

Company update and
reco change

Automobiles

Target price: Rs412

Earnings revision

(%)	FY21E	FY22E
Sales	↑ 1.1	↑ 1.1
EBITDA	↑ 1.8	↓ 0.1
EPS	↑ 18.6	↓ 13.7

Target price revision

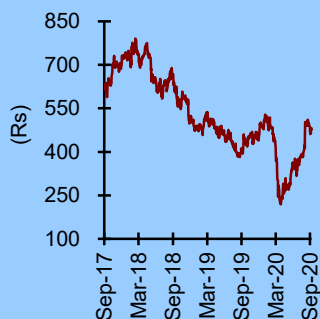
Rs412 from Rs337

Shareholding pattern

	Dec '19	Mar '20	Jun '20
Promoters	45.8	45.8	45.8
Institutional Investors	35.7	36.4	37.2
MFs and others	8.4	9.0	8.4
FIs/Banks/Ins	6.8	6.5	5.5
FII	20.5	20.9	22.3
Others	18.5	17.8	17.0

Source: BSE

Price chart



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INDIA

Bharat Forge

REDUCE

Upgrade from Sell

Rs447

Expectation hurdle remains steep

We are admirers of Bharat Forge (BHFC) for its focus on quality and innovation, yet the truth is its key business segments (CV, PV, Oil & Gas) are cyclical, which are currently in differing demand rebound cycles. Management is trying to pivot and create a larger pie of revenues from stable segments like defence, aerospace etc. Aerospace segment outlook remains uncertain due to Covid-19 pandemic; however, recent defence procurement policy shift has raised investor confidence in BHFC's potential to win artillery guns' orders. We deep-dived into the artillery segment opportunity, analysed global peers (e.g. Rheinmetall) and our base case incremental DCF value is ~Rs41/share. Key risk: If Kalyani group chooses to bid for defence orders via Kalyani Strategic Systems BHFC benefits drops by 50%. We roll forward earnings into Sep'20, upgrade our rating to REDUCE from SELL.

- ▶ **Trying to decode the defence (artillery) opportunity:** As per media reports, Indian army might procure ~2,700 artillery guns for varied requirements. Currently, the key systems being tested/ procured are from: 1) Global suppliers – e.g. BAE M777, Hanwha K9-Vajra (license-built by M&M, L&T respectively), 2) domestic suppliers – e.g. ATAGS (BHFC, Tata Power), Dhanush (OFB). As per our estimates, the cumulative order value relevant for BHFC could be ~Rs243bn (Refer Table: 2). Our base case assumes: ATAGS wins 60% of towed artillery guns' requirement (~1600 guns), BHFC wins ~30% of orders (~500 guns) along with key input supplies (e.g. gun barrel) for another ~30% of orders (non-OFB suppliers). Key risks to ATAGS ordering remains a) budgetary constraints, b) alternate options like Pinaka (Phase2)
- ▶ **Global suppliers could be a template for defence profitability:** We looked at two global suppliers, Rheinmetall, Elbit Systems as case studies to evaluate defence business financial opportunity for BHFC. Both these companies have grown defence revenues, EBIT at ~6%/5% CAGR in FY10-19, respectively. However, nature of business (higher government procurement) leads to higher net-working capital (ex-cash) requirements (~6-7% of revenue). Rheinmetall (closer proxy to BHFC) with similar revenue mix of automotive (~45% in FY19), non-automotive (~55%) has delivered ~12% RoE/ ~6% EBIT margin over FY10-19. We estimate BHFC's defence business to clock superior EBIT margins (>25%) factoring in significant labour cost advantage, higher asset efficiency.
- ▶ **Overseas subsidiaries performance likely to remain a drag:** The lack of material financial improvement in FY20 remains worrying (Refer Tables 7-8); FY21 is likely to slip further. The fact remains European M&HCV revival is likely a CY21/22 story while cost base surprisingly still remains elevated (employee headcount/cost rose 1%, 2% in FY20, respectively). We estimate consolidated RoCEs rebound in FY22/23 to remain below previous cycle (FY18/19).
- ▶ **Upgrade to REDUCE:** The class-8 truck demand (exports) is likely to scale back >300k units by CY22; however, domestic truck market is unlikely to reach FY18 peak volumes before FY24/25. We cut our multiple to 25x (earlier:27x) Sep'22E EPS (roll forward), add Rs41/share fair value (DCF basis) to arrive at fair value of Rs412.

Market Cap	Rs208bn/US\$2.8bn	Year to Mar (Std)	FY20	FY21E	FY22E	FY23E
Reuters/Bloomberg	BFRG.NS/BHFC IN	Revenue (Rs mn)	80,558	61,442	79,325	95,455
Shares Outstanding (mn)	465.5	Rec. Net Income (Rs mn)	3,999	888	5,009	8,790
52-week Range (Rs)	528/219	Rec. EPS (Rs)	7.3	1.9	10.8	18.9
Free Float (%)	54.2	% Chg YoY	(61.3)	NC	NC	NC
FII (%)	22.3	P/E (x)	52.2	234.8	41.6	23.7
Daily Volume (US\$/000)	9,418	CEPS (Rs)	9.5	6.9	11.5	15.9
Absolute Return 3m (%)	21.0	EV/E (x)	20.7	32.3	18.4	12.7
Absolute Return 12m (%)	(1.3)	Dividend Yield (%)	0.4	0.1	0.7	1.1
Sensex Return 3m (%)	6.9	RoCE (%)	6.2	1.6	6.6	11.1
Sensex Return 12m (%)	(2.6)	RoE (%)	6.5	1.7	8.7	13.6

