

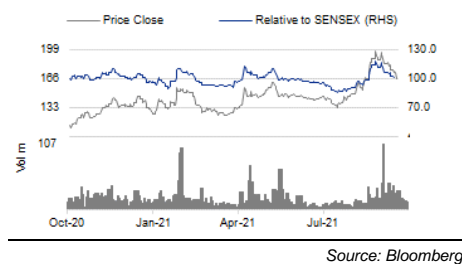
India

ADD (previously **REDUCE**)

Consensus ratings*:	Buy 21	Hold 4	Sell 3
Current price:	Rs171		
Target price:	Rs233 ▲		
Previous target:	Rs149		
Up/downside:	36.3%		
InCred Research / Consensus:	20.2%		
Reuters:	COAL.NS		
Bloomberg:	COAL IN		
Market cap:	US\$14,054m		
	Rs1,052,286m		
Average daily turnover:	US\$37.6m		
	Rs2814.5m		
Current shares o/s:	6,162.7m		
Free float:	33.9%		
*Source: Bloomberg			

Key changes in this note

- FY23F EPS increased by 134%.
- FY24F EPS increased by 87.3%.



Price performance	1M	3M	12M
Absolute (%)	(9.5)	19.2	49.5
Relative (%)	(11.6)	4.9	(1.2)

Major shareholders	% held
Promoter & Promoter Group	66.1
HDFC Trustee Company Ltd	4.1
CPSE Exchange Traded Scheme	2.6

Analyst(s)

Satish KUMAR
T (91) 22 4161 1562
E satish.kumar@incredcapital.com

Shaily RUPARELIA
T (91) 22 4161 1556
E shaily.ruparelia@incredcapital.com

Coal India

E-auction benefits likely to accrue again

- The recent energy crisis and the lack of mining investments because of ESG concerns makes us believe that coal prices can remain strong in medium-term
- Even after taking IEA's aggressive coal consumption fall projection, we project very thin surplus in global market in CY23F and a deficit in CY24/25F.
- E-auction prices are set to rise again. We upgrade FY23F and FY24F EPS by 134% and 87.3%, respectively. Upgrade stock to ADD with TP of Rs233/share.

Lack of global coal mining investment is leading to shortages

Reluctance of banks to lend, pressure from investors and projection of a bleak future by international agencies like the International Energy Agency (IEA) has led to suboptimal investment in mining assets over the last few years. Lack of investment has led to a decline in coal grades, rise in operational expenses and overall decline in production. Investors are forcing companies to dividend out the cashflows, further exacerbating the lack of capex. As per IEA, as of now, the world has only 40-45mt of more advanced coal projects (which can yield production in one-or two-years' time frame). The whole bear thesis (ours now as well as in the past) was based on a rapid shift from coal to renewables, but unfortunately that's not happening. Coal consumption in terms of exa-joules fell at a -0.9% CAGR over the last five years compared to overall energy consumption growth at 0.44% CAGR, but over the last couple of years production has lagged consumption by 100bp. We see a shortage of coal in the near to medium-term which will lead to sustained high coal prices. Coal India Ltd (CIL) likely to benefit from its E-auction realizations, in our view.

Cost likely to rise but will be compensated by FSA and E-auction

After every wage negotiation, CIL used to raise Fuel Supply Agreement or FSA coal prices and customers used to accept it as the cost gets passed on to end-consumers. We expect the same to happen this time around as well and adding to it is the benefit of high E-auction prices. While import parity prices of CIL's E-auction grade coal (at international prices of US\$70/t, current price of the same grade coal is US\$100/t) works out to Rs4,350/t, we are working with Rs2,500/t assumption for FY23F and Rs2,700/t for FY24F.

Upgrade rating on the stock to ADD with a TP of Rs233/share

We value CIL stock at 4x FY23F EV/EBITDA, which is in line with current trading multiples. We also upgrade our FY23F and FY24F EPS by 134% and 87.3% to Rs30.43/share and Rs 31.28/share, respectively. Downside risk to our hypothesis emanates from any big slowdown in global economy which will reduce power demand, and thereby coal consumption.

Financial Summary

	Mar-20A	Mar-21A	Mar-22F	Mar-23F	Mar-24F
Revenue (Rsm)	960,803	900,260	1,025,324	1,217,863	1,299,064
Operating EBITDA (Rsm)	219,209	185,734	205,079	269,629	275,397
Net Profit (Rsm)	167,003	127,022	140,589	187,848	193,122
Core EPS (Rs)	27.1	20.6	22.8	30.5	31.3
Core EPS Growth	(4.0%)	(23.9%)	10.7%	33.6%	2.8%
FD Core P/E (x)	6.30	8.28	7.48	5.60	5.45
DPS (Rs)	12.0	12.5	12.5	12.5	12.5
Dividend Yield	9.20%	7.32%	7.32%	7.32%	7.32%
EV/EBITDA (x)	3.72	4.75	3.63	2.14	1.52
P/FCFE (x)	15.57	10.17	3.94	4.17	4.37
Net Gearing	(67.9%)	(40.8%)	(67.8%)	(85.0%)	(93.8%)
P/BV (x)	3.27	2.88	2.45	1.95	1.60
ROE	57.0%	37.0%	35.4%	38.8%	32.3%
% Change In Core EPS Estimates			53.11%	134.47%	87.65%
InCred Research/Consensus EPS (x)			0.95	1.18	1.19

SOURCES: INCRED RESEARCH, COMPANY REPORTS

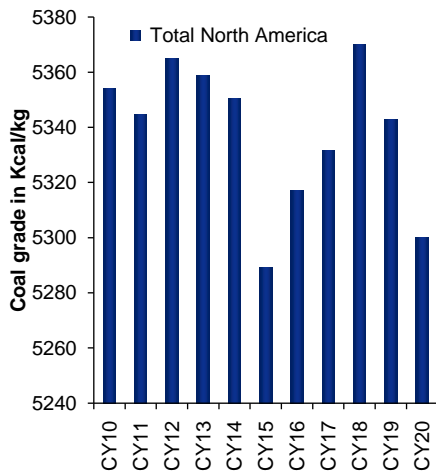
E-auction benefits likely to accrue again

Coal shortage in sight

Major economies are witnessing coal grade declining. By coal grade, we mean GCV (Gross Calorific Value) in Kcal/kg. The declining coal grade means that for the same amount of energy input, extra tonnage of coal is needed. Even with very aggressive demand cut projections, lack of mining investments will ensure that thermal coal will remain in short supply.

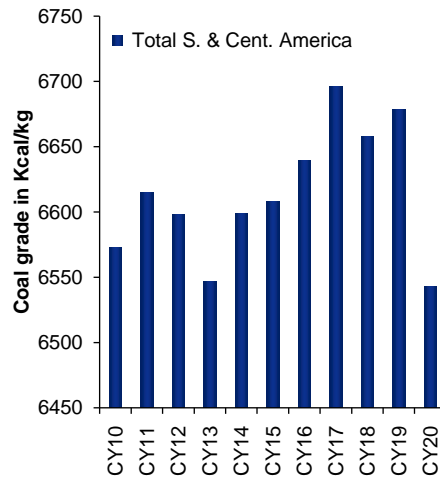
Almost all major economies barring China are witnessing a decline in coal grade ➤

Figure 1: Lack of mining investment is leading to a decline in coal grades in North America



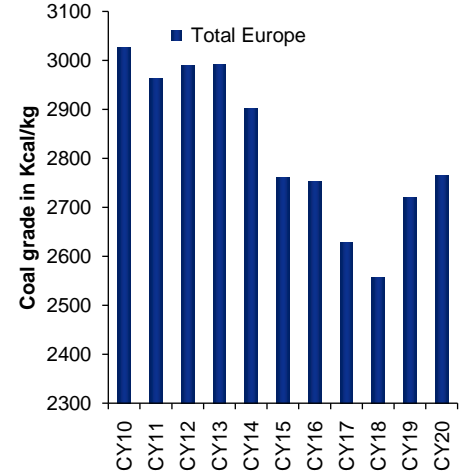
SOURCES: BP ENERGY STATISTICS, INCRED RESEARCH

Figure 2: Similarly, south and central America is also witnessing a decline



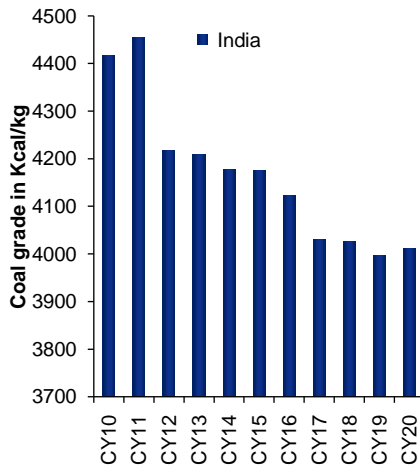
SOURCES: BP ENERGY STATISTICS, INCRED RESEARCH

Figure 3: Europe is also a part of this global trend as mining investment is lacking there as well



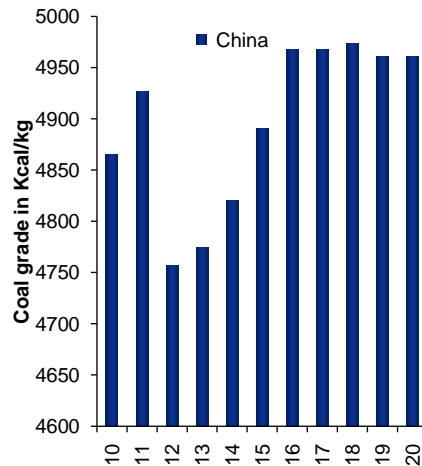
SOURCES: BP ENERGY STATISTICS, INCRED RESEARCH

Figure 4: Indian average coal grade has declined by 9% over the last decade



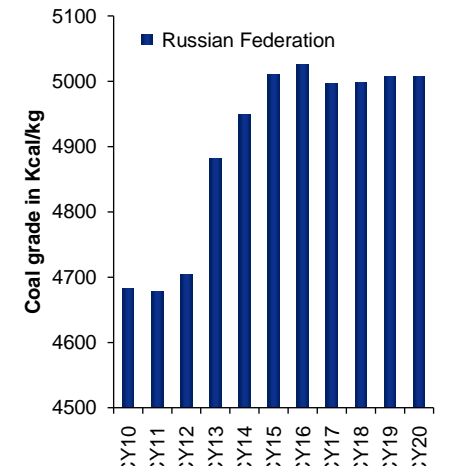
SOURCES: BP ENERGY STATISTICS, INCRED RESEARCH

