



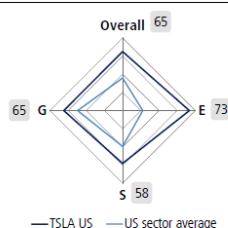
Tesla (TSLA.O/TSLA US)

Price as of Dec 30: US123

Expectation reset offers good bargain-hunting opportunity

Trading data			
Mkt cap (US\$bn)	590.2		
Outstanding shares (mn)	3,158		
Institutional ownership (%)	45.3		
3M avg. daily trading (mn)	74.0		
52-week trading range (US\$)	177.1-402.7		
Performance			
	3M	6M	12M
Absolute (%)	(39.0)	(22.6)	(46.8)
Relative (%)	(31.0)	(21.4)	(31.0)

ESG score card



Source: Refinitiv, KGI securities

Event

4Q22 deliveries arrived at 405,278 units, with annual deliveries up 40% YoY to 1,313,851 units. Tesla has scheduled its 4Q22 earnings call on January 25 and 2023 investor day on March 1.

Impact

Record-high 4Q22 deliveries, 4% below consensus, but in line with most recent estimates. Tesla's EV production grew 20% QoQ and 44% YoY to 439,701 units in 4Q22, versus EV deliveries of 405,278 units, up 18% QoQ and 31% YoY. Vehicles in transit further increased QoQ, reflecting more even regional mix of vehicle builds and markets served. 4Q22 deliveries were 4% below consensus, but in line with the most recent estimates due to weakening macroeconomic conditions and reduced output from Giga factory Shanghai in December. In 2022, Tesla delivered 1,313,851 EV units, up 40% YoY, and Model 3 and Y combined sales totaled 1,247,146 units, up 37% YoY.

We project 37% YoY delivery growth in 2023, with a more diversified market mix.

Tesla's recent multiple actions, including price cuts, discounts, and sales promotions are clearly in response to weakening demand due to slowing macroeconomic conditions, competition in China, and near-term policy uncertainty in the US. 2023 will be a challenging year for Tesla to achieve 50% YoY delivery growth (firm's multi-year CAGR target), but we remain positive on its ability to outperform our global EV market growth forecast of 35% in 2023. Provided the tapering of China demand growth due to NEV subsidy phase-out by end-2022, Tesla is expanding its presence in markets it had previously been unable to serve due to capacity constraints. For example, the firm started to deliver Model Y units in Taiwan in December and will begin to deliver Model 3 and Y in Thailand in 1Q23. We expect Tesla to maintain a solid footprint in the US, and achieve robust growth outside of China in 2023.

Strong financial health will help weather uncertainties; we lower 2022-24F CAGR to 37%. Despite multiple headwinds, Tesla has stayed largely on track with its operational targets, including further ramping up of Gigafactories Berlin and Austin, now reportedly set to reach a production run rate of 3k per week, as well as the first delivery of the Tesla Semi in December. Compared with its global automotive OEM peers, we believe the firm is well positioned to weather the macro downturn due to its strong financials, including cash-on-hand of US\$19.5bn, positive free cash flow, and unrivaled profitability. We trim 2023 and 2024 EPS by a respective 12% and 10%, factoring in measures taken to drive vehicle sales amid an unfavorable macro environment.

Key financials

	Dec-20A	Dec-21A	Dec-22F	Dec-23F	Dec-24F
Revenue (US\$m)	31,536	53,823	81,509	109,152	142,542
Gross profit (US\$m)	6,630	13,606	21,267	28,343	37,815
Operating profit (US\$m)	1,994	6,523	14,009	19,926	27,900
EBITDA (US\$m)	4,316	9,434	17,773	24,450	26,381
Net profit (US\$m)	2,424	7,654	14,265	19,609	26,629
EPS (US\$)	0.75	2.26	4.11	5.65	7.68
Revenue growth (%)	28.3	70.7	51.4	33.9	30.6
EPS growth (%)	5,437.4	202.9	82.0	37.5	35.8
Gross margin (%)	21.0	25.3	26.1	26.0	26.5
Operating margin (%)	6.3	12.1	17.2	18.3	19.6
EBITDA margin (%)	13.7	17.5	21.8	22.4	18.5
Net debt to equity (%)	Net cash	Net cash	Net cash	Net cash	Net cash
Return on average equity (%)	4.3	20.0	28.1	27.9	27.7