Table 1: Current situation of artillery procurement

Category	Likely Orders	Potential Bidders	Status of Ordering
Towed Guns	1580	Bharat Forge, Tata Power, OFB, L&T-Trajan, Elbit-Bharat Forge	150 guns ATAGS order cleared; L1/L2 not announced yet. OFB has secured 114 guns orders for Dhanush
Mounted Guns	814	L&T-Trajan, Tata Power, OFB, BAE-M&M, Elbit-Bharat Forge	No ordering announcement yet
Wheeled self-propelled guns	100	BAE-M&M, Elbit-Bharat Forge, L&T-Hanwha, Tata Power	L&T Hanwha secured 100 guns order for K9-Vajra
Ultra-light howitzers	145	BAE-M&M, Elbit-Bharat Forge, L&T-Hanwha, Tata Power	BAE-M&M secured 145 guns order for M-777
Total	2639		

Source: Bloomberg, splandforces.com, I-Sec research

Table 2: ATAGS ordering and revenue forecast

Particulars (Rs mn)	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	Total
ATAGS (Units)	90	104	119	137	192	211	232	255	282	1,620
ASP	150	150	150	150	150	150	150	150	150	150
Order Size	13,500	15,525	17,854	20,532	28,745	31,619	34,781	38,259	42,235	243,049
L1 (70% order) guns	63	72	83	96	134	148	162	179	197	1,134
Revenue	9,450	10,868	12,498	14,372	20,121	22,133	24,347	26,781	29,564	170,134
Gross margin (%)	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
PAT margin	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
PAT	1,134	1,304	1,500	1,725	2,415	2,656	2,922	3,214	3,548	20,416
L2 (30% order) guns	27	31	36	41	57	63	70	77	84	486
Revenue	4,050	4,658	5,356	6,160	8,623	9,486	10,434	11,478	12,670	72,915
Gross margin (%)	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
PAT margin	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
PAT	486	559	643	739	1,035	1,138	1,252	1,377	1,520	8,750
Forging supply opportunity (Rs mn)	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	Total
Share of material cost	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Cost of supplied components	790	908	1,044	1,201	1,682	1,850	2,035	2,238	2,471	14,218

Source: Bloomberg, splandforces.com, I-Sec research

As per media reports, the Indian army artillery regiments need in excess of 1,600 towed artillery guns (155 mm calibre). As per our assessment of potential pricing (ASP) of ~Rs150mn/system, we believe the potential ordering opportunity could be ~Rs243bn. Under the new procurement policy local manufacturers may stand to gain a higher share of orders. However, considering the past issues on artillery guns, we expect a low risk procurement approach, where orders are spread across different indigenous platforms/vendors i.e. ATAGS (BHFC, Tata Power) and Dhanush (OFB).

In our base case, we are currently not assuming global suppliers like Elbit who were being evaluated for their ATHOS (Autonomous Towed Howitzer Ordnance System) platform to gain meaningful share of orders. Though ATHOS is considered technologically ahead of ATAGS due to its GPS/INS enabled computerised firing systems which potentially improve accuracy due to its automatic nature, reduces the need for manual interventions.

The potential key risk to our assumption of ~60% of indigenous procurement via ATAGS is that even though the platform has been rigorously tested and successfully completed multiple trials, the combat usage and performance is still pending. ATAGS is in fact the first 155mm howitzer developed by DRDO, they had limited prior experience in developing howitzers (earlier worked on smaller 105mm caliber guns). Any future performance issues of ATAGS could cause change in our assumptions.

For BHFC, we believe, forging component supplies (e.g. Gun barrel) remains another stream of potential revenue for non-OFB suppliers. We believe it may cumulatively amount to ~Rs14.2bn till FY31.

Case Study – Global Comparison: Rheinmetall & Elbit Systems

To analyse the potential financial implications of the artillery opportunity we tried to consider a few global players who had some overlap in segments or products vis-à-vis BHFC.

Rheinmetall & Elbit Systems

Rheinmetall AG, a German multinational corporation, is a market leader in areas of mobility and threat appropriate security technology and a leading supplier to European armed forces. It is involved in automotive and defence segments with share of defence increasing in the past decade. Key customers in automotive segment are: Ford, VW, Renault-Nissan, Gm, FCA, while for defence, Germany is the largest customer along with other eastern European countries.

Elbit Systems, an Israel-based defence technology company, is a major supplier of airborne, land and naval systems and products for defence, homeland security and commercial applications. It supplies defence and homeland security solutions to US and certain European and Asia-Pacific countries.

