17,014
Fuel consumed (L)	J = C *1000/.8	3,064	6,171	4,125
Price of ATF (Rs/L)	K	103	103	103
Fuel cost/ tkm of payload (Rs)	L = K * J/ I	26.5	29.0	25.0
Fuel cost/ tkm of total weight (Rs)	M = K * J/ H	6.1	7.9	6.8

SOURCE: INCRED RESEARCH, COMPANY REPORTS

For cargo aircraft, the key factor for carrying cargo is fuel cost/tkm of payload (Rs25-30), which is 4x the marginal cost. The large difference in fuel cost/ tkm of payload and the fuel cost/ tkm of total weight is because the payload is just 27% of total weight for an aircraft. **The ratio of payload to total weight for aircraft is significantly worse (lower) than for trucks and trains.**

**Figure 10: Ratio of payload to total weight for trucks, train and aircraft**

	Empty weight (tonne)	Payload (tonne)	Fuel (tonne)	Payload/ Total (%)
Truck - 37 tonne	12.0	25.0	0.3	68
Train - BLC wagon - container - single stack	21.8	33.0	-	60
Train - BLC wagon - container - double stack	21.8	66.0	-	75
Boeing 857-200	52.4	21.2	4.1	27

SOURCE: INCRED RESEARCH, COMPANY REPORTS

In FY23, for BlueDart Aviation (BDAL), overall cost/ tkm of payload is Rs73 (~20x more expensive than road transport of Rs3-4/tkm). Assuming that road express cost/ tkm is Rs6-8, BDAL's cost/ tkm is 10x of road express.

**Figure 11: Costs for BlueDart Aviation in FY23**

(Rs bn)	FY23	Rs/ tkm of payload
Fuel cost	4.9	30.8
Ownership cost	3.0	18.8
Salary cost	1.8	11.5
Others	2.0	12.2
<b>Total cost</b>	<b>11.7</b>	<b>73.4</b>

SOURCE: INCRED RESEARCH, COMPANY REPORTS

**Air freight is the key segment for BDE comprising ~70% of sales (as per the company) and 45% of cost (our estimate) ➤**

Air cargo comprised 12.5% of BDE's cargo (kt) in FY23 but ~70% of its revenue (as per BDE's management). We believe this is because of (a) BDE's dominant market share in the air cargo segment, (b) longer lead distance of air cargo vs. surface cargo, and (c) air cargo (tkm) is 10x more expensive than road express.

BDE's main cost items are domestic network operating costs (32% of sales: mainly truck hire charges, as per BDE's management), employee costs (16% of sales), ownership costs (9% of sales) and aircraft fuel costs (10% of sales). We calculate that 45% of the total cost is for air transport.

Note: Breakdown of Others and handling & clearing charges into air cargo and surface cargo segments are our estimates.

**Figure 12: Breakup of costs of BlueDart Express**

(Rs bn)	Total Costs FY23	Cost as a % of Sales	Air transport costs		as % total cost
			Costs for BDAL	Other costs for air cargo (estimated)	
Domestic network operating costs	16.6	32	-	-	-
Employee Benefits Expense	8.4	16	1.8	-	22
Ownership cost (interest + depreciation)	4.6	9	3.0	-	65
Aircraft fuel	4.9	10	4.9	-	100
Commercial airlift charges	2.3	4	-	2.3	100
International servicing charges	2.7	5	-	2.7	100
Handling and clearing charges	1.6	3	-	1.1	70
Rent ex-aircrafts	0.5	1	-	-	-
Others	5.5	11	2.0	3.5	100
<b>Total Cost</b>	<b>47.0</b>	<b>91</b>	<b>11.7</b>	<b>9.6</b>	<b>45</b>

SOURCE: INCRED RESEARCH, COMPANY REPORTS

While air cargo accounts for 70% of BDE's revenue, it accounts for just 45-50% of the costs (our estimate). Thus, we believe, BDE's air cargo EBT margin is higher than in road transport and air cargo contributes more than 80% to BDE's EBT.

**BlueDart Express – niche business but lacks strong growth ➤**

Despite overall cargo growth of ~9% p.a. (FY15-25F), revenue growth was 10% p.a. despite the announced annual tariff hikes. We believe this is due to sluggish growth in the core air cargo segment (1.5% p.a.). The growth in EBITDAR of 12% pa is at odds with the rich valuation (16x FY25F EV/EBITDA). The return ratios are healthy. We believe that BDE has a niche business, but it is likely to report tepid growth over FY24F-26F.

**Figure 13: Key financials of BlueDart Express**

(Rs m)	FY15	FY19	FY24F	FY25F	CAGR %	
					FY15-19	FY19-25F
Sales	22,722	31,744	51,876	57,111	8.7	10.3
yoy growth %		13	0	10		
Total volume (kt)	559	755	1,193	1,301	7.8	9.5
yoy growth %		8	3	9		
Tariff (Rs/t)	40,680	42,046	43,475	43,910	0.8	0.7
yoy growth %		5	-3	1		
Air cargo (kt) - DGCA	119	121	135	138	0.5	2.2
yoy growth %		-4	-7	2		
Air cargo as % total cargo	21	16	11	11		
EBITDAR	3,149	5,716	8,897	9,799	16.1	9.4
EBITDAR margin %	13.9	18.0	17.2	17.2		
EBITDA	2,243	2,855	8,420	9,322		
EBITDA margin %	9.9	9.0	16.2	16.3		
PAT	1,272	898	2,673	2,981		
PAT margin %	5.6	2.8	5.2	5.2		
P/E			54.8	49.1		
EV/EBITDA			18.0	16.0		
ROCE %	34.1	15.9	20.3	22.9		
RoE %	41.4	15.5	19.8	19.4		

SOURCE: INCRED RESEARCH, COMPANY REPORTS

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