Source: Company data, KGI Research estimates

Figure 1: Breakdown of 4Q22 & 1Q23 forecast revisions vs. consensus

US\$m	4Q22F							1Q23F						
	Revision	Previous	Chg. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)
Revenue	24,365	24,841	(1.9)	13.6	37.5	25,058	(2.8)	24,770	26,575	(6.8)	1.7	32.1	25,978	(4.6)
Gross profit	6,191	6,324	(2.1)	15.0	27.7	6,441	(3.9)	6,291	7,002	(10.1)	1.6	15.2	6,721	(6.4)
Operating profit	4,254	4,548	(6.5)	15.3	62.8	4,532	(6.1)	4,297	5,155	(16.6)	1.0	19.3	4,425	(2.9)
Net income	4,263	4,577	(6.9)	16.7	47.8	4,262	0.0	4,280	5,070	(15.6)	0.4	14.7	4,287	(0.2)
EPS (US\$)	1.23	1.32	(6.9)	16.7	45.1	1.19	3.5	1.23	1.46	(15.6)	0.4	14.8	1.23	0.4
Gross margin (%)	25.4	25.5	(0.1) ppts	0.3 ppts	(1.9) ppts	25.7	(0.3) ppts	25.4	26.3	(0.9) ppts	(0.0) ppts	(3.7) ppts	25.9	(0.5) ppts
Op. margin (%)	17.5	18.3	(0.9) ppts	0.3 ppts	2.7 ppts	18.1	(0.6) ppts	17.3	19.4	(2.0) ppts	(0.1) ppts	(1.9) ppts	17.0	0.3 ppts
Net margin (%)	17.5	18.4	(0.9) ppts	0.5 ppts	1.2 ppts	17.0	0.5 ppts	17.3	19.1	(1.8) ppts	(0.2) ppts	(2.6) ppts	16.5	0.8 ppts

Source: Bloomberg; KGI Research

Figure 2: Breakdown of 2022-24 forecast revisions vs. consensus

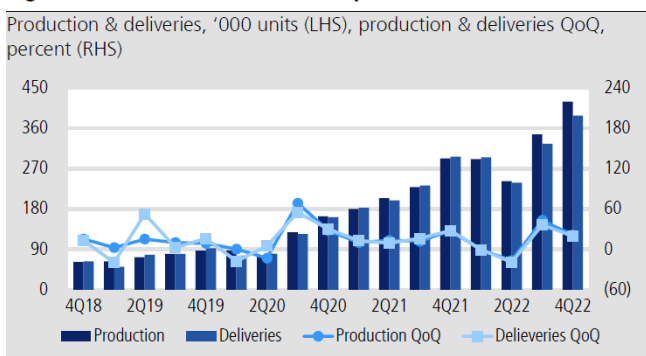
US\$m	2022F					2023F					2024F							
	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)
Revenue	81,509	81,985	(0.6)	51.4	82,982	(1.8)	109,152	115,806	(5.7)	33.9	113,987	(4.2)	142,542	149,208	(4.5)	30.6	146,663	(2.8)
Gross profit	21,267	21,400	(0.6)	56.3	21,973	(3.2)	28,343	30,818	(8.0)	33.3	30,582	(7.3)	37,815	41,445	(8.8)	33.4	39,094	(3.3)
Operating profit	14,009	14,303	(2.1)	114.8	14,419	(2.8)	19,926	22,935	(13.1)	42.2	20,890	(4.6)	27,900	31,678	(11.9)	40.0	26,275	6.2
Net income	14,265	14,579	(2.2)	86.4	13,804	3.3	19,609	22,935	(12.4)	37.5	18,610	5.4	26,629	29,526	(9.8)	35.8	23,569	13.0
EPS (US\$)	4.11	4.20	(2.2)	82.0	4.13	(0.4)	5.65	6.46	(12.4)	37.5	5.42	4.3	7.68	8.51	(9.8)	35.8	6.75	13.7
Gross margin (%)	26.1	26.1	(0.0) ppts	0.8 ppts	26.5	(0.4) ppts	26.0	26.6	(0.6) ppts	(0.1) ppts	26.8	(0.9) ppts	26.5	27.8	(1.2) ppts	0.6 ppts	26.7	(0.1) ppts
Op. margin (%)	17.2	17.4	(0.3) ppts	5.1 ppts	17.4	(0.2) ppts	18.3	19.8	(1.5) ppts	1.1 ppts	18.3	(0.1) ppts	19.6	21.2	(1.7) ppts	1.3 ppts	17.9	1.7 ppts
Net margin (%)	17.5	17.8	(0.3) ppts	3.3 ppts	16.6	0.9 ppts	18.0	19.3	(1.4) ppts	0.5 ppts	16.3	1.6 ppts	18.7	19.8	(1.1) ppts	0.7 ppts	16.1	2.6 ppts