Figure 5: Chinese coal grade remains constant



SOURCES: BP ENERGY STATISTICS, INCRED RESEARCH

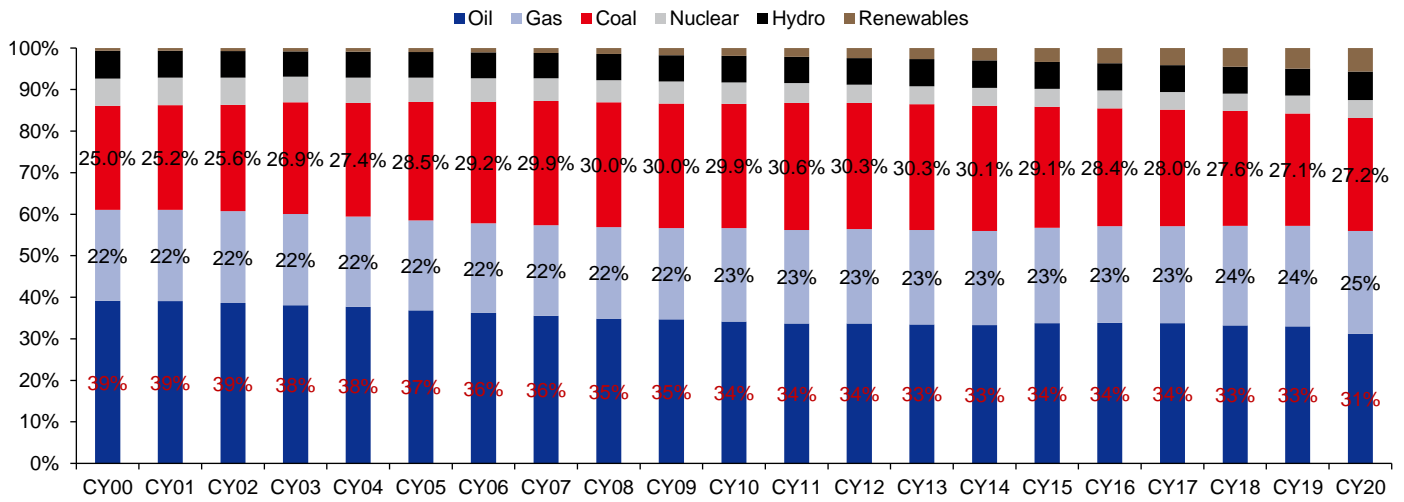
Figure 6: Russian coal grade has improved by ~7% over last decade



SOURCES: BP ENERGY STATISTICS, INCRED RESEARCH

Coal is losing its market share very slowly ▶

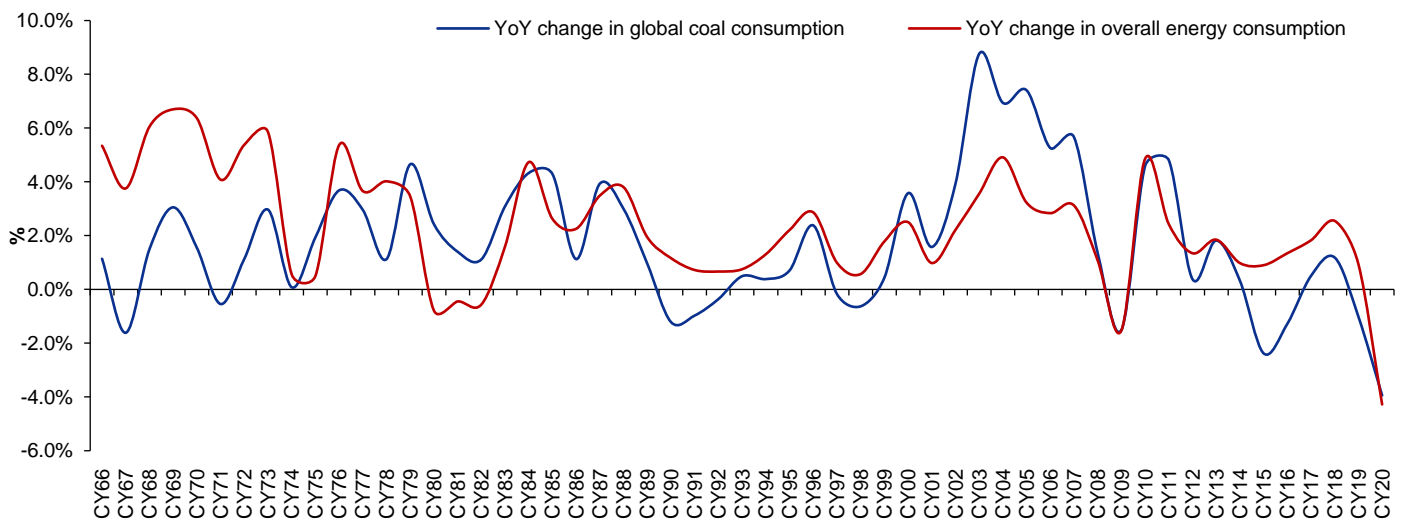
Figure 7: Coal share declined by 280bp over the last decade, barring CY20 (where mobility was challenged) oil doggedly accounts for around 33-34% of the total global energy consumption pie



SOURCES: INCRED RESEARCH, COMPANY REPORTS

The absolute decline in coal consumption is also very tepid ▶

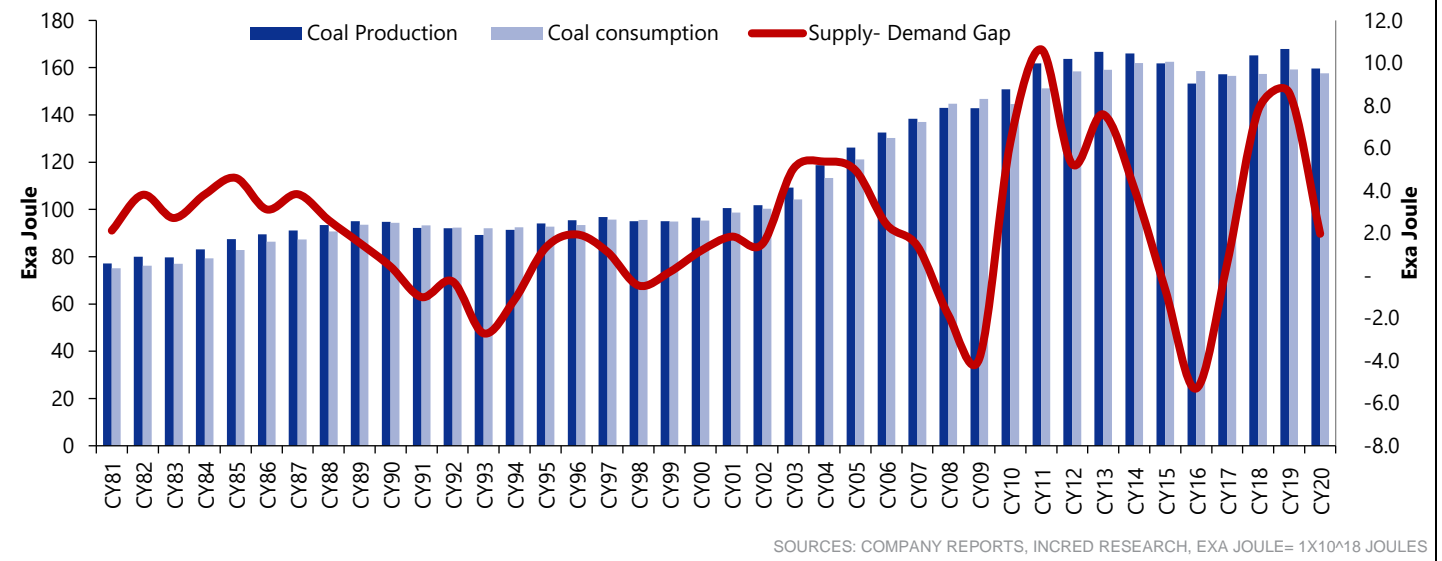
Figure 8: Absolute decline in coal consumption is tepid



SOURCES: INCRED RESEARCH, COMPANY REPORTS

Consequently, global demand-supply balance in terms of energy contained in coal, is getting tighter >

Figure 9: Global demand-supply balance is getting tighter, mining needs new investments and that too, at a rapid pace



Renewables are not picking up fast in global context >

Figure 10: Growth in renewable power has been exponential, but it still forms only 10% of global power requirement

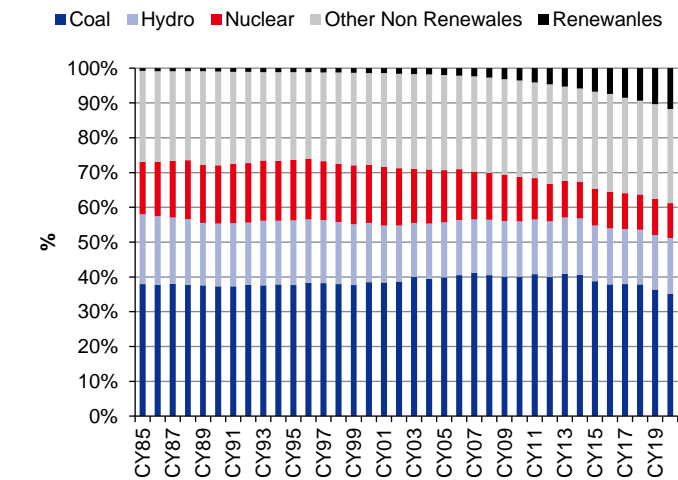
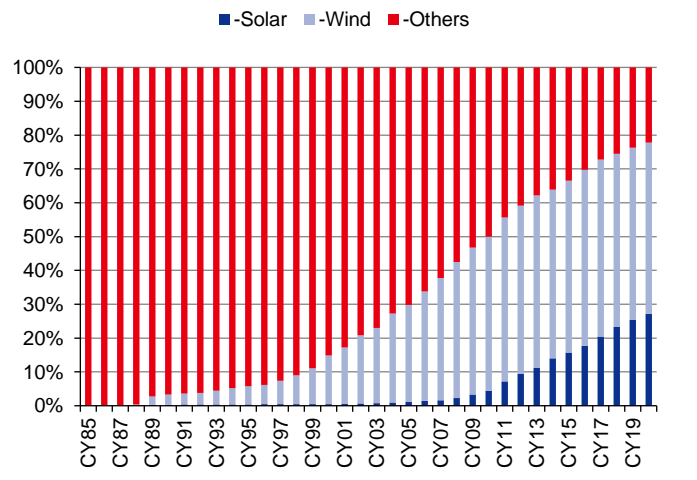


Figure 11: Among renewables, solar energy has immense potential and now forms approximately 30% of the overall renewable power (from nearly 0% in CY00)

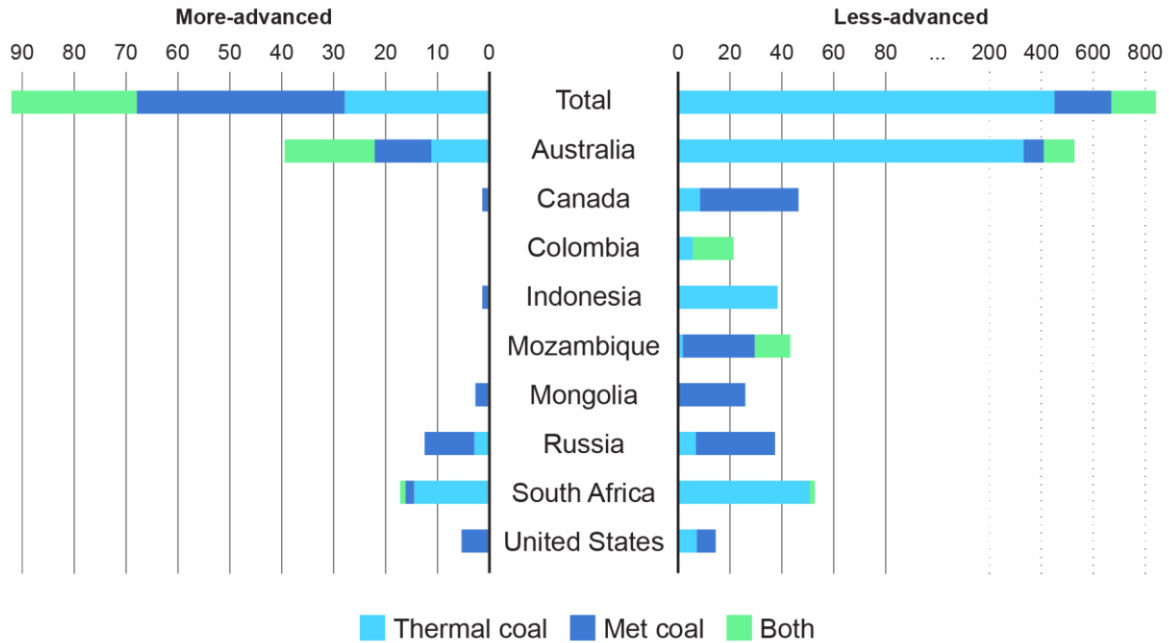


New coal projects are not coming up in the same proportion ▶

Figure 12: New coal projects are few and far in between

More-advanced coal mining projects are in Australia, Russia and South Africa

Capacity of hard coal export mining projects by country and coal grade (Mtpa)



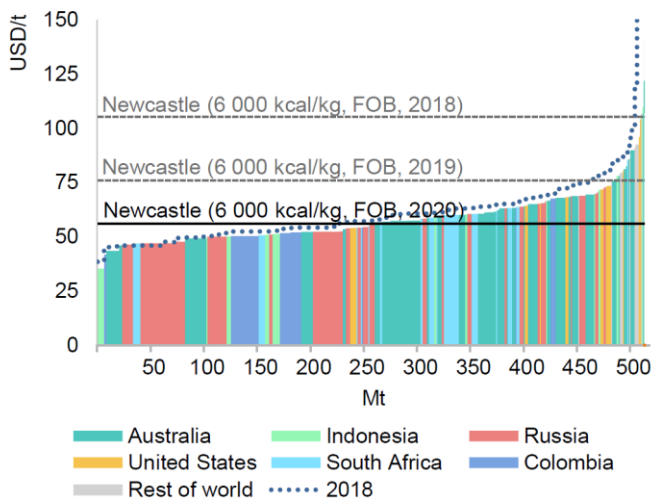
IEA 2020. All rights reserved.