Table 3: Key defence products and competitors

Rheinmetall AG			
Key Product categories	Vehicle systems	Weapon and Ammunition	Electronic solutions
Key products	<ul style="list-style-type: none"> Boxer – Armored transport vehicle GTK Boxer JODAA Armored Multi-Purpose Vehicle (AMPV) Leopard – Main battle tank MBT Advanced Technology Demonstrator Lynx – Infantry fighting vehicle Puma – Infantry fighting vehicle Marder – Infantry fighting vehicle Wiesel 1 - TOW, MK 20 automatic cannon and recce versions Wiesel 2 Air-portable mortar combat system Bv206S – Lightly armored air-portable all-terrain vehicle Büffel – Armored recovery vehicle 3 Kodiak – Armored engineering vehicle 3 Biber – Bridge-laying tank Keiler – Mine-clearing tank PzH 2000 – Self-propelled howitzer 	<ul style="list-style-type: none"> 155mm artillery armament 155mm sensor-fused DM702 Smart projectile 120mm track-mounted mortar system Mortar ammunition 60mm mortar RSG60 SeaSnake naval gun MK30-2/ABM automatic cannon 40mm ammunition Crowd Riot Control Pyrotechnics Propellant powder for medium and large ammunition Piezo-activated fuse systems LANCE modular turret system LANCE RC turret system 609M weapon station with double armament Remote Controlled Weapon Stations Fieldranger 20 - high precision, stabilized 20mm weapon station Oerlikon Skynex Air Defence System Oerlikon X-TAR3D Tactical acquisition radar Oerlikon Revolver Gun Mk3 Oerlikon Twin Gun GDF009 TREO Oerlikon Laser Gun Oerlikon Skyguard 3/ Skyshield/ Seaguard – Air Defence System Oerlikon Skyranger Mobile Air Defence System 	<ul style="list-style-type: none"> Electro-optics C4i systems
Key Competitors	General Dynamics, BAE, KNDS, Scania, Levco, Hanwha	Nammo, Northrop, Grumman, Plasan, Euroco, GD, Kongsberg	R&S, CAE, Saab, Thales, Rafael, Elbit systems, Safran, Hensoldt

Elbit systems			
Key Product categories	Military Aviation	EW and SIGINT	Land Systems
Key products	<ul style="list-style-type: none"> • Magnesium teflon Viton Flares • IR Spectral flares • Advanced Tactical Air-launched decoy and target • Mini Stand-alone missile protection system • Rampage - Long range supersonic missile • MPR 500 - 500lb multi-purpose rigid GP bomb • MPR 1000/2000 - next-gen multi-purpose rigid GP bomb • Delilah - Air-launched advanced stand-off missiles 	<ul style="list-style-type: none"> • Mobile Threat simulator • Air keeper intelligence • Solid State Phased array transmitter • Immune Satellite Navigation systems • Underwater surveillance and intelligence • Naval decoy control and launch system • Multi beam radar • Foxtrack - Portable ground surveillance radar • Advanced ballistic missile solution • Miniature Relative jammer • Re-Drone - Advanced multi layered defense 	<ul style="list-style-type: none"> • MRPS - Multipurpose rifle system • M26 - Hand grenade • Unmanned and Manned Turrets UT30/MT30 • Sabrah Light tank • Remote controlled weapon stations • Combatguard - Offroad 4x4 AFV • MPV 4x4 - Tactical protection vehicle • Hound - Unmanned ground vehucle system • Ground Mortars • SPEAR - 120mm mortar • SPEAR Long range upto 10km • Cardom - Autonomous mortar system • ATHOS - 155mm/52 capiber Howitzer • ATMOS - 155mm truck mounted Howitzer • M-71 - 155mm 39 caliber tower howitzer • L70 - Low level air attacked defense
Key Competitors	Boeing, Lockheed Martin, Northrop Grumman, Raytheon, General Dynamics, BAE Systems, Collins Aerospace, L-3 Communications, Thales, Airbus, Leonardo, Saab, Harris, Textron, FLIR Systems, Orbital ATK, AeroVironment, Rohde & Schwarz, Rheinmetall, Kongsberg, Safran, Hensoldt, CMC, CAE, Aselsan, Bharat Electronics, Cubic and Verint		

Source: Company data, I-Sec research

Table 4: Financial performance and revenue breakdown tables (1/2)

Rheinmetall (EUR mn)	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Total revenues	3989	4454	4704	4,417	4,688	5,183	5,602	5,896	6,148	6,255
Revenue Growth (%)		12%	6%	-6%	6%	11%	8%	5%	4%	2%
EBITDA	411	495	465	259	226	423	509	555	723	732
EBITDA margin %	10%	11%	10%	6%	5%	8%	9%	9%	12%	12%
EBIT	278	336	278	90	77	275	343	378	494	495
EBIT margin %	7%	8%	6%	2%	2%	5%	6%	6%	8%	8%
PAT	162	213	173	29	18	151	200	224	305	335
PAT Margin (%)	4%	5%	4%	1%	0%	3%	4%	4%	5%	5%
EPS	4.23	5.55	4.55	0.76	0.47	3.88	4.69	5.24	7.1	7.77
ROE	13.9	15.9	12.5	2.2	1.5	11.6	12.6	13.0	16.2	16.2
RoC	12.3	12.9	11.2	3.9	4.1	9.1	10.1	11.1	13.4	12.0
Net debt	69	118	81	124	310	55	-37	-257	14	52
Net debt to Equity	0.05	0.08	0.06	0.09	0.26	0.04	-0.02	-0.14	0.01	0.02
Net debt to EBITDA	0.16	0.23	0.17	0.41	1.09	0.12	-0.06	-0.42	0.02	0.07
CFO	147	290	359	211	102	339	444	546	242	605
CFO/EBITDA (x)	0.4	0.6	0.8	0.8	0.5	0.8	0.9	1.0	0.3	0.8
R&D Expense	214	212	230	219	214	239	216	295	336	355
Capex	186	197	234	191	284	310	283	270	277	288
FCF	-39	93	125	20	-182	29	161	276	-35	317
Valuation metrics	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
P/E	14.2	6.2	8.0	43.6	106.6	15.8	13.6	20.2	10.9	13.2
P/B	1.8	0.9	1.0	1.4	1.2	1.8	1.6	2.6	1.6	2.1
P/CF	15.6	4.5	3.9	8.1	13.6	7.1	6.1	8.3	13.7	7.3
EV/Sales	0.6	0.4	0.3	0.4	0.4	0.5	0.5	0.7	0.6	0.7
EV/EBITDA	5.5	3.0	3.3	6.3	6.2	5.7	4.9	7.1	4.3	5.9
Defense Segment	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Sales	2007	2141	2335	2155	2240	2,591	2,946	3,036	3,221	3,522
EBIT	234	223	173	4	-67	90	147	172	247	341
EBIT margin (%)	12%	10%	7%	0%	-3%	3%	5%	6%	8%	10%
Operating result	223	212	146	60	-9	90	147	174	254	343
Operating margin (%)	11%	10%	6%	3%	0%	3%	5%	6%	8%	10%
Capex	93	102	90	62	76	96	95	89	101	166
Weapon & Ammunition	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	
Sales	1198	1136	1027	977	881	1,111	1,175	1,056	1,018	
Operating result	146	102	47	0	73	108	117	121	123	
Operating margin (%)	12%	9%	5%	0%	8%	10%	10%	11%	12%	
Electronic Systems	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	
Sales	799	748	710	705	759	745	691	839	948	
Operating result	86	97	29	1	12	25	20	46	75	
Operating margin (%)	11%	13%	4%	0%	2%	3%	3%	5%	8%	
Vehicle Systems	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	
Sales	255	567	539	667	1,195	1,392	1,480	1,568	1,787	
Operating result	-12	-25	-35	-9	-9	29	53	108	150	
Operating margin (%)	-5%	-4%	-6%	-1%	-1%	2%	4%	7%	8%	
Regional sales	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Germany	31%	30%	28%	27%	25%	26%	23%	24%	28%	31%
Rest of Europe	38%	40%	40%	38%	37%	35%	31%	31%	30%	30%
Asia	13%	12%	16%	14%	19%	21%	21%	18%	18%	17%
Rest of the World	7%	7%	6%	9%	9%	7%	13%	16%	12%	11%
North America	11%	11%	10%	11%	10%	11%	11%	11%	12%	10%