Source: Bloomberg; KGI Research

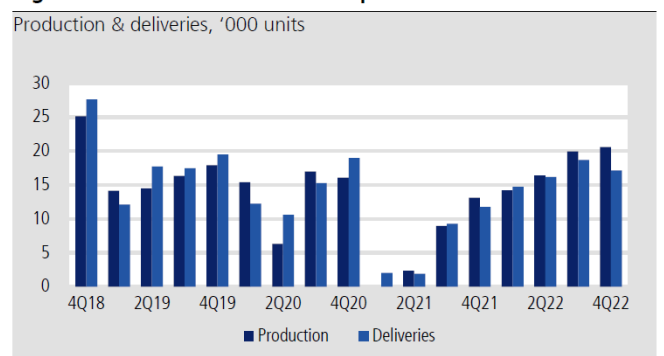
Figure 3: Breakdown of 2022-24 forecast revisions

Unit	2022				2023F				2024F			
	Revision	Previous	Chg. (%)	YoY (%)	Revision	Previous	Chg. (%)	YoY (%)	Revision	Previous	Chg. (%)	YoY (%)
Total	1,313,851	1,313,073	0.1	40.3	1,800,000	1,880,650	(4.3)	37.0	2,465,900	2,533,000	(2.6)	37.0
Model S/X	66,705	69,058	(3.4)	167.0	87,500	94,000	(6.9)	31.2	100,000	100,000	0.0	14.3
Model 3/Y	1,247,146	1,244,015	0.3	36.9	1,700,000	1,767,000	(3.8)	36.3	1,940,000	2,090,000	(7.2)	14.1
Cybertruck	0	0	-	-	11,400	19,000	(40.0)	-	179,200	179,200	0.0	1471.9
Semi	0	0	-	-	1,100	650	69.2	-	6,700	3,800	76.3	509.1

Source: KGI Research

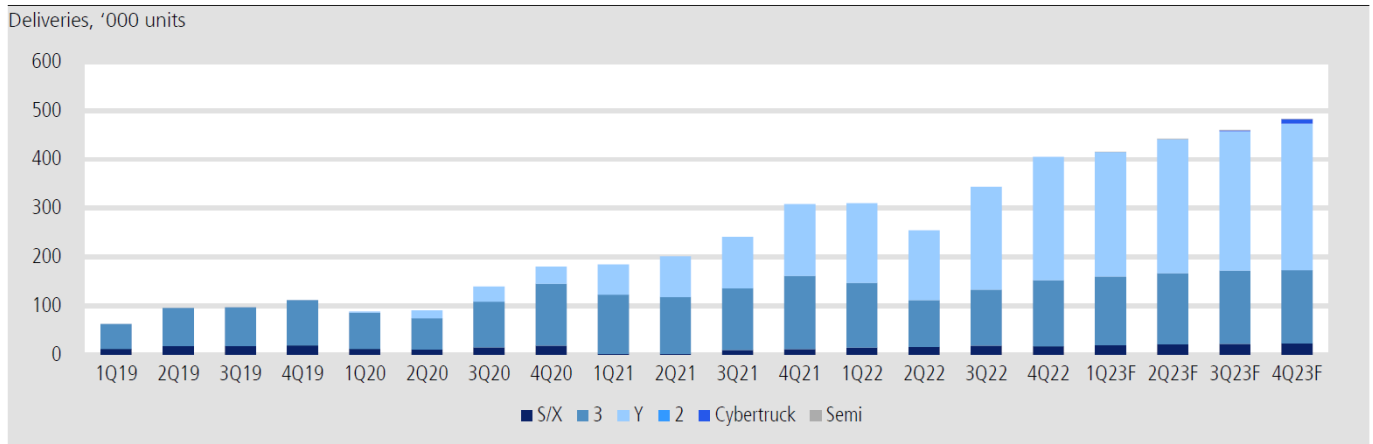
Figure 4: Model 3 & Y combined production & deliveries