SOURCES: INCRED RESEARCH, IEA

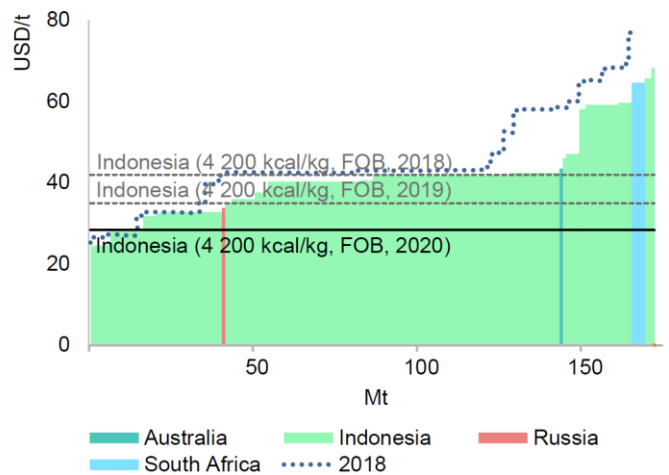
Cost of production is increasing for both thermal energy and coking coal ▶

Figure 13: The cost of production is increasing across the board as mining grades are declining and lack of new investment is making operational costs higher

Indicative high calorific (> 5 700 kcal/kg) thermal coal FOB supply curve 2019 and average FOB marker prices



Indicative low calorific (< 4 500 kcal/kg) thermal coal FOB supply curve 2019 and average FOB marker prices



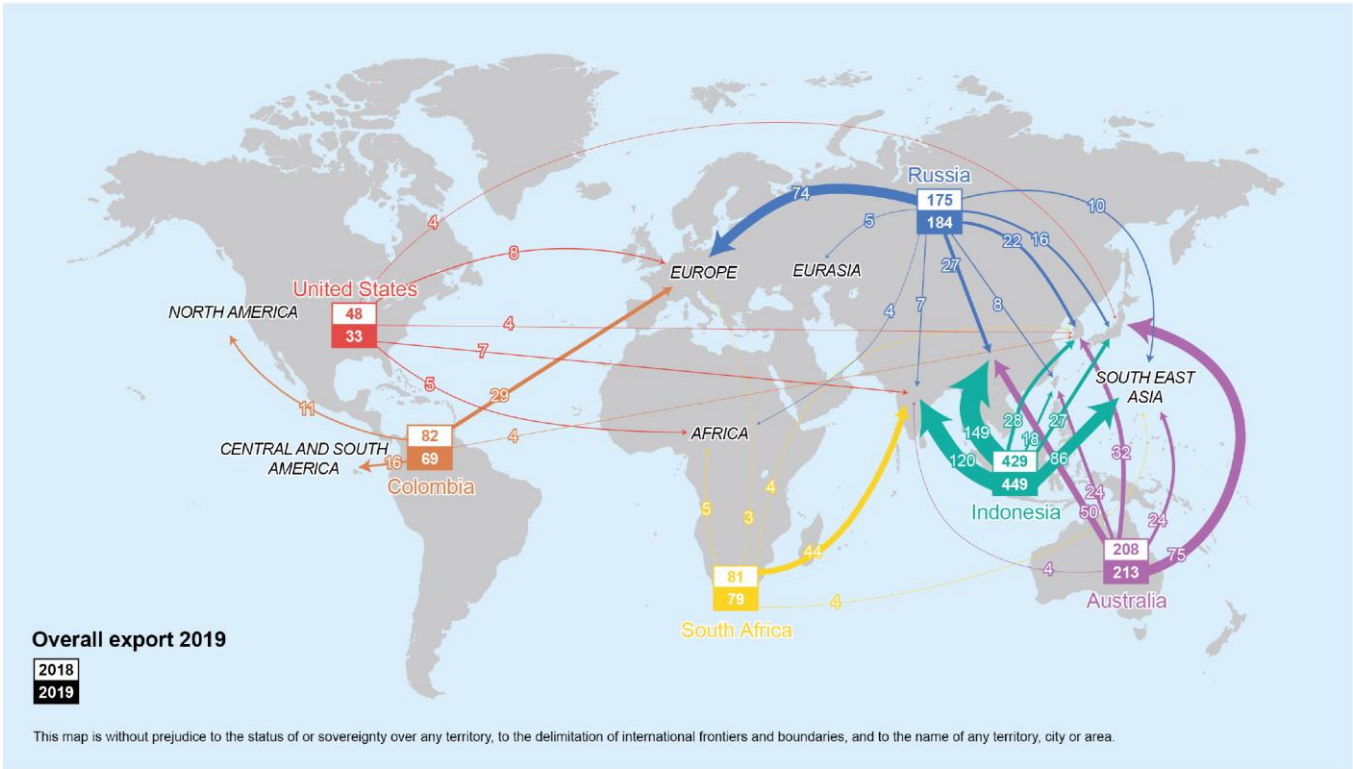
IEA 2020. All rights reserved.

SOURCES: INCRED RESEARCH, COMPANY REPORTS

The trade patterns of coal makes it highly vulnerable in case of global supply chain shock ➤

Figure 14: Given the quantum of trade in thermal coal, it's easy to visualize the havoc any supply chain problem can create to coal supply, and thereby on its prices

Main trade flows in the thermal coal market, 2019 (Mt)

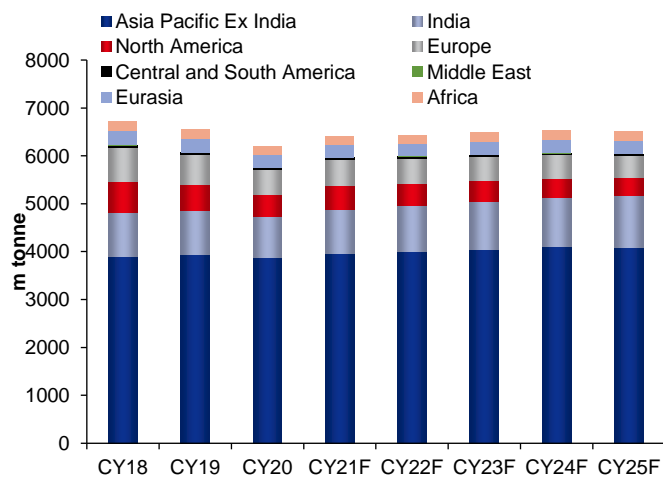


IEA 2020. All rights reserved.

SOURCES: INCRED RESEARCH, COMPANY REPORTS

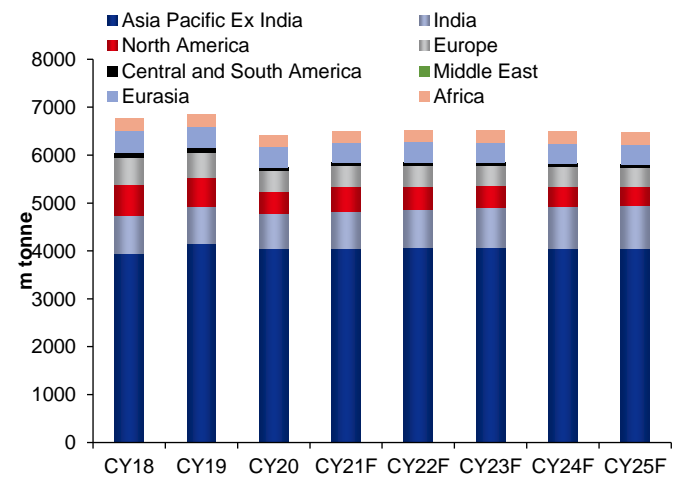
Global demand-supply, to a large extent, is dependent on Indian production ramp up ➤

Figure 15: Indian coal demand is unlikely to decline soon



SOURCES: INCRED RESEARCH, COMPANY REPORTS

Figure 16: However, India's inability to ramp up supply is a major constraint



SOURCES: INCRED RESEARCH, COMPANY REPORTS

Figure 17: The table below (figures in green) give the demand-supply balance in global market vis-à-vis Indian production and demand

		Indian Coal Production							
		-45.07	850	875	900	925	950	975	1000
Indian coal demand	1000	-19	6	31	56	81	106	131	
	1025	-44	-19	6	31	56	81	106	
	1050	-69	-44	-19	6	31	56	81	
	1075	-94	-69	-44	-19	6	31	56	
	1100	-119	-94	-69	-44	-19	6	31	
	1125	-144	-119	-94	-69	-44	-19	6	
	1150	-169	-144	-119	-94	-69	-44	-19	
	1175	-194	-169	-144	-119	-94	-69	-44	

SOURCES: INCRED RESEARCH, COMPANY REPORTS

The joker in the pack is Chinese and European coal demand ➤

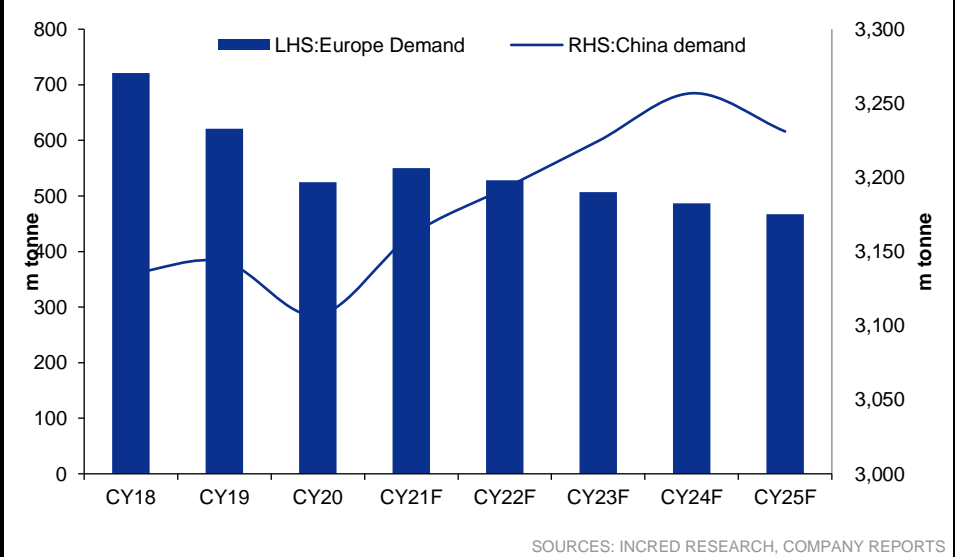
We are going with the IEA’s forecast of a decline in European coal demand by 36% as at CY25F-end over CY18. However, given the recent energy crisis, this looks far-fetched. The shortage sensitivity with different coal demand situations in Europe and China is given in table below