Source: Bloomberg, I-Sec research

Table 5: Financial performance and revenue breakdown tables (2/2)

Elbit Systems (EUR mn)	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Total revenues	2,670	2,818	2,889	2,925	2,958	3,108	3,260	3,378	3,684	4,508
Revenue Growth (%)		6%	3%	1%	1%	5%	5%	4%	9%	22%
EBITDA	292	209	293	323	326	343	381	405	385	423
EBITDA margin %	11%	7%	10%	11%	11%	11%	12%	12%	10%	9%
EBIT	207	116	203	239	247	269	299	319	293	322
EBIT margin %	8%	4%	7%	8%	8%	9%	9%	9%	8%	7%
PAT	183	90	168	183	171	203	232	228	209	226
PAT Margin (%)	7%	3%	6%	6%	6%	7%	7%	7%	6%	5%
EPS	4.3	2.11	3.98	4.35	4.01	4.74	5.54	5.59	4.84	5.2
ROE	20.4	9.7	17.5	16.7	14.2	15.5	16.0	14.6	11.7	11.5
RoC	14.3	6.5	11.4	11.5	10.4	11.6	12.9	12.3	9.7	8.4
Net debt	402	444	408	400	291	174	160	273	570	1,011
Net debt to Equity	0.40	0.48	0.39	0.33	0.24	0.12	0.10	0.16	0.31	0.47
Net debt to EBITDA	1.18	1.67	1.19	1.08	0.79	0.44	0.38	0.63	1.39	1.88
CFO	185	191	198	167	178	435	208	101	192	-53
CFO/EBITDA (x)	0.6	0.9	0.7	0.5	0.5	1.3	0.5	0.2	0.5	-0.1
R&D Expense	234.1	241.1	233.4	220.5	228.0	243.4	255.8	265.1	287.4	331.8
Capex	139	122	82	63	71	99	124	108	102	138
FCF	46	69	117	104	107	336	84	-7	89	-191
Valuation metrics	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
P/E	12.4	16.5	10.0	13.9	15.2	18.6	18.3	23.9	23.7	29.9
P/B	2.4	1.9	1.6	2.2	2.1	2.7	2.8	3.3	2.7	3.2
P/CF	12.3	9.2	8.5	15.3	14.6	8.7	20.9	56.5	25.5	
EV/Sales	1.0	0.8	0.7	1.0	1.0	1.3	1.4	1.8	1.5	1.8
EV/EBITDA	8.0	8.4	6.2	8.1	7.9	10.1	10.7	13.8	13.3	14.7
Segmental sales mix	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Airborne Systems	30%	34%	36%	39%	41%	39%	38%	38%	40%	36%
C4ISR systems	38%	35%	35%	37%	38%	32%	37%	34%	31%	26%
Land Systems	14%	14%	13%	11%	9%	18%	13%	15%	18%	27%
Electro-optic systems	14%	11%	11%	11%	9%	7%	8%	10%	9%	8%
Other	5%	5%	4%	3%	3%	3%	3%	3%	3%	3%
Regional sales mix	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Asia & South America	24%	24%	31%	28%	35%	37%	33%	31%	33%	29%
U.S.	32%	32%	31%	29%	28%	27%	25%	25%	27%	28%
Israel	24%	25%	18%	24%	22%	20%	22%	22%	20%	24%
Europe	20%	19%	19%	19%	16%	16%	20%	23%	20%	19%