Source: Tesla, KGI Research

Figure 5: Model S & X combined production & deliveries


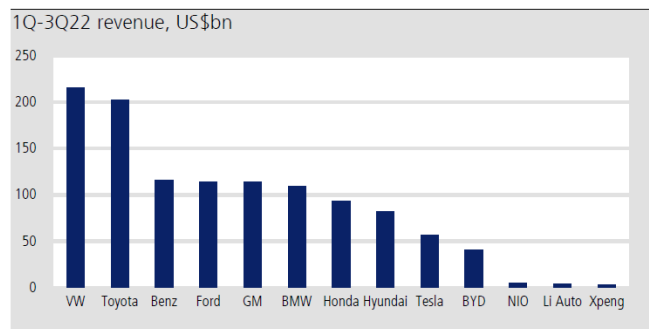
Source: Tesla, KGI Research

Figure 6: Model Y to serve as major growth driver over next two years



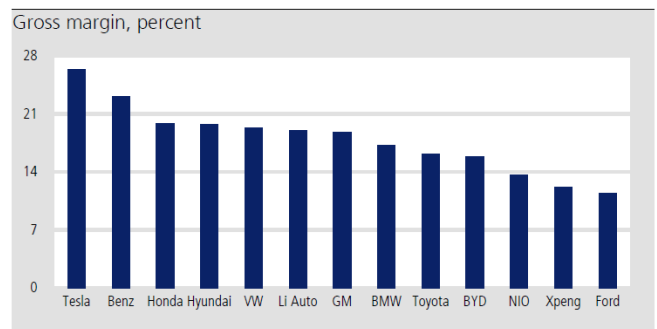
Source: Tesla; KGI Research

Figure 7: Tesla's revenue is catching up on traditional auto OEMs



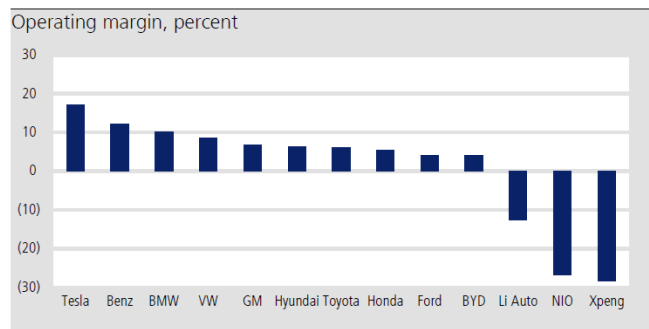
Source: Bloomberg, KGI Research

Figure 8: Industry-leading gross margin of 26.4% in 1Q-3Q22



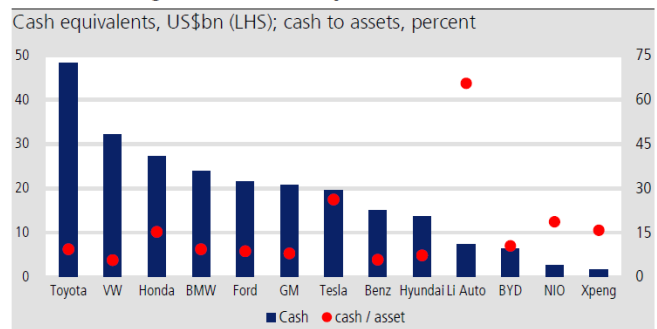
Source: Bloomberg, KGI Research

Figure 9: Operating margin of 17.1% in 1Q-3Q22 far ahead of peers



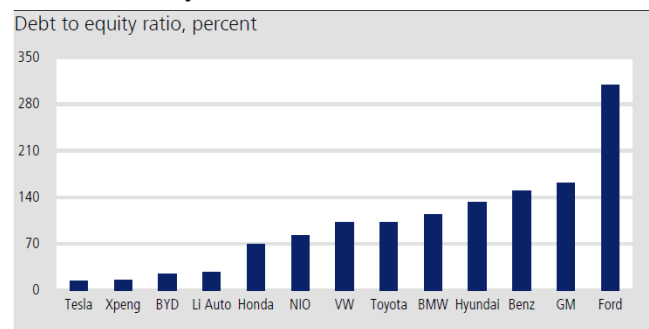
Source: Bloomberg, KGI Research

Figure 10: Cash-on-hand amounted to US\$19.5bn at end-3Q22 with high asset efficiency