Figure 18: Coal shortage can be severe in CY25F if European coal demand doesn’t decline to 460mt by CY25F

		European coal demand (million tonne)							
		-45.07	400	450	500	550	600	650	700
China coal demand (million tonnes)	3000	253.1	203.1	153.1	103.1	53.1	3.1	-46.9	
	3050	203.1	153.1	103.1	53.1	3.1	-46.9	-96.9	
	3100	153.1	103.1	53.1	3.1	-46.9	-96.9	-146.9	
	3150	103.1	53.1	3.1	-46.9	-96.9	-146.9	-196.9	
	3200	53.1	3.1	-46.9	-96.9	-146.9	-196.9	-246.9	
	3250	3.1	-46.9	-96.9	-146.9	-196.9	-246.9	-296.9	
	3300	-46.9	-96.9	-146.9	-196.9	-246.9	-296.9	-346.9	
	3350	-96.9	-146.9	-196.9	-246.9	-296.9	-346.9	-396.9	

SOURCES: IEA, INCRED RESEARCH

Figure 19: We are projecting a significant decline in European and Chinese coal demand, which is a leap of faith given current energy shortage



Coal India to benefit as E-auction prices will go up

While CIL will ramp up production, India will remain an importer of coal. Rising international coal prices will lead to higher E-auction prices. We also estimate a rise in wage costs. CIL will be able to take escalation in FSA coal prices. We increase our EPS estimates for FY23F and FY24F by 181.8% and 141.5% to Rs36.63 and Rs41.50, respectively.

Driven by international prices, E-auction prices are slated to go up ➤

E-auction realisations are directly linked to international coal prices as CIL aims to reduce imports by providing an alternative to imported coal for industry as such. As we believe thermal coal (6,000 Kcal/kg grade) prices will remain strong, CIL's average grade of 4,000 kcal/kg is likely to remain above Rs3,500/t. The costing of E-auction is shown below.

Figure 20: At US\$70/t (against current prices of US\$100/t) the landed cost of coal works out to be Rs8,767/t

	Value	Unit
International coal prices	70.00	US\$/tonne
Freight charges	15.00	US\$/tonne
Unloading charges	2.00	US\$/tonne
CIF Value of Imports	87.00	US\$/tonne
India import duty	5%	
Landed cost	91.35	US\$/tonne
GST	4.57	US\$/tonne
GST compensation tax	5.33	US\$/tonne
Internal freight	20.00	US\$/tonne
Landed cost	116.90	US\$/tonne
Landed cost in Rs/tonne	8,767.56	Rs/tonne

SOURCES: INCRED RESEARCH, COMPANY REPORTS

Figure 21: The comparable price for E-auction coal works out to Rs4,373/t

	Value	Unit
Coal India E-auction prices	4,373.65	Rs/tonne
Royalty	612.31	Rs/tonne
DMF and other charges	214.31	Rs/tonne
GST	249.30	Rs/tonne
GST compensation	400.00	Rs/tonne
Road taxes	50.00	Rs/tonne
Overall Cost	5,899.57	Rs/tonne
Internal freight	2,500.00	Rs/tonne
Wastage	167.99	Rs/tonne
Loading unloading charges	200.00	Rs/tonne
Landed cost	8,767.56	Rs/tonne

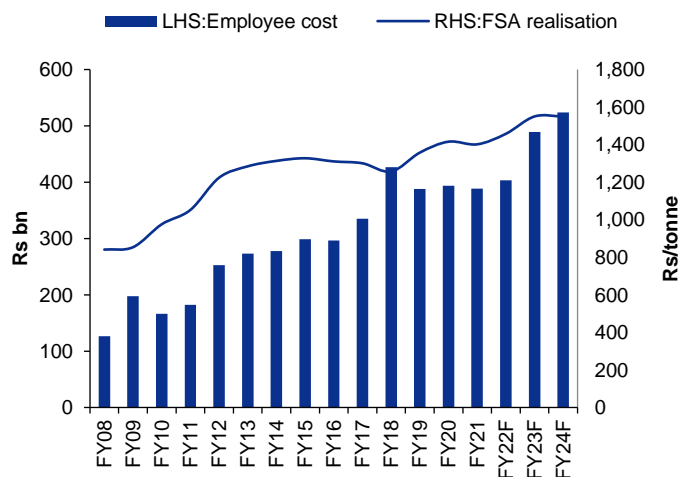
SOURCES: INCRED RESEARCH, COMPANY REPORTS

We have made the following assumptions in costing:

- While current comparable grade prices are US\$100/t, we have worked with US\$70/t assumption.
- We have assumed that imported coal will be used by power plants and user industries which are near to the port, and hence freight costs will be lower compared to E-auction coal.

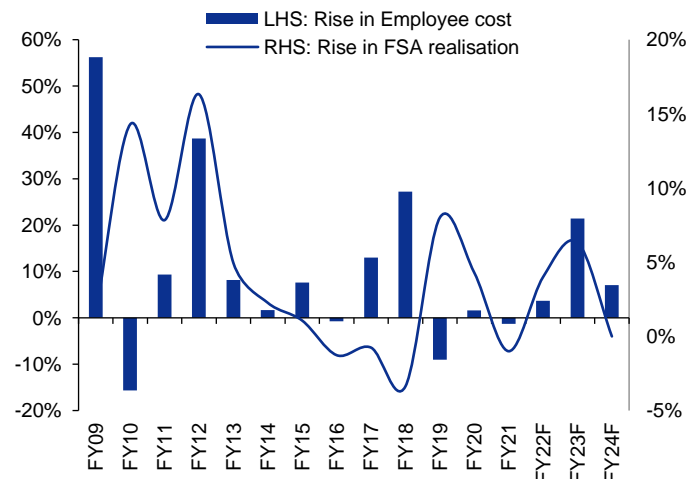
Staff cost is a major concerns for investors, but the rise in this cost will compensated by rise in FSA ➤

Figure 22: Normally, company has been able to pass on the rise in employee costs in the form of higher FSA realisation



SOURCES: INCRED RESEARCH, COMPANY REPORTS

Figure 23: Historically, the rise in staff cost has always led to a rise in FSA prices



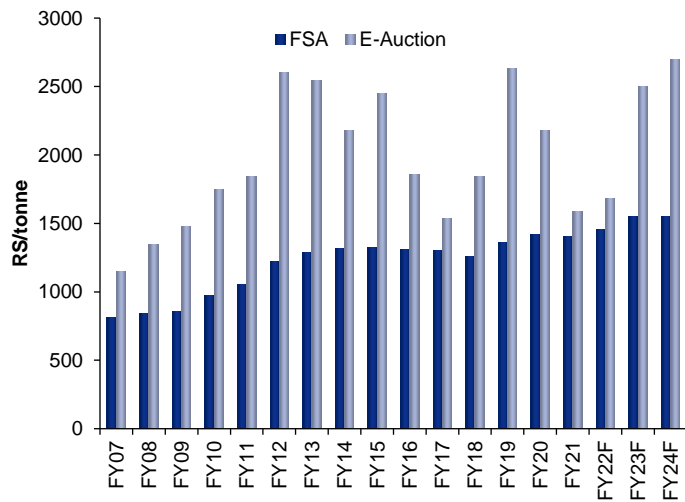
SOURCES: INCRED RESEARCH, COMPANY REPORTS

Don't BUY Coal India for volume growth but for the rise in realisation ➤

Coal India has been a serial disappointment in volume growth. We won't bet on volume growth delivery by Coal India. E-auction is an indirect way to play on higher coal prices as well inefficiency of Coal India in raising its production.

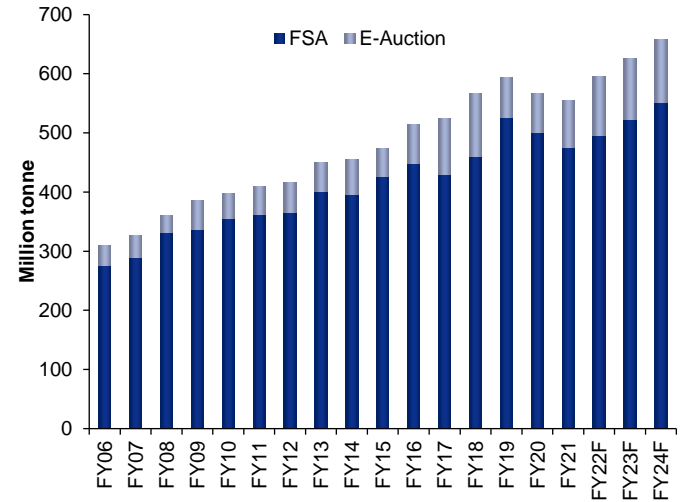
We model Rs2,500/t in E-auction for FY23F and Rs2,700 in FY24F >

Figure 24: Our assumption for E-auction price is near to highs touched in FY13/F14 as well as in FY19



SOURCES: INCRED RESEARCH, COMPANY REPORTS

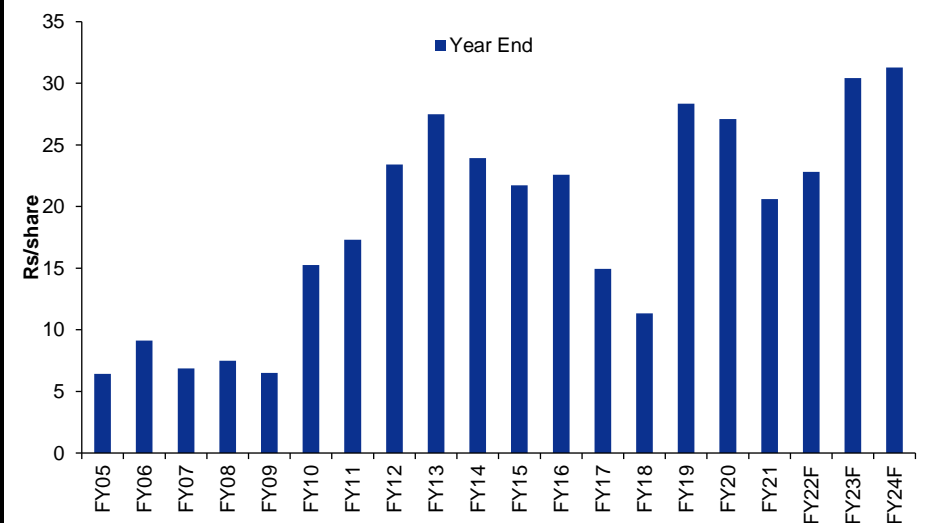
Figure 25: The volume of E-action will like rise only marginally, but a major portion of the increase will come from a rise in realisations



SOURCES: INCRED RESEARCH, COMPANY REPORTS

We increase our EPS estimates for FY23F/and FY24F by 134.1% and 87.3%, respectively >