Source: Bloomberg, I-Sec research

Table 6: Artillery DCF forecast (base case) for BHFC

Rs Mn	Stage I			Stage II						Terminal
	Mar-23	Mar-24	Mar-25	Mar-26	Mar-27	Mar-28	Mar-29	Mar-30	Mar-31	Mar-32
Sales	4,840	5,566	6,401	7,361	10,305	11,335	12,469	13,716	15,141	15,898
<i>NOPAT Margin (EBIT*(1-T))</i>	18.8%	19.0%	19.2%	19.4%	19.6%	19.8%	20.0%	20.0%	20.0%	23.0%
NOPAT	907	1,055	1,227	1,426	2,018	2,243	2,494	2,743	3,028	3,657
Working Capital	242	278	320	368	515	567	623	686	757	795
NWC/Sales	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Total WC	242	278	320	368	515	567	623	686	757	795
Capex (Net of Depreciation)	565	649	747	368	515	567	623	686	757	650
Gross Block Asset Turnover	6.0x	6.0x	6.0x	10.0x	10.0x	10.0x	10.0x	10.0x	10.0x	11.0x
FCF	101	370	438	1,010	1,356	1,625	1,814	1,995	2,200	2,211
FCF Growth Y/Y (%)		267%	19%	130%	34%	20%	12%	10%	10%	1%
Terminal Value										42,216
WACC (%)	10.5%									
PV of Stage I	619									
PV of Stage II	4,382									
PV of Terminal CF	14,098									
Total (Rs mn)	19,099									
Shares (mn)	466									
DCF Value per Share (Rs)	41									

Source: Bloomberg, I-Sec research

- Base case assumes 30% order wins, 30% supplies to non-OFB supplier

Table 7: Artillery DCF forecast (bull case) for BHFC

Rs Mn	Stage I			Stage II						Terminal
	Mar-23	Mar-24	Mar-25	Mar-26	Mar-27	Mar-28	Mar-29	Mar-30	Mar-31	Mar-32
Sales	10,240	11,776	13,542	15,573	21,803	23,983	26,381	29,019	32,035	33,957
<i>NOPAT Margin (EBIT*(1-T))</i>	18.8%	19.3%	19.8%	20.4%	20.9%	21.5%	22.0%	22.0%	22.0%	25.0%
NOPAT	1,920	2,272	2,686	3,173	4,560	5,146	5,804	6,384	7,048	8,489
Working Capital	512	589	677	779	1,090	1,199	1,319	1,451	1,602	1,698
NWC/Sales	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Total WC	512	589	677	779	1,090	1,199	1,319	1,451	1,602	1,698
Capex (Net of Depreciation)	1,195	1,374	1,580	779	1,090	1,199	1,319	1,451	1,602	1,389
Gross Block Asset Turnover	6.0x	6.0x	6.0x	10.0x	10.0x	10.0x	10.0x	10.0x	10.0x	11.0x
FCF	213	821	1,018	2,293	3,159	3,838	4,365	4,801	5,295	5,402
FCF Growth Y/Y (%)		285%	24%	125%	38%	22%	14%	10%	10%	2%
Terminal Value										127,254
WACC (%)	10.5%									
PV of Stage I	1,395									
PV of Stage II	10,378									
PV of Terminal CF	42,096									
Total (Rs mn)	53,869									
Shares (mn)	466									
DCF Value per Share (Rs)	116									

Source: Bloomberg, I-Sec research

- Bull case assumes 70% order wins, 30% supplies to non-OFB supplier

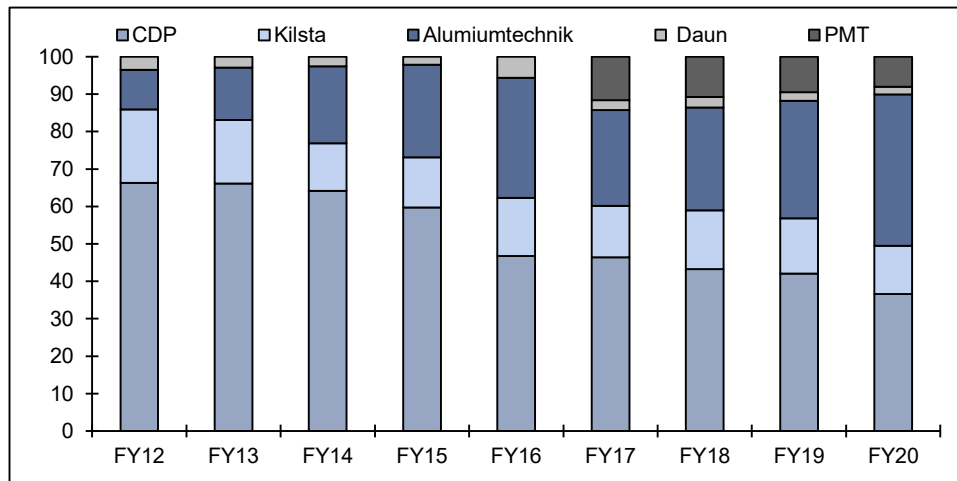
Update on overseas subsidiaries performance

Table 8: Cumulative financials across key operating overseas subsidiaries continues to slip