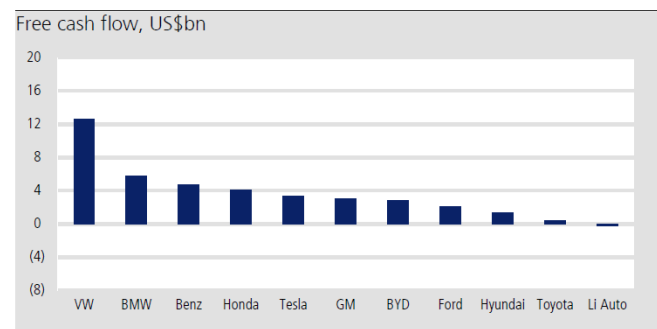
Source: Bloomberg, KGI Research

Figure 11: Lowest debt to equity ratio implies strong financial stability



Source: Bloomberg, KGI Research

Figure 12: Comparable free cash flow with traditional auto OEMs



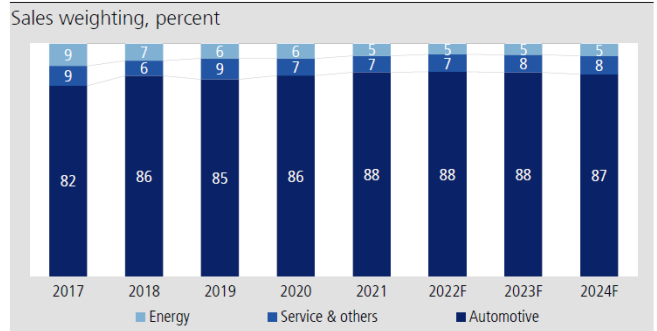
Source: Bloomberg, KGI Research

Figure 13: Company profile

Established in 2003, Tesla was a dedicated electric vehicle maker before entering the solar business after acquiring SolarCity (US) in November 2016. As of 2021, Tesla was the largest EV vendor worldwide with sales of 936.2k units, representing a 15% EV market share. Headquartered in Austin, Texas, Tesla opened its first Gigafactory in Fremont, California in 2010, and started its global expansion in 2019. Gigafactory Shanghai commenced deliveries in January 2020, while two more factories, in Berlin and Texas, started deliveries in March and April this year, respectively.