Figure 26: After a dip in FY21, EPS growth is likely to be back on track



SOURCES: COMPANY REPORTS, INCRED RESEARCH

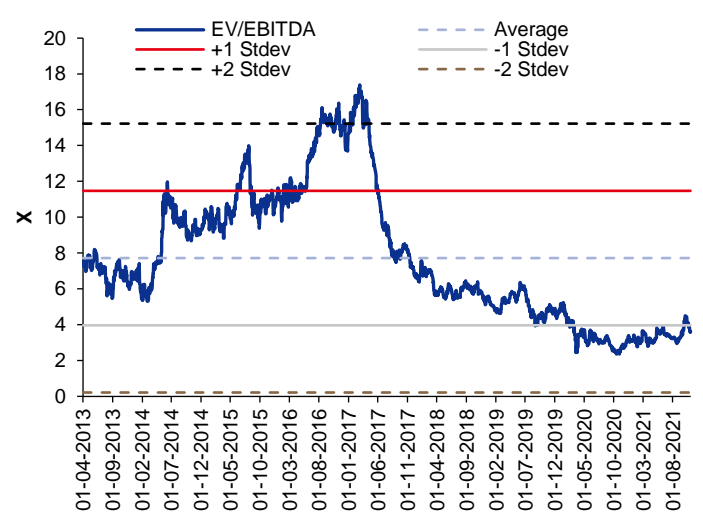
We value Coal India at its historical average trading multiple of 4X EV/EBITDA to arrive at Rs233/share as a fair value ►

Figure 27: We value Coal India at 4X EV/EBITDA to arrive at a fair value of Rs233/share

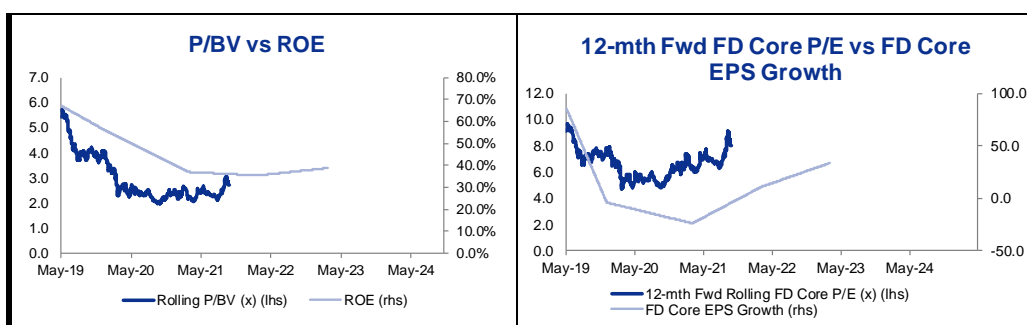
	Value	Unit
FY23F EBITDA	2,69,629	Rs m
FY24F EBITDA	2,75,397	Rs m
12 Months Forward EBITDA	2,72,513	Rs m
EV/EBITDA Multiple	4.00	X
Enterprise Value	10,90,052	Rs m
Cash	3,48,091	Rs m
Equity value	14,38,143	Rs m
Value Per share	233	Rs/ Share

SOURCES: INCRED RESEARCH, COMPANY REPORTS

Figure 28: Coal India has been de-rated and currently trades at 4x EV/EBITDA



SOURCES: INCRED RESEARCH, COMPANY REPORTS

BY THE NUMBERS

Profit & Loss

(Rs mn)	Mar-20A	Mar-21A	Mar-22F	Mar-23F	Mar-24F
Total Net Revenues	960,803	900,260	1,025,324	1,217,863	1,299,064
Gross Profit	899,967	845,096	945,388	1,131,413	1,205,568
Operating EBITDA	219,209	185,734	205,079	269,629	275,397
Depreciation And Amortisation	(34,508)	(37,089)	(43,154)	(49,440)	(56,057)
Operating EBIT	184,700	148,645	161,925	220,189	219,340
Financial Income/(Expense)	(5,029)	(6,447)	(6,447)	(6,739)	(6,739)
Pretax Income/(Loss) from Assoc.	(12)	(30)			
Non-Operating Income/(Expense)	61,054	37,924	43,836	52,864	61,191
Profit Before Tax (pre-EI)	240,713	180,092	199,314	266,314	273,791
Exceptional Items					
Pre-tax Profit	240,713	180,092	199,314	266,314	273,791
Taxation	(73,710)	(53,071)	(58,725)	(78,466)	(80,669)
Exceptional Income - post-tax					
Profit After Tax	167,003	127,022	140,589	187,848	193,122
Minority Interests					
Preferred Dividends					
FX Gain/(Loss) - post tax					
Other Adjustments - post-tax					
Net Profit	167,003	127,022	140,589	187,848	193,122
Recurring Net Profit	167,003	127,022	140,589	187,848	193,122
Fully Diluted Recurring Net Profit	167,003	127,022	140,589	187,848	193,122

Cash Flow

(Rs mn)	Mar-20A	Mar-21A	Mar-22F	Mar-23F	Mar-24F
EBITDA	219,209	185,734	205,079	269,629	275,397
Cash Flow from Invt. & Assoc.					
Change In Working Capital	(123,268)	(56,552)	70,081	33,667	9,547
(Incr)/Decr in Total Provisions					
Other Non-Cash (Income)/Expense	(52,589)	(20,096)	(58,355)	(47,980)	(60,960)
Other Operating Cashflow	122,606	59,589	122,055	141,477	155,995
Net Interest (Paid)/Received	(5,029)	(6,447)	(6,447)	(6,739)	(6,739)
Tax Paid	(119,463)	(56,630)	(58,725)	(78,466)	(80,669)
Cashflow From Operations	41,465	105,599	273,687	311,588	292,570
Capex	(56,445)	(108,525)	(85,079)	(100,000)	(100,000)
Disposals Of FAs/subsidiaries					
Acq. Of Subsidiaries/investments	24,871	86,578	39,774		
Other Investing Cashflow	34,898	25,335	33,340	40,743	48,392
Cash Flow From Investing	3,324	3,389	(11,966)	(59,257)	(51,608)
Debt Raised/(repaid)	22,776	(5,508)	5,585		
Proceeds From Issue Of Shares					
Shares Repurchased					
Dividends Paid	(96,760)	(77,064)	(77,034)	(77,034)	(77,034)
Preferred Dividends					
Other Financing Cashflow	4,482	(1,982)	(6,447)	(6,739)	(6,739)
Cash Flow From Financing	(69,502)	(84,554)	(77,896)	(83,774)	(83,774)
Total Cash Generated	(24,712)	24,433	183,825	168,557	157,189
Free Cashflow To Equity	67,565	103,479	267,306	252,331	240,962
Free Cashflow To Firm	49,819	115,434	268,169	259,070	247,702

SOURCES: INCRED RESEARCH, COMPANY REPORTS

BY THE NUMBERS...cont'd

Balance Sheet					
(Rs mn)	Mar-20A	Mar-21A	Mar-22F	Mar-23F	Mar-24F
Total Cash And Equivalents	285,465	209,429	357,925	526,483	683,671
Total Debtors	144,082	196,231	140,455	150,148	160,159
Inventories	66,189	89,475	70,228	73,405	78,300
Total Other Current Assets	339,385	352,114	339,869	342,066	342,970
Total Current Assets	835,122	847,249	908,478	1,092,102	1,265,100
Fixed Assets	451,119	528,951	570,876	621,436	665,379
Total Investments	18,732	23,176	18,732	18,732	18,732
Intangible Assets					
Total Other Non-Current Assets	195,243	218,421	217,857	229,614	238,731
Total Non-current Assets	665,094	770,548	807,464	869,782	922,841
Short-term Debt	44,326	31,872	44,326	44,326	44,326
Current Portion of Long-Term Debt					
Total Creditors	101,076	76,376	94,680	112,460	119,958
Other Current Liabilities	339,157	408,180	372,690	403,644	421,502
Total Current Liabilities	484,559	516,429	511,697	560,430	585,786
Total Long-term Debt	20,012	26,881	20,012	20,012	20,012
Hybrid Debt - Debt Component					
Total Other Non-Current Liabilities	67,869	73,117	67,869	67,869	67,869
Total Non-current Liabilities	87,880	99,998	87,880	87,880	87,880
Total Provisions	602,266	631,786	683,226	769,620	854,233
Total Liabilities	1,174,705	1,248,213	1,282,803	1,417,931	1,527,900
Shareholders Equity	321,569	365,174	428,728	539,542	655,630
Minority Interests	3,941	4,411	4,411	4,411	4,411
Total Equity	325,510	369,584	433,139	543,953	660,041

Key Ratios					
	Mar-20A	Mar-21A	Mar-22F	Mar-23F	Mar-24F
Revenue Growth	(3.5%)	(6.3%)	13.9%	18.8%	6.7%
Operating EBITDA Growth	(12.3%)	(15.3%)	10.4%	31.5%	2.1%
Operating EBITDA Margin	22.8%	20.6%	20.0%	22.1%	21.2%
Net Cash Per Share (Rs)	35.88	24.45	47.64	74.99	100.50
BVPS (Rs)	52.18	59.26	69.57	87.55	106.39
Gross Interest Cover	36.73	23.06	25.12	32.67	32.55
Effective Tax Rate	30.6%	29.5%	29.5%	29.5%	29.5%
Net Dividend Payout Ratio	57.9%	60.6%	54.8%	41.0%	39.9%
Accounts Receivables Days	37.81	68.99	59.93	43.55	43.59
Inventory Days	366.07	514.98	364.61	303.21	296.12
Accounts Payables Days	585.74	587.06	390.54	437.28	453.67
ROIC (%)					
ROCE (%)	54.3%	36.3%	35.0%	39.8%	32.9%
Return On Average Assets	12.0%	8.4%	8.7%	10.5%	9.5%

SOURCES: INCRED RESEARCH, COMPANY REPORTS

DISCLAIMER

This report (including the views and opinions expressed therein, and the information comprised therein) has been prepared for and is distributed by CGS-CIMB, Incred Research Services Private Limited (formerly known as by Earnest Innovation Partners Private Limited (hereinafter referred to as "IRSPL") pursuant to an arrangement between IRSPL and CGS-CIMB. IRSPL is not an affiliate of CGS-CIMB. IRSPL is held 76% by InCred Capital Wealth Portfolio Managers Private Limited and 24% by EIP Holdings Private Limited. IRSPL is registered with SEBI as a Research Analyst vide Registration No. INH000007793. Pursuant to a trademark agreement, IRSPL has adopted "InCred Equities" as its trademark for use in this report.

The term "IRSPL" shall, unless the context otherwise requires, mean IRSPL and its affiliates, subsidiaries and related companies. The term "CGS-CIMB" shall denote, where appropriate, the relevant entity distributing or disseminating the report in the particular jurisdiction referenced below, or, in every other case except as otherwise stated herein, CGS-CIMB Securities International Pte. Ltd. and its affiliates, subsidiaries and related corporations. This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation and remains subject to the "Restrictions on Distribution" set out below. If your status has changed or the distribution restrictions set out below impact your ability to receive this report please contact your usual CGS-CIMB representative.

By accepting this report, the recipient hereof represents and warrants that he is entitled to receive such report in accordance with the restrictions set forth below and agrees to be bound by the limitations contained herein (including the "Restrictions on Distributions" set out below). Any failure to comply with these limitations may constitute a violation of law and limit our ability to provide reports to you.

This report is being supplied to you strictly on the basis that it will remain confidential. No part of this report may be (i) copied, photocopied, duplicated, stored or reproduced in any form by any means; or (ii) redistributed or passed on, directly or indirectly, to any other person in whole or in part, for any purpose without the prior written consent of IRSPL or CGS-CIMB.

The information contained in this report is prepared from data believed to be correct and reliable at the time of issue of this report.