(Rs mn)	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Sales	21,699	21,385	26,423	21,376	24,600	22,550	29,674	33,183	26,376
Growth (YoY - %)		(1)	24	(19)	15	(8)	32	12	(11)
Raw material	13,903	13,307	15,831	13,250	15,216	12,986	18,095	21,320	18,838
% of sales	64.1	62.2	59.9	62.0	61.9	57.6	61.0	64.3	71.4
Employee costs	4,046	4,472	5,289	4,349	5,147	4,991	5,935	6,347	6,282
% of sales	18.6	20.9	20.0	20.3	20.9	22.1	20.0	19.1	23.8
Other expenses	2,418	2,424	2,952	2,491	3,050	2,768	3,430	3,461	3,204
% of sales	11.1	11.2	13.6	11.5	14.1	12.8	15.8	16.0	14.8
EBITDA	1,331	1,182	2,351	1,286	1,187	1,805	2,213	2,054	802
EBITDA Margins (%)	6.1	5.5	8.9	6.0	4.8	8.0	7.5	6.2	3.0
D&A	716	956	1,182	972	1,280	1,336	1,615	1,525	1,671
% of sales	3.3	4.5	4.5	4.5	5.2	5.9	5.4	4.6	6.3
EBIT	615	227	1,170	315	(92)	469	599	529	(869)
% of sales	2.8	1.1	4.4	1.5	(0.4)	2.1	2.0	1.6	(3.3)
PBT	252	(13)	939	145	(90)	347	444	633	(1,079)
% of sales	1.2	(0.1)	3.6	0.7	(0.4)	1.5	1.5	1.9	(4.1)
PAT	353	(76)	764	(45)	(124)	328	417	563	(1,121)
% of sales	1.6	(0.4)	2.9	(0.2)	(0.5)	1.5	1.4	1.7	(4.2)
RoCE (%)	6.7	2.3	9.1	2.5	(1.0)	4.2	5.1	3.6	-5.1

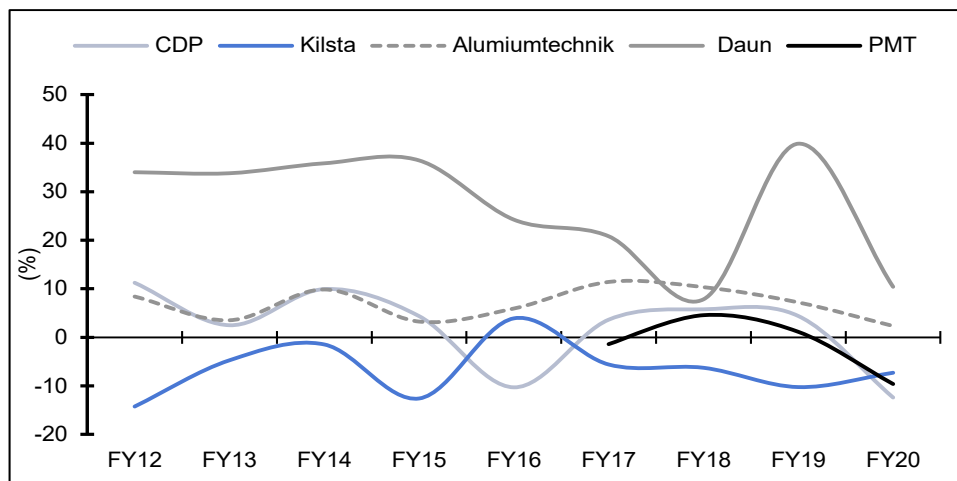
Source: Company data, I-Sec research; Key operating subsidiaries include BHFC CDP, BHFC Kilsta, BHFC Aluminiumtechnik, BHFC Daun, BHFC PMT

Chart 1: Share of capital employed across key subsidiaries



Source: Company data, I-Sec research

Chart 2: RoCE snapshot across key subsidiaries highlights the challenges



Source: Company data, I-Sec research

Table 9: Operating metrics / employee slip further, employee costs remain sticky

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	% CAGR (FY12-19)
Revenue (Rs mn/employee)										
Bharat Forge CDP + Daun	22.0	19.6	25.2	20.1	21.4	18.9	23.0	25.9	21.5	(0.3)
Growth(%)		(11)	29	(20)	6	(11)	21	13	(17)	
Bharat Forge Kilsta	19.4	20.2	23.1	20.6	22.6	19.7	22.4	22.7	21.1	1.1
Growth(%)		4	15	(11)	9	(13)	14	2	(7)	
Bharat Forge Alumiumtechnik	20.0	18.2	22.8	15.3	16.8	16.7	19.3	18.6	17.9	(1.4)
Growth(%)		(9)	26	(33)	9	(0)	15	(4)	(4)	
Gross profit (Rs mn/employee)										
Bharat Forge CDP + Daun	7.4	6.9	9.5	7.4	7.3	7.7	9.3	9.5	7.7	0.4
Growth(%)		(7)	38	(23)	(1)	6	20	2	(19)	
Bharat Forge Kilsta	8.0	9.1	11.0	8.8	10.2	9.1	9.8	8.8	8.7	1.1
Growth(%)		14	21	(21)	17	(11)	8	(11)	(1)	
Bharat Forge Alumiumtechnik	6.4	5.6	7.7	5.4	6.8	7.2	8.2	8.5	7.9	2.8
Growth(%)		(12)	39	(31)	26	7	13	3	(6)	
Employee cost (Rs mn/employee)										
Bharat Forge CDP + Daun	3.9	4.1	5.0	4.1	4.7	4.3	5.1	5.3	5.5	4.4
Growth(%)		5	22	(18)	14	(7)	17	5	3	
Bharat Forge Kilsta	4.2	4.7	5.4	4.5	4.8	4.7	5.1	4.8	4.9	1.8
Growth(%)		11	15	(16)	6	(1)	7	(5)	2	
Bharat Forge Alumiumtechnik	2.8	2.8	3.4	2.7	3.0	3.0	3.4	3.6	3.6	2.9
Growth(%)		0	19	(20)	10	(0)	14	7	(1)	
Other expenses (Rs mn/employee)										
Bharat Forge CDP + Daun	1.5	1.6	2.0	1.8	2.2	1.9	2.4	2.3	2.1	3.8
Growth(%)		7	23	(12)	22	(12)	25	(2)	(11)	
Bharat Forge Kilsta	3.7	3.6	4.4	3.9	4.3	3.9	4.5	4.1	3.7	0.0
Growth(%)		(4)	23	(12)	10	(10)	16	(8)	(10)	
Bharat Forge Alumiumtechnik	2.1	1.5	1.9	1.4	1.7	1.6	1.9	2.0	2.0	(0.3)
Growth(%)		(28)	24	(26)	20	(7)	20	9	(0)	
EBITDA (Rs mn/employee)										
Bharat Forge CDP + Daun	2.0	1.2	2.6	1.5	0.5	1.5	1.8	1.8	0.1	(29.6)
Growth(%)		(42)	117	(41)	(67)	206	21	(2)	(93)	
Bharat Forge Kilsta	0.03	0.8	1.3	0.4	1.2	0.5	0.3	(0.13)	0.11	19.1
Growth(%)		3,050	49	(69)	203	(59)	(40)	(145)	(184)	
Bharat Forge Alumiumtechnik	1.4	1.2	2.5	1.3	2.1	2.7	2.9	2.8	2.3	6.2
Growth(%)		(14)	101	(49)	68	28	9	(5)	(17)	
EBIT (Rs mn/employee)										
Bharat Forge CDP + Daun	1.4	0.4	1.6	0.7	(0.5)	0.4	0.5	0.6	(1.1)	NC
Growth(%)		(69)	267	(55)	(175)	(173)	29	26	(281)	
Bharat Forge Kilsta	(0.7)	(0.2)	(0.1)	(0.7)	0.2	(0.3)	(0.4)	(0.7)	(0.5)	NC
Growth(%)		(68)	(69)	880	(128)	(243)	29	78	(29)	
Bharat Forge Alumiumtechnik	0.8	0.3	1.6	0.5	0.7	1.3	1.3	1.2	0.6	(3.8)
Growth(%)		(58)	386	(68)	46	72	0	(7)	(52)	