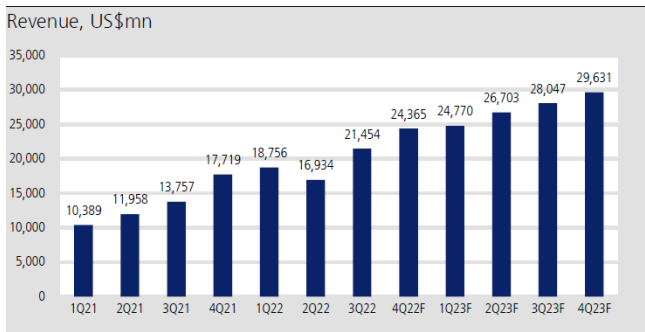
Source: Company data; KGI Research

Figure 14: Revenue mix



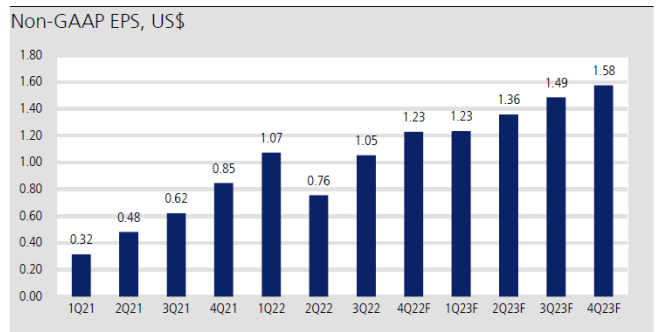
Source: Company data; KGI Research

Figure 15: Revenue



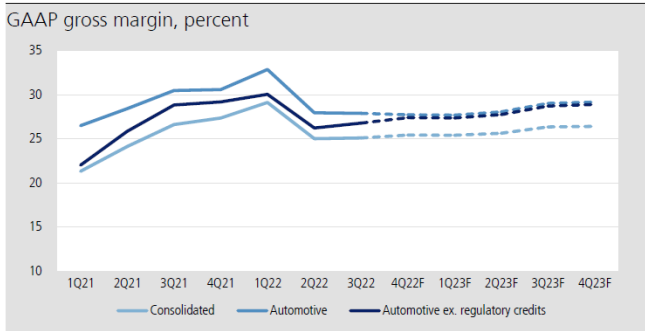
Source: Company data; KGI Research

Figure 16: Non-GAAP EPS



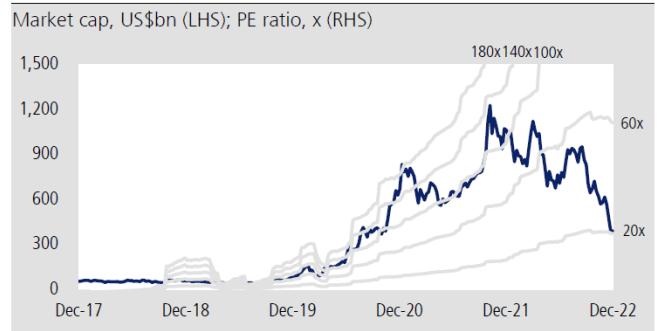
Source: Company data; KGI Research

Figure 17: GAAP gross margin



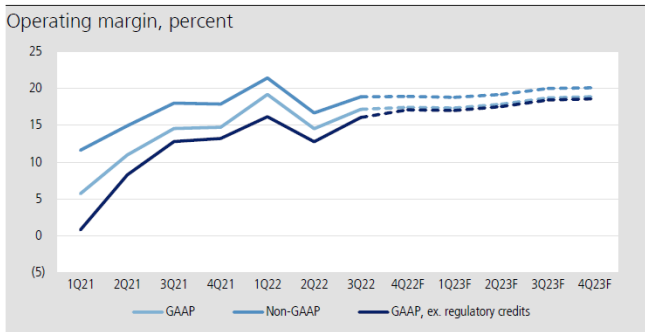
Source: Company data; KGI Research

Figure 18: 12M forward PE band



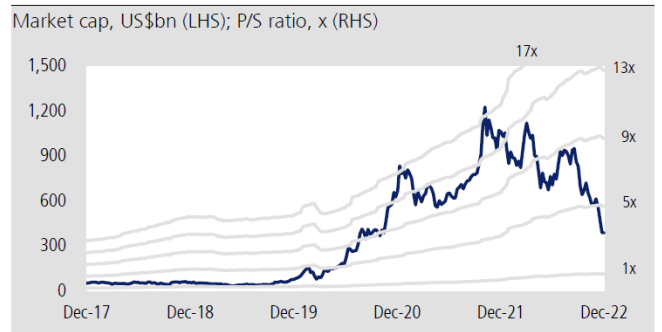
Source: Bloomberg; KGI Research

Figure 19: Operating margin



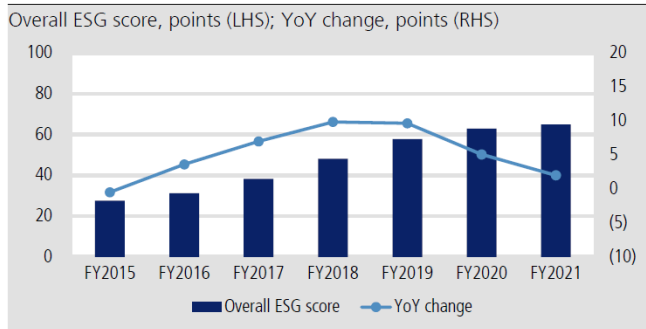
Source: Company data; KGI Research

Figure 20: 12M forward P/S band



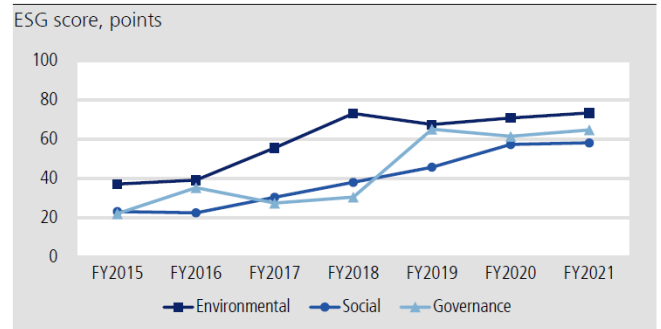
Source: Company data; KGI Research

Figure 21: Overall ESG score



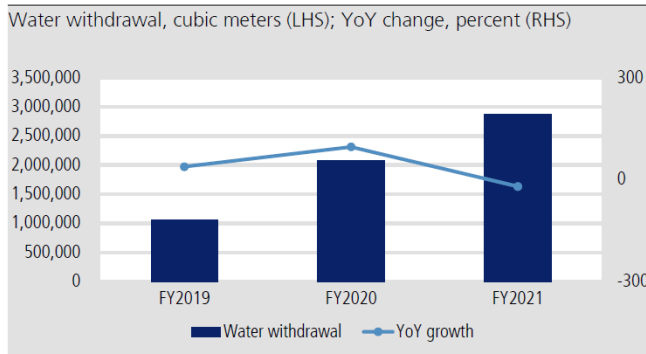
Source: Refinitiv; KGI Research; Company data