Under the terms of the agreement between IRSPL and CGS-CIMB, IRSPL is not required to issue regular reports on the subject matter of this report at any frequency and it may cease to do so or change the periodicity of reports at any time. Neither IRSPL nor CGS-CIMB is under any obligation to update this report in the event of a material change to the information contained in this report. Neither IRSPL nor CGS-CIMB has any and will accept any, obligation to (i) check or ensure that the contents of this report remain current, reliable or relevant; (ii) ensure that the content of this report constitutes all the information a prospective investor may require; (iii) ensure the adequacy, accuracy, completeness, reliability or fairness of any views, opinions and information, and accordingly, IRSPL and its affiliates/group companies and/or CGS-CIMB, its affiliates and related persons including China Galaxy International Financial Holdings Limited ("CGIFHL") and CIMB Group Sdn. Bhd. ("CIMBG") and their respective related corporations (and their respective directors, associates, connected persons and/or employees) shall not be liable in any manner whatsoever for any consequences (including but not limited to any direct, indirect or consequential losses, loss of profits and damages) of any reliance thereon or usage thereof. In particular, CGS-CIMB disclaims all responsibility and liability for the views and opinions set out in this report.

Unless otherwise specified, this report is based upon reasonable sources. Such sources will, unless otherwise specified, for market data, be market data and prices available from the main stock exchange or market where the relevant security is listed, or, where appropriate, any other market. Information on the accounts and business of company(ies) will generally be based on published statements of the company(ies), information disseminated by regulatory information services, other publicly available information and information resulting from our research. Whilst every effort is made to ensure that statements of facts made in this report are accurate, all estimates, projections, forecasts, expressions of opinion and other subjective judgments contained in this report are based on assumptions considered to be reasonable as of the date of the document in which they are contained and must not be construed as a representation that the matters referred to therein will occur. Past performance is not a reliable indicator of future performance. The value of investments may go down as well as up and those investing may, depending on the investments in question, lose more than the initial investment. No report shall constitute an offer or an invitation by or on behalf of IRSPL and its affiliates/group companies and/or CGS-CIMB or their respective affiliates (including CGIFHL, CIMBG and their respective related corporations) or IRSPL and its affiliates/group companies, to any person to buy or sell any investments.

By IRSPL producing this report for CGS-CIMB, IRSPL has confirmed to CGS-CIMB that the opinions expressed are based on information it believes to be accurate and complete and obtained through reliable public or other non-confidential sources at the time made. (Information barriers and other arrangements may be established where necessary to prevent conflicts of interests arising. However, the analyst(s) may receive compensation that is based on his/their coverage of company(ies) in the performance of his/their duties or the performance of his/their recommendations. In reviewing this report, an investor should be aware that any or all of the foregoing, among other things, may give rise to real or potential conflicts of interest. Additional information is, subject to the duties of confidentiality, available on request.

The report is not a "prospectus" as defined under Indian Law, including the Companies Act, 2013, and is not, and shall not be, approved by, or filed or registered with, any Indian regulator, including any Registrar of Companies in India, SEBI, any Indian stock exchange, or the Reserve Bank of India. No offer, or invitation to offer, or solicitation of subscription with respect to any such securities listed or proposed to be listed in India is being made, or intended to be made, to the public, or to any member or section of the public in India, through or pursuant to this report

The research analysts, strategists or economists principally responsible for the preparation of this research report are segregated from the other activities of IRSPL. Information barriers and other arrangements have been established, as required, to prevent any conflicts of interests.

IRSPL may have issued other reports (based on technical analysis, event specific, short term views etc.) that are inconsistent with and reach different conclusion from the information presented in this report.

Holding of Analysts/Relatives of Analysts, IRSPL and Associates of IRSPL in the covered securities, as on the date of publishing of this report

	Analyst/ Relative	Entity/ Associates
any financial interests in the company covered in this report (subject company) and nature of such financial interest	NO	NO
actual/beneficial ownership of 1% or more in securities of the subject company at the end of the month immediately preceding the date of publication of the research report or date of the public appearance;	NO	NO
any other material conflict of interest at the time of publication of the research report or at the time of public appearance	NO	NO
received any compensation from the subject company in the past twelve months for investment banking or merchant banking or brokerage services or investment advisory or depository or distribution from the subject company in the last twelve months for products/services other than investment banking or merchant banking or broker- age services or investment advisory or depository or distribution from the subject company in the last twelve months	NO	NO
managed or co-managed public offering of securities for the subject company in the last twelve months	NO	NO
received any compensation or other benefits from the subject company or third party in connection with the research report	NO	NO
served as an officer, director or employee of the subject company	NO	NO
been engaged in market making activity for the subject company	NO	NO

Analyst declaration

- The analyst responsible for the production of this report hereby certifies that the views expressed herein accurately and exclusively reflect his or her personal views and opinions about any and all of the issuers or securities analysed in this report and were prepared independently and autonomously in an unbiased manner.
- No part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations(s) or view(s) in this report or based any specific investment banking transaction.
- The analyst(s) has(have) not had any serious disciplinary action taken against him/her(them).
- The analyst, strategist, or economist does not have any material conflict of interest at the time of publication of this report.
- The analyst(s) has(have) received compensation based upon various factors, including quality, accuracy and value of research, overall firm performance, client feedback and competitive factors.

CGS-CIMB DISCLOSURES

Country	CGS-CIMB Entity	Regulated by
Hong Kong	CGS-CIMB Securities (Hong Kong) Limited	Securities and Futures Commission Hong Kong
India	CGS-CIMB Securities (India) Private Limited	Securities and Exchange Board of India (SEBI)
Indonesia	PT CGS-CIMB Sekuritas Indonesia	Financial Services Authority of Indonesia
Malaysia	CGS-CIMB Securities Sdn. Bhd.	Securities Commission Malaysia
Singapore	CGS-CIMB Securities (Singapore) Pte. Ltd.	Monetary Authority of Singapore
South Korea	CGS-CIMB Securities (Hong Kong) Limited, Korea Branch	Financial Services Commission and Financial Supervisory Service
Thailand	CGS-CIMB Securities (Thailand) Co. Ltd.	Securities and Exchange Commission Thailand

Other Significant Financial Interests:

As of the end of 31st October 2021 immediately preceding the date of this report CGS-CIMB does not:

- have a proprietary position in the securities (which may include but not be limited to shares, warrants, call warrants and/or any other derivatives) in the company(ies) covered in this report except for the following:
 - Nil
- act as market maker or have assumed an underwriting commitment in securities of the company(ies) covered in this report except for the following:
 - Nil
- perform or seek to perform significant investment banking, advisory, underwriting or placement services for or relating to the company(ies) covered in this report and/or solicit such investment, advisory or other services from the company(ies) covered in this report except for the following:
 - Nil

CGS-CIMB, its affiliates, related corporations (including CGIFHL, CIMBG and their respective related corporations) and/or their respective directors, associates, connected parties and/or employees and/or IRSPL and/or its affiliates and/or its Directors/employees may own or have positions in securities of the company(ies) covered in this report or any securities related thereto and may from time to time add to or dispose of, or may be materially interested in, any such securities.

CGS-CIMB, its affiliates and related corporations (including CGIFHL, CIMBG and their respective related corporations) and/or IRSPL and/or its affiliates and/or its Directors/employees may do and seek to do business with the company(ies) covered in this research report and may from time to time (a) buy/sell the securities covered in this report, from time to time and/or (b) act as market maker or have assumed an underwriting commitment in securities of such company(ies), and/or (c) may sell them to or buy them from customers on a principal basis and/or (d) may also perform or seek to perform significant investment banking, advisory, underwriting or placement services for or relating to such company(ies) and/or (e) solicit such investment, advisory or other services from any entity mentioned in this report and/or (f) act as a lender/borrower to such company and may earn brokerage or other compensation. However, Analysts are forbidden to acquire, on their own account or hold securities (physical or uncertificated, including derivatives) of companies in respect of which they are compiling and producing financial recommendations or in the result of which they play a key part

This report does not purport to contain all the information that a prospective investor may require. Neither CGS-CIMB nor any of its affiliates (including CGIFHL, CIMBG and their related corporations) make any guarantee, representation or warranty, express or implied, as to the adequacy, accuracy, completeness, reliability or fairness of any such information and opinion contained in this report. Neither CGS-CIMB nor any of its affiliates nor their related persons (including CGIFHL, CIMBG and their related corporations) shall be liable in any manner whatsoever for any consequences (including but not limited to any direct, indirect or consequential losses, loss of profits and damages) of any reliance thereon or usage thereof.

This report is general in nature and has been prepared for information purposes only. It is intended for circulation amongst CGS-CIMB's and its affiliates' (including CGIFHL's, CIMBG's and their respective related corporations') clients generally and does not have regard to the specific investment objectives, financial situation and the particular needs of any specific person who may receive this report. The information and opinions in this report are not and should not be construed or considered as an offer, recommendation or solicitation to buy or sell the subject securities, related investments or other financial instruments or any derivative instrument, or any rights pertaining thereto.

Investors are advised to make their own independent evaluation of the information contained in this report, consider their own individual investment objectives, financial situation and particular needs and consult their own professional and financial advisers as to the legal, business, financial, tax and other aspects before participating in any transaction in respect of the securities of company(ies) covered in this report. The securities of such company(ies) may not be eligible for sale in all jurisdictions or to all categories of investors.

The report is not a "prospectus" as defined under Indian Law, including the Companies Act, 2013, and is not, and shall not be, approved by, or filed or registered with, any Indian regulator, including any Registrar of Companies in India, SEBI, any Indian stock exchange, or the Reserve Bank of India. No offer, or invitation to offer, or solicitation of subscription with respect to any such securities listed or proposed to be listed in India is being made, or intended to be made, to the public, or to any member or section of the public in India, through or pursuant to this report

Restrictions on Distributions

Australia: Despite anything in this report to the contrary, this research is prepared for and provided in Australia by CGS-CIMB Securities (Singapore) Pte. Ltd. and CGS-CIMB Securities (Hong Kong) Limited. This research is only available in Australia to persons who are "wholesale clients" (within the meaning of the Corporations Act 2001 (Cth) and is supplied solely for the use of such wholesale clients and shall not be distributed or passed on to any other person. You represent and warrant that if you are in Australia, you are a "wholesale client". This research is of a general nature only and has been prepared without taking into account the objectives, financial situation or needs of the individual recipient. CGS-CIMB Securities (Singapore) Pte. Ltd. and CGS-CIMB Securities (Hong Kong) Limited do not hold, and are not required to hold an Australian financial services license. CGS-CIMB Securities (Singapore) Pte. Ltd. and CGS-CIMB Securities (Hong Kong) Limited rely on "passporting" exemptions for entities appropriately licensed by the Monetary Authority of Singapore (under ASIC Class Order 03/1102) and the Securities and Futures Commission in Hong Kong (under ASIC Class Order 03/1103).

Canada: This report has not been prepared in accordance with the disclosure requirements of Dealer Member Rule 3400 – Research Restrictions and Disclosure Requirements of the Investment Industry Regulatory Organization of Canada. For any research report distributed by CIBC, further disclosures related to CIBC conflicts of interest can be found at <https://researchcentral.cibcwm.com>.

China: For the purpose of this report, the People's Republic of China ("PRC") does not include the Hong Kong Special Administrative Region, the Macau Special Administrative Region or Taiwan. The distributor of this report has not been approved or licensed by the China Securities Regulatory Commission or any other relevant regulatory authority or governmental agency in the PRC. This report contains only marketing information. The distribution of this report is not an offer to buy or sell to any person within or outside PRC or a solicitation to any person within or outside of PRC to buy or sell any instruments described herein. This report is being issued outside the PRC to a limited number of institutional investors and may not be provided to any person other than the original recipient and may not be reproduced or used for any other purpose.

France: Only qualified investors within the meaning of French law shall have access to this report. This report shall not be considered as an offer to subscribe to, or used in connection with, any offer for subscription or sale or marketing or direct or indirect distribution of financial instruments and it is not intended as a solicitation for the purchase of any financial instrument.