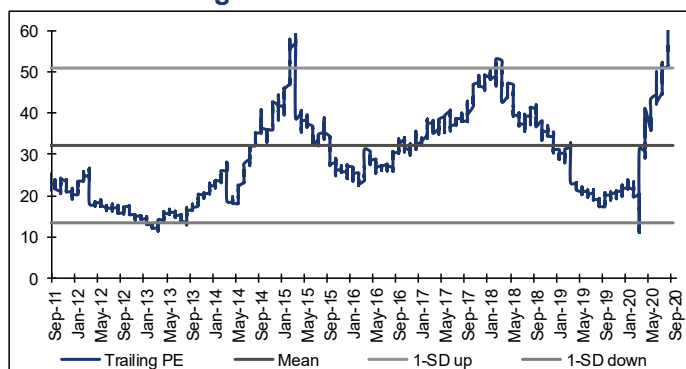
Source: Company data, I-Sec research

Outlook and valuations

Our analysis in this report suggests two things: a) Consensus is discounting bull case scenarios for defence opportunity which has yet to deliver meaningfully and b) BHFC’s execution track record in its overseas subsidiaries continues to remain weak. The overseas performance going ahead also has headwinds e.g. European truck market slowdown, and is thus likely to drag consolidated earnings/RoCEs recovery in medium term. We believe management needs to relook at continued business case in its weak European business entities which have been consistently falling short of the cost of capital hurdle rate.

The class-8 truck demand (exports) is likely to scale back >300k units by CY22; however, domestic truck market is unlikely to scale FY18 peak volumes before FY24/25. Oil & gas segment is also unlikely to recover back to FY18/19 revenue levels anytime soon. We revised our multiple to 25x (earlier: 27x) Sep’22E EPS (roll forward), add Rs41/share fair value (DCF basis) of defence business to arrive at fair value of Rs412. We upgrade our rating to REDUCE from Sell.

Chart 3: Trailing P/E



Source: I-Sec research, 12m trailing data

Chart 4: Trailing P/B



Source: I-Sec research, 12m trailing data

Table 10: Earnings revision

	FY21E			FY22E			FY23E
	Previous	New	Chg (%)	Previous	New	Chg (%)	Introduced
Sales	60,784	61,442	1.1	78,471	79,325	1.1	95,455
EBITDA	6,881	7,002	1.8	12,034	12,023	(0.1)	17,099
PAT	749	888	18.6	5,807	5,009	(13.7)	8,790
EPS (Rs)	1.6	1.9	18.6	12.5	10.8	(13.7)	18.9

Source: Company data, I-Sec research

Financial summary (consolidated)

Table 11: Profit and loss statement
(Rs mn, year ending March 31)

	FY20	FY21E	FY22E	FY23E
Total Op. Income (Sales)	80,558	61,442	79,325	95,455
Operating Expenses	69,410	54,441	67,301	78,356
EBITDA	11,148	7,002	12,023	17,099
% margins	13.8%	11.4%	15.2%	17.9%
Depreciation & Amortisation	5,477	5,538	5,733	5,993
EBIT	5,671	1,463	6,290	11,105
Other Income	1,879	1,287	1,718	1,860
Gross Interest	1,713	1,468	1,549	1,530
PBT	5,837	1,283	6,459	11,434
Less: Exceptionals	789	-	-	-
PBT after Exceptionals	5,047	1,283	6,459	11,434
Less: Taxes	1,218	318	1,550	2,744
Less: Minority Interest	0	0	0	0
Add: Profit from Associates	-429	-76	100	100
Less: Discontinued operations	0	0	0	0
Net Income (Reported)	3,400	888	5,009	8,790
Net Income (Adjusted)	3,999	888	5,009	8,790