Figure 22: ESG score by category



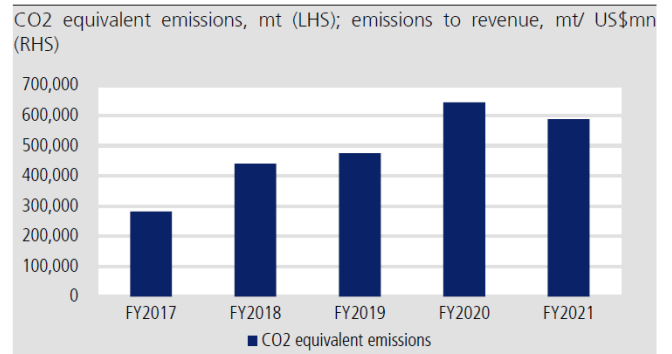
Source: Refinitiv; KGI Research; Company data

Figure 23: Water withdrawal



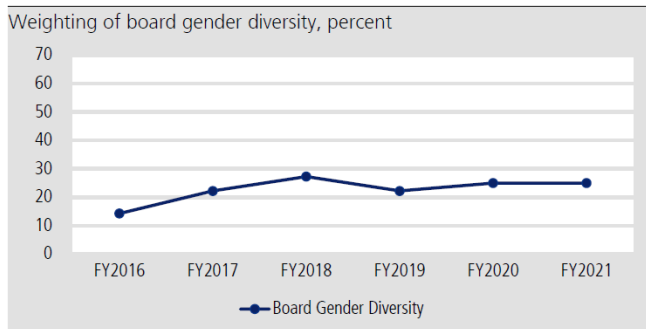
Source: Refinitiv; KGI Research; Company data

Figure 24: CO2 equivalent emissions



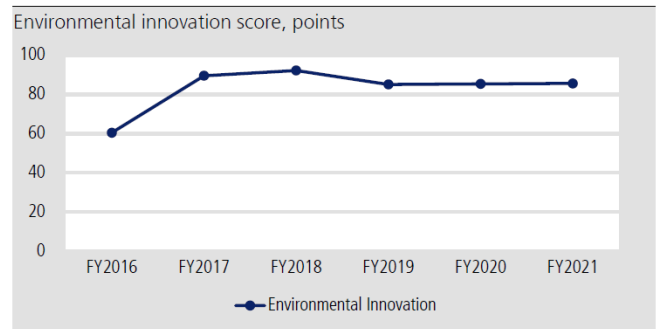
Source: Refinitiv; KGI Research; Company data

Figure 25: Board gender diversity



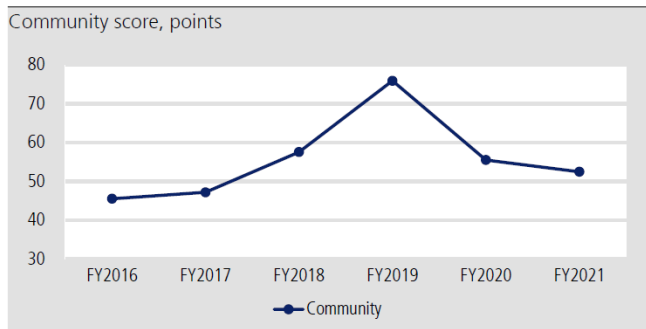
Source: Refinitiv; KGI Research; Company data

Figure 26: Environmental innovation



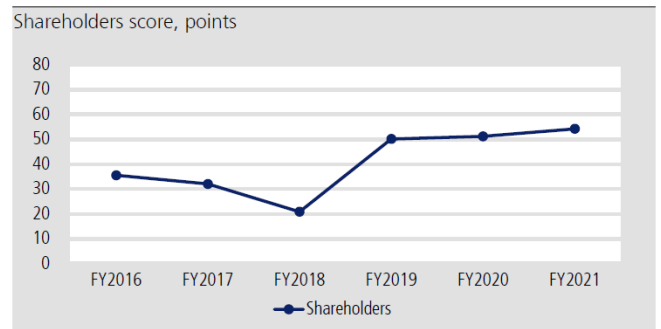
Source: Refinitiv; KGI Research; Company data