Germany: This report is only directed at persons who are professional investors as defined in sec 31a(2) of the German Securities Trading Act (WpHG). This publication constitutes research of a non-binding nature on the market situation and the investment instruments cited here at the time of the publication of the information.

The current prices/yields in this issue are based upon closing prices from Bloomberg as of the day preceding publication. Please note that neither the German Federal Financial Supervisory Agency (BaFin), nor any other supervisory authority exercises any control over the content of this report.

Hong Kong: This report is prepared for and distributed in Hong Kong by CGS-CIMB Securities (Hong Kong) Limited ("CHK") which is licensed in Hong Kong by the Securities and Futures Commission for Type 1 (dealing in securities) and Type 4 (advising on securities) activities. Any investors wishing to purchase or otherwise deal in the securities covered in this report should contact the Head of Sales at CHK. The views and opinions in this report are our own as of the date hereof and are subject to change. If the Financial Services and Markets Act of the United Kingdom or the rules of the Financial Conduct Authority apply to a recipient, our obligations owed to such recipient therein are unaffected. CHK has no obligation to update its

opinion or the information in this report.

This publication is strictly confidential and is for private circulation only to clients of CHK.

India: This report is prepared by IRSPL for and distributed in India by IRSPL or CGS-CIMB Securities (India) Private Limited ("CGS-CIMB India"), as the case may be. CGS-CIMB India is a subsidiary of CGS-CIMB Securities International Pte. Ltd. which is in turn is a 50:50 joint venture company of CGIFHL and CIMBG. The details of the members of the group of companies of CGS-CIMB can be found at www.cgs-cimb.com, CGIFHL at www.chinastock.com.hk/en/ACG/ContactUs/index.aspx and CIMBG at www.cimb.com/en/who-we-are.html. CGS-CIMB India is registered with the National Stock Exchange of India Limited and BSE Limited as a trading and clearing member (under the Securities and Exchange Board of India (Stock Brokers and Sub-Brokers) Regulations, 1992). CGS-CIMB India is registered with SEBI (SEBI Registration Number: INZ000209135) as a Research Analyst (INH000000669) pursuant to the SEBI (Research Analysts) Regulations, 2014 ("Regulations").

By IRSPL producing this report for CGS-CIMB, IRSPL has confirmed to CGS-CIMB that the research analysts, strategists or economists principally responsible for the preparation of this report are segregated from the other activities of IRSPL and they have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues, client feedback and competitive factors. Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed or proposed to be performed by IRSPL, CGS-CIMB India or its affiliates.

This report does not take into account the particular investment objectives, financial situations, or needs of the recipients. It is not intended for and does not deal with prohibitions on investment due to law/jurisdiction issues etc. which may exist for certain persons/entities. Recipients should rely on their own investigations and take their own professional advice before investment.

CGS-CIMB India does not have actual / beneficial ownership of 1% or more securities of the subject company in this report, at the end of the month immediately preceding the date of publication of this report. However, since affiliates of CGS-CIMB India are engaged in the financial services business, they might have in their normal course of business financial interests or actual / beneficial ownership of one per cent or more in various companies including the subject company in this report.

CGS-CIMB India or its associates, may: (a) from time to time, have long or short position in, and buy or sell the securities of the subject company in this report; or (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the subject company in this report or act as an advisor or lender/borrower to such company or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions.

CGS-CIMB India and associates have not received any compensation for investment banking, merchant banking or brokerage services from the subject company mentioned in the report in the past 12 months.

CGS-CIMB India and associates have not managed or co-managed public offering of securities for the subject company mentioned in the report in the past 12 months.

Indonesia: This report is prepared for and distributed in Indonesia by PT CGS-CIMB Sekuritas Indonesia ("CGS-CIMB Indonesia"). The views and opinions in this report is prepared from data believed to be correct and reliable at the time of issue of this report and are subject to change. CGS-CIMB Indonesia has no obligation to update the opinion or the information in this report. This report is for private circulation only to clients of CGS-CIMB Indonesia. Neither this report nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable Indonesian capital market laws and regulations.

This report is not an offer of securities in Indonesia. The securities referred to in this report have not been registered with the Financial Services Authority (Otoritas Jasa Keuangan) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market law and regulations.

Ireland: CGS-CIMB is not an investment firm authorised in the Republic of Ireland and no part of this document should be construed as CGS-CIMB acting as, or otherwise claiming or representing to be, an investment firm authorised in the Republic of Ireland.

Malaysia: This report is prepared for and distributed in Malaysia by CGS-CIMB Securities Sdn. Bhd. ("CGS-CIMB Malaysia") solely for the benefit of and for the exclusive use of our clients. Recipients of this report are to contact CGS-CIMB Malaysia, at Level 29, Menara Bumiputra-Commerce, No. 11, Jalan Raja Laut, 50350 Kuala Lumpur, Malaysia, in respect of any matters arising from or in connection with this report. CGS-CIMB Malaysia has no obligation to update, revise or reaffirm the opinion or the information in this report after the date of this report.

New Zealand: In New Zealand, this report is for distribution only to persons who are wholesale clients pursuant to section 5C of the Financial Advisers Act 2008.

Singapore: This report is prepared for and distributed in Singapore by CGS-CIMB Securities (Singapore) Pte Ltd ("CGS-CIMB Singapore"). CGS-CIMB Singapore is a capital markets services licensee under the Securities and Futures Act (Chapter 289). Accordingly, it is exempted from the requirement to hold a financial adviser's licence under the Financial Advisers Act, Cap 110 ("FAA") for advising on investment products, by issuing or promulgating research analyses or reports, whether in electronic, print or other form. CGS-CIMB Singapore is subject to the applicable rules under the FAA unless it is able to avail itself to any prescribed exemptions.

Recipients of this report are to contact CGS-CIMB Singapore, 50 Raffles Place, #16-02 Singapore Land Tower, Singapore in respect of any matters arising from, or in connection with this report. CGS-CIMB Singapore has no obligation to update the opinion or the information in this report. This publication is strictly confidential and is for private circulation only. If you have not been sent this report by CGS-CIMB Singapore directly, you may not rely, use or disclose to anyone else this report or its contents.

If the recipient of this report is not an accredited investor, expert investor or institutional investor, CGS-CIMB Singapore accepts legal responsibility for the contents of the report without any disclaimer limiting or otherwise curtailing such legal responsibility. If the recipient is an accredited investor, expert investor or institutional investor, the recipient is deemed to acknowledge that CGS-CIMB Singapore is exempt from certain requirements under the FAA and its attendant regulations, and as such, is exempt from complying with the following:

- (a) Section 25 of the FAA (obligation to disclose product information);
- (b) Section 27 of the FAA (duty not to make recommendation with respect to any investment product without having a reasonable basis where you may be reasonably expected to rely on the recommendation);

- (c) MAS Notice on Information to Clients and Product Information Disclosure [Notice No. FAA-N03];
- (d) MAS Notice on Recommendation on Investment Products [Notice No. FAA-N16];
- (e) Section 36 of the FAA (obligation on disclosure of interest in specified products); and
- (f) any other laws, regulations, notices, directive, guidelines, circulars and practice notes which relates to the above, to the extent permitted by applicable laws, as may be amended from time to time, and any other laws, regulations, notices, directive, guidelines, circulars, and practice notes as we may notify you from time to time. In addition, the recipient who is an accredited investor, expert investor or institutional investor acknowledges that as CGS-CIMB Singapore is exempt from Section 27 of the FAA, the recipient will also not be able to file a civil claim against CGS-CIMB Singapore for any loss or damage arising from the recipient's reliance on any recommendation made by CGS-CIMB Singapore which would otherwise be a right that is available to the recipient under Section 27 of the FAA.

CGS-CIMB Singapore, its affiliates and related corporations, their directors, associates, connected parties and/or employees may own or have positions in specified products of the company(ies) covered in this report or any specified products related thereto and may from time to time add to or dispose of, or may be materially interested in, any such specified products. Further, CGS-CIMB Singapore, its affiliates and its related corporations do and seek to do business with the company(ies) covered in this report and may from time to time act as market maker or have assumed an underwriting commitment in specified products of such company(ies), may sell them to or buy them from customers on a principal basis and may also perform or seek to perform significant investment banking, advisory, underwriting or placement services for or relating to such company(ies) as well as solicit such investment, advisory or other services from any entity mentioned in this report.

As of CGS-CIMB Singapore does not have a proprietary position in the recommended specified products in this report.

CGS-CIMB Singapore makes a market on the specified products.

CGS-CIMB Singapore does not make a market on other specified products mentioned in the report.

South Korea: This report is prepared for and distributed in South Korea by CGS-CIMB Securities (Hong Kong) Limited, Korea Branch ("CGS-CIMB Korea") which is licensed as a cash equity broker, and regulated by the Financial Services Commission and Financial Supervisory Service of Korea. In South Korea, this report is for distribution only to professional investors under Article 9(5) of the Financial Investment Services and Capital Market Act of Korea ("FSCMA").

Spain: This document is a research report and it is addressed to institutional investors only. The research report is of a general nature and not personalised and does not constitute investment advice so, as the case may be, the recipient must seek proper advice before adopting any investment decision. This document does not constitute a public offering of securities.

CGS-CIMB is not registered with the Spanish Comision Nacional del Mercado de Valores to provide investment services.

Sweden: This report contains only marketing information and has not been approved by the Swedish Financial Supervisory Authority. The distribution of this report is not an offer to sell to any person in Sweden or a solicitation to any person in Sweden to buy any instruments described herein and may not be forwarded to the public in Sweden.

Switzerland: This report has not been prepared in accordance with the recognized self-regulatory minimal standards for research reports of banks issued by the Swiss Bankers' Association (Directives on the Independence of Financial Research).

Thailand: This report is prepared for and distributed in Thailand by CGS-CIMB Securities (Thailand) Co. Ltd. ("CGS-CIMB Thailand") based upon sources believed to be reliable (but their accuracy, completeness or correctness is not guaranteed). The statements or expressions of opinion herein were arrived at after due and careful consideration for use as information for investment. Such opinions are subject to change without notice and CGS-CIMB Thailand has no obligation to update its opinion or the information in this report.

CGS-CIMB Thailand may act or acts as Market Maker, and issuer and offerer of Derivative Warrants and Structured Note which may have the following securities as its underlying securities. Investors should carefully read and study the details of the derivative warrants in the prospectus before making investment decisions.

AAV, ACE, ADVANC, AEONTS, AMATA, AOT, AP, BAM, BANPU, BBL, BCH, BCP, BCPG, BDMS, BEC, BEM, BGRIM, BH, BJC, BTS, CBG, CENTEL, CHG, CK, CKP, COM7, CPALL, CPF, CPN, CRC, DELTA, DOHOME, DTAC, EA, EGCO, ESSO, GLOBAL, GPSC, GULF, GUNKUL, HANA, HMPRO, ICHI, INTUCH, IRPC, IVL, JAS, JMART, JMT, KBANK, KCE, KKP, KTB, KTC, LH, MAJOR, MEGA, MINT, MTC, NRF, OR, ORI, OSP, PLANB, PRM, PSL, PTG, PTL, PTT, PTTEP, PTTGC, QH, RATCH, RBF, RS, SAWAD, SCB, SCC, SCGP, SINGER, SPALI, SPRC, STA, STEC, STGT, SUPER, SYNEX, TASCO, TCAP, THANI, TISCO, TKN, TOP, TQM, TRUE, TTB, TU, TVO, VGI, WHA

Corporate Governance Report:

The disclosure of the survey result of the Thai Institute of Directors Association ("IOD") regarding corporate governance is made pursuant to the policy of the Office of the Securities and Exchange Commission. The survey of the IOD is based on the information of a company listed on the Stock Exchange of Thailand and the Market for Alternative Investment disclosed to the public and able to be accessed by a general public investor. The result, therefore, is from the perspective of a third party. It is not an evaluation of operation and is not based on inside information.