Source: Company data, I-Sec research

Table 12: Balance sheet
(Rs mn, year ending March 31)

	FY20	FY21E	FY22E	FY23E
ASSETS				
Current Assets	42,631	36,901	50,090	48,177
Cash & cash eqv.	5,756	10,745	8,878	7,903
Current Liabilities & Provisions	20,426	11,749	24,699	21,053
Net Current Assets	22,206	25,151	25,391	27,124
Investments	14,970	16,970	19,970	22,970
Goodwill	368	368	368	368
Net Fixed Assets	51,072	48,034	45,800	44,307
Capital Work-in-Progress	11,426	11,426	11,426	11,426
Long term loans & advances	609	1,474	1,968	3,079
Deferred Tax Assets	800	800	800	800
Other non-current asset	5,650	5,650	5,650	5,650
Total Assets	95,675	98,447	99,947	1,04,297
LIABILITIES				
Borrowings	38,788	40,788	37,788	34,788
long-term borrowings	18,745	20,745	20,745	20,745
short-term borrowings	20,043	20,043	17,043	14,043
Long-term provisions	1,722	1,722	1,722	1,722
Deferred Tax Liability	2,202	2,202	2,202	2,202
Other Non-current Liabilities	445	445	445	445
Minority Interest	319	319	319	319
Equity Share Capital	931	931	931	931
Reserves & Surplus	51,267	52,038	56,538	63,889
Net Worth	52,198	52,970	57,470	64,820
Total Liabilities	95,675	98,447	99,947	1,04,297

Source: Company data, I-Sec research

Table 13: 5-stage du-pont
(year ending March 31)

All figures in %	FY20	FY21E	FY22E	FY23E
Tax Burden	67.4	69.2	77.5	76.9
Interest Burden	89.0	87.7	102.7	103.0
EBIT Margin	7.4	2.5	8.4	12.3
Asset Turnover	79.7	59.2	75.2	86.8
Financial Leverage	183.3	185.9	173.9	160.9
ROE	6.5	1.7	8.7	13.6

Source: Company data, I-Sec research

Table 14: Cashflow statement
(Rs mn, year ending March 31)

	FY20	FY21E	FY22E	FY23E
Cashflow before working capital changes	8,877	6,427	10,742	14,783
Working Capital Changes	8,639	2,043	(2,106)	(2,709)
Operating Cashflow	17,517	8,470	8,636	12,075
Capital Commitments	(12,398)	(2,500)	(3,500)	(4,500)
Free Cashflow	5,119	5,970	5,136	7,575
Cashflow from Investing Activities	(13,721)	(5,364)	(6,994)	(8,611)
Issue of Share Capital	-	-	-	-
Inc/(Dec) in securities premium	-	-	-	-
Buyback of shares	-	-	-	-
Inc/(Dec) in Borrowings	1,060	2,000	(3,000)	(3,000)
Dividend paid	(1,117)	(233)	(1,397)	(2,328)
Others	(2,739)	116	888	888
Cashflow from Financing Activities	(2,796)	1,883	(3,509)	(4,440)
Net Cashflow	999	4,989	(1,867)	(975)
Closing Cash & Bank balance	5,756	10,745	8,878	7,903

Source: Company data, I-Sec research

Table 15: Key ratios
(Year ending March 31)

	FY20	FY21E	FY22E	FY23E
Per Share Data (in Rs.)				
EPS (Basic)	8.6	1.9	10.8	18.9
EPS (Adjusted)	7.3	1.9	10.8	18.9
Cash EPS	9.5	6.9	11.5	15.9
Dividend per share (DPS)	2.0	0.5	3.0	5.0
BVPS (Adjusted)	56	57	62	70
Growth Ratios (%)				
Total Op. Income (Sales)	-20.6	-23.7	29.1	20.3
EBITDA	-45.8	-37.2	71.7	42.2
Net Income (Adjusted)	-61.3	-77.8	463.9	75.5
EPS (Adjusted)	-61.3	-77.8	463.9	75.5
Cash EPS	-42.9	-27.6	67.1	37.6
BVPS (Adjusted)	-0.9	1.5	8.5	12.8
Valuation Ratios (x)				
P/E (Adjusted)	52.2	234.8	41.6	23.7
P/BV (Adjusted)	4.0	3.9	3.6	3.2
EV/EBITDA	20.7	32.3	18.4	12.7
EV/Sales	2.9	3.7	2.8	2.3
Return/Profitability Ratios (%)				
EBITDA Margin	13.8	11.4	15.2	17.9
Net Income Margin (Adjusted)	4.2	1.4	6.3	9.2
RoCE	6.2	1.6	6.6	11.1
RoNW	6.5	1.7	8.7	13.6
Dividend Payout Ratio	27.4	26.2	27.9	26.5
Dividend Yield	0.4	0.1	0.7	1.1

Solvency/Wkg. Cap. Ratios (x)

Net D/E	0.4	0.3	0.2	0.1
Debt/EBITDA	3.5	5.8	3.1	2.0
EBIT/Interest	3.3	1.0	4.1	7.3
Current Ratio	2.1	3.1	2.0	2.3
Quick Ratio	1.8	2.2	1.7	1.9
Inventory (days)	86	85	70	70
Receivables (days)	72	76	72	72
Payables (days)	52	53	57	57

Source: Company data, I-Sec research

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