Figure 27: Community



Source: Refinitiv; KGI Research; Company data

Figure 28: Shareholders



Source: Refinitiv; KGI Research; Company data

Item	Definition
Energy use	Total direct and indirect energy consumption in gigajoules. - the total amount of energy that has been consumed within the boundaries of the company's operations - total energy use = total direct energy consumption + indirect energy consumption - purchased energy and produced energy are included in total energy use - for utilities, transmission/ grid loss as part of its business activities is considered as total energy consumed and data does not consider electricity produced to answer energy use (utility company produces to sell) - for utilities, raw materials such as coal, gas or nuclear used in the production of energy are not considered under 'total energy use'
Renewable energy purchased	Total primary renewable energy purchased in gigajoules. - energy consumed by the company from various sources and among the purchased energy, how much energy is renewable in nature (solar, wind, hydro, biomass, geothermal) are in scope - if there is no evidence that renewable energy is produced by the company, then we consider the reported energy figure as renewable energy purchased
Renewable energy use ratio	Renewable energy to total energy used
CO2 equivalent emissions	Direct CO2 and CO2 equivalent emissions in metric tons. - direct emissions from sources that are owned or controlled by the company (scope 1 emissions) - following gases are relevant: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorinated compound (PFCS), sulfur hexafluoride (SF6), nitrogen trifluoride (NF3)
CO2 equivalent emissions to sales	Direct CO2 and CO2 equivalent emissions (metric tons) to sales (NT\$m) - direct emissions from sources that are owned or controlled by the company (scope 1 emissions) - following gases are relevant: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorinated compound (PFCS), sulfur hexafluoride (SF6), nitrogen trifluoride (NF3)
Waste total	Total amount of waste produced in metric tons. - total waste = non-hazardous waste + hazardous waste - only solid waste is taken into consideration, exceptionally if liquid waste is reported in metric tons, then we do the summation to derive total including liquid waste - for sectors like mining, oil & gas, waste generation like tailings, waste rock, coal and fly ash are also considered
Waste recycling ratio	The waste recycling ratio as reported by the company. - waste recycling ratio = waste recycled/total waste*100 - waste to energy or waste incinerated with energy recovery are considered as waste recycled - waste recovered via composting is considered as recycled waste
Water withdrawal total	Total water withdrawal in cubic meters. - the total volume of water withdrawn from any water source that was either withdrawn directly by the reporting organization or through intermediaries such as water utilities - different sources of water like wells, town/utility/municipal water, river water, and surface water are considered
Environmental expenditures	Total amount of environmental expenditures. - all environmental investment & expenditures for environmental protection or to prevent, reduce, control environmental aspects, impacts, and hazards. It also includes disposal, treatment, sanitation, and clean-up expenditures
Turnover of employees	Percentage of employee turnover. - includes employees who left the company for any reason (voluntary or involuntary), such as resignations, retirement, natural departure/death, medical incapacitation, redundancy, layoffs, restructuring, dismissal, retrenchment or end of a fixed-term contract - employees turnover rate = (employees leaving/average number of employees)*100 - where the average number of employees = (employees at the end of the current year + employees at the end of the previous year)/2 - employees at the end of the current fiscal year = employees at the end of the previous fiscal year + new employees - employees leaving
Women managers	Percentage of women managers. - percentage of women managers among total managers of the company - if there is a breakdown by category in percentage, such as top, senior, middle, and junior management, then we consider the percentage of middle women managers - percentage of women managers = number of women managers/total number of managers*100
Women employees	Percentage of women employees. - percentage of women employees to the total number of employees of the company - percentage of women employees = number of women/total number of employees*100
Training hours total	Total training hours performed by all employees. - consider only employee training hours - includes all types of training given to general employees (such as health & safety, environmental, emergency response, skills & career development training) - if the value is given in days, multiply by 8, assuming that 1 day = 8 hours worked
Training hours per employee	Training hours per employee per year

All the above named KGI analyst(s) is SFC licensed person accredited to KGI Asia Ltd to carry on the relevant regulated activities. Each of them and/or his/her associate(s) does not have any financial interest in the respectively covered stock, issuer and/or new listing applicant.

Disclaimer Some of KGI Asia Ltd. equity research and earnings estimates are available electronically on www.kgi.com.hk. Please contact your KGI representative for information. The information and opinions in this report are those of KGI Asia Ltd. internal research activity. KGI Asia Ltd. does not make any representation or warranty, express or implied, as to the fairness, accuracy, completeness or correctness of the information and opinions contained in this report. The information and opinions contained in this report are subject to change without any notice. No person accepts any liability whatsoever for any loss however arising from any use of this report or its contents. This report is not to be construed as an invitation or offer to buy or sell securities and/or to participate in any investment activity. This report is being supplied solely for informational purposes and may not be reproduced or published (in whole or in part) for any purpose without the prior written consent of KGI Asia Ltd.. Members of the KGI group and their affiliates may provide services to any companies and affiliates of such companies mentioned herein. Members of the KGI group, their affiliates and their directors, officers and employees may from time to time have a position in any securities mentioned herein.