The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey result may be changed after that date. CGS-CIMB Thailand does not confirm nor certify the accuracy of such survey result.

Score Range:	90 - 100	80 – 89	70 - 79	Below 70	No Survey Result
Description:	Excellent	Very Good	Good	N/A	N/A

United Arab Emirates: The distributor of this report has not been approved or licensed by the UAE Central Bank or any other relevant licensing authorities or governmental agencies in the United Arab Emirates. This report is strictly private and confidential and has not been reviewed by, deposited or registered with UAE Central Bank or any other licensing authority or governmental agencies in the United Arab Emirates. This report is being issued outside the United Arab Emirates to a limited number of institutional investors and must not be provided to any person other than the original recipient and may not be reproduced or used for any other purpose. Further, the information contained in this report is not intended to lead to the sale of investments under any subscription agreement or the conclusion of any other contract of whatsoever nature within the territory of the United Arab Emirates.

United Kingdom and European Economic Area (EEA): In the United Kingdom and European Economic Area, this material is prepared for and being distributed by CGS-CIMB Securities (UK) Limited ("CGS-CIMB UK"). CGS-CIMB UK is authorized and regulated by the Financial Conduct Authority and its registered office is at 27 Knightsbridge, London, SW1X7YB. The material distributed by CGS-CIMB UK has been prepared in accordance with CGS-CIMB's policies for managing conflicts of interest arising as a result of publication and distribution of this material. This material is for distribution only to, and is solely directed at, selected persons on the basis that those persons: (a) are eligible counterparties and professional clients of CGS-CIMB UK; (b) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"), (c) fall within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc") of the Order; (d) are outside the United Kingdom subject to relevant regulation in each jurisdiction, material (all such persons together being referred to as "relevant persons"). This material is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this material relates is available only to relevant persons and will be engaged in only with relevant persons.

This material is categorised as non-independent for the purposes of CGS-CIMB UK and therefore does not provide an impartial or objective assessment of the subject matter and does not constitute independent research. Consequently, this material has not been prepared in accordance with legal requirements designed to promote the independence of research and will not be subject to any prohibition on dealing ahead of the dissemination of research. Therefore, this material is considered a marketing communication.

United States: This report is prepared for and distributed in the United States of America by CGS-CIMB Securities (USA) Inc, a U.S. registered broker-dealer and an affiliate of CGS-CIMB Securities Sdn. Bhd., CGS-CIMB Securities (Singapore) Pte Ltd, PT CGS-CIMB Sekuritas Indonesia, CGS-CIMB Securities (Thailand) Co. Ltd, CGS-CIMB Securities (Hong Kong) Limited and CGS-CIMB Securities (India) Private Limited, and is distributed solely to persons who qualify as "U.S. Institutional Investors" as defined in Rule 15a-6 under the Securities and Exchange Act of 1934. This communication is only for Institutional Investors whose ordinary business activities involve investing in shares, bonds, and associated securities and/or derivative securities and who have professional experience in such investments. Any person who is not a U.S. Institutional Investor or Major Institutional Investor must not rely on this communication. The delivery of this report to any person in the United States of America is not a recommendation to effect any transactions in the securities discussed herein, or an endorsement of any opinion expressed herein. CGS-CIMB Securities (USA) Inc, is a FINRA/SIPC member and takes responsibility for the content of this report. For further information or to place an order in any of the above-mentioned securities please contact a registered representative of CGS-CIMB Securities (USA) Inc.

CGS-CIMB Securities (USA) Inc. has managed or co-managed a public offering of securities in the past 12 months.

CGS-CIMB Securities (USA) Inc. has not managed or co-managed a public offering of any of the securities mentioned in the past 12 months.

CGS-CIMB Securities (USA) Inc. has received compensation for investment banking services in the past 12 months.

CGS-CIMB Securities (USA) Inc. has not received compensation for investment banking services from any of the company mentioned in the past 12 months.

CGS-CIMB Securities (USA) Inc. expects to receive or intend to seek compensation for investment banking services within the next 3 months.

CGS-CIMB Securities (USA) Inc. neither expects to receive nor intends to seek compensation for investment banking services from any of the company mentioned within the next 3 months.

As of the end of the month immediately preceding the date of publication of this report, CGS-CIMB Securities (USA) Inc. beneficially owns 1% or more of any class of common equity securities.

United States Third-Party Disclaimer: If this report is distributed in the United States of America by Raymond James & Associates, Inc ("RJA"), this report is third-party research prepared for and distributed in the United States of America by RJA pursuant to an arrangement between RJA and CGS-CIMB Securities International Pte. Ltd. ("CGS-CIMB"). CGS-CIMB is not an affiliate of RJA. This report is distributed solely to persons who qualify as "U.S. Institutional Investors" or as "Major U.S. Institutional Investors" as defined in Rule 15a-6 under the Securities and Exchange Act of 1934, as amended. This communication is only for U.S. Institutional Investors or Major U.S. Institutional Investor whose ordinary business activities involve investing in shares, bonds, and associated securities and/or derivative securities and who have professional experience in such investments. Any person who is not a U.S. Institutional Investor or Major U.S. Institutional Investor must not rely on this communication. The delivery of this report to any person in the U.S. is not a recommendation to effect any transactions in the securities discussed herein, or an endorsement of any opinion expressed herein. If you are receiving this report in the U.S from RJA, a FINRA/SIPC member, it takes responsibility for the content of this report. For further information or to place an order in any of the above-mentioned securities please contact a registered representative of CGS-CIMB Securities (USA) Inc. or RJA. <https://raymondjames.com/InternationalEquityDisclosures>

Other jurisdictions: In any other jurisdictions, except if otherwise restricted by laws or regulations, this report is only for distribution to professional, institutional, or sophisticated investors as defined in the laws and regulations of such jurisdictions.

Corporate Governance Report of Thai Listed Companies (CGR). CG Rating by the Thai Institute of Directors Association (Thai IOD) in 2020, Anti-Corruption 2020

ADVANC – Excellent, Certified, **AMATA** – Excellent, Certified, **ANAN** – Excellent, n/a, **AOT** – Excellent, n/a, **AP** – Excellent, Certified, **ASP** – Excellent, n/a, **AU** – Good, n/a, **BAM** – Very Good, Certified, **BAY** – Excellent, Certified, **BBL** – Very Good, Certified, **BCH** – Good, Certified, **BCP** – Excellent, Certified, **BCPG** – Excellent, Certified, **BDMS** – Excellent, n/a, **BEAUTY** – Good, n/a, **BH** – Good, n/a, **BJC** – Very Good, n/a, **BLA** – Excellent, Certified, **BTS** – Excellent, Certified, **CBG** – Very Good, n/a, **CCET** – n/a, n/a, **CENTEL** – Excellent, Certified, **CHAYO** – Very Good, n/a, **CHG** – Very Good, n/a, **CK** – Excellent, n/a, **COM7** – Very Good, Certified, **CPALL** – Excellent, Certified, **CPF** – Excellent, Certified, **CPN** – Excellent, Certified, **CPNREIT** – n/a, n/a, **CRC** – Very Good, n/a, **DELTA** – Excellent, Certified, **DDD** – Very Good, n/a, **DIF** – n/a, n/a, **DOHOME** – Very Good, n/a, **DREIT** – n/a, n/a, **DTAC** – Excellent, Certified, **ECL** – Excellent, Certified, **EGCO** – Excellent, Certified, **EPG** – Excellent, Certified, **ERW** – Very Good, Certified, **GFPT** – Excellent, Certified, **GGC** – Excellent, Certified, **GLOBAL** – Very Good, n/a, **HANA** – Excellent, Certified, **HMPRO** – Excellent, Certified, **HUMAN** – Good, n/a, **ICHI** – Excellent, Certified, **III** – Excellent, n/a, **INTUCH** – Excellent, Certified, **IRPC** – Excellent, Certified, **ITD** – Very Good, n/a, **IVL** – Excellent, Certified, **JASIF** – n/a, n/a, **JKN** – Excellent, Declared, **JMT** – Very Good, Declared, **KBANK** – Excellent, Certified, **KCE** – Excellent, Certified, **KEX** – n/a, n/a, **KKP** – Excellent, Certified, **KSL** – Excellent, Certified, **KTB** – Excellent, Certified, **KTC** – Excellent, Certified, **LH** – Excellent, n/a, **LPN** – Excellent, Certified, **M** – Very Good, Certified, **MAKRO** – Excellent, Certified, **MC** – Excellent, Certified, **MEGA** – Very Good, n/a, **MINT** – Excellent, Certified, **MTC** – Excellent, Certified, **NETBAY** – Very Good, n/a, **NRF** – n/a, n/a, **OR** – n/a, n/a, **ORI** – Excellent, Certified, **OSP** – Very Good, n/a, **PLANB** – Excellent, Certified, **PRINC** – Very Good, Certified, **PR9** – Excellent, n/a, **PSH** – Excellent, Certified, **PTT** – Excellent, Certified, **PTTEP** – Excellent, Certified, **PTTGC** – Excellent, Certified, **QH** – Excellent, Certified, **RBF** – Good, n/a, **RS** – Excellent, n/a, **RSP** – Good, n/a, **S** – Excellent, n/a, **SAK** – n/a, n/a, **SAPPE** – Very Good, Certified, **SAWAD** – Very Good, n/a, **SCB** – Excellent, Certified, **SCC** – Excellent, Certified, **SCGP** – n/a, n/a, **SHR** – Very Good, n/a, **SIRI** – Excellent, Certified, **SPA** – Very Good, n/a, **SPALI** – Excellent, Declared, **SPRC** – Excellent, Certified, **SSP** – Good, Declared, **STEC** – n/a, n/a, **SVI** – Excellent, Certified, **SYNEX** – Very Good, n/a, **TCAP** – Excellent, Certified, **THANI** – Excellent, Certified, **TIDLOR** – n/a, n/a, **TISCO** – Excellent, Certified, **TKN** – Very Good, n/a, **TMB** – Excellent, Certified, **TOP** – Excellent, Certified, **TRUE** – Excellent, Certified, **TU** – Excellent, Certified, **TVO** – Excellent, Certified, **VGI** – Excellent, Certified, **WHA** – Excellent, Certified, **WHART** – n/a, n/a, **WICE** – Excellent, Certified, **WORK** – Good, n/a.

- CG Score 2020 from Thai Institute of Directors Association (IOD)

- Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of January 30, 2021) are categorised into: companies that have declared their intention to join CAC, and companies certified by CAC.

Recommendation Framework

Stock Ratings

Definition:

Add	The stock's total return is expected to exceed 10% over the next 12 months.
Hold	The stock's total return is expected to be between 0% and positive 10% over the next 12 months.
Reduce	The stock's total return is expected to fall below 0% or more over the next 12 months.

The total expected return of a stock is defined as the sum of the: (i) percentage difference between the target price and the current price and (ii) the forward net dividend yields of the stock. Stock price targets have an investment horizon of 12 months.

Sector Ratings

Definition:

Overweight	An Overweight rating means stocks in the sector have, on a market cap-weighted basis, a positive absolute recommendation.
Neutral	A Neutral rating means stocks in the sector have, on a market cap-weighted basis, a neutral absolute recommendation.
Underweight	An Underweight rating means stocks in the sector have, on a market cap-weighted basis, a negative absolute recommendation.

Country Ratings

Definition:

Overweight	An Overweight rating means investors should be positioned with an above-market weight in this country relative to benchmark.
Neutral	A Neutral rating means investors should be positioned with a neutral weight in this country relative to benchmark.
Underweight	An Underweight rating means investors should be positioned with a below-market weight in this country relative to benchmark.