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COMPANY OVERVIEW

Market Cap. (Mil USD)	\$19,130
Revenue (Mil USD)	\$18,694
No. of Employees	--
D&I Index Ranking	226 / 6018
TRBC Ind. Group	Semiconductors & Semiconductor Equipment
Countries/ Region	Taiwan
Fiscal Yr. End	2022-12-31
ESG Reporting Scope	100%

B+ ESG Score	A+ ESG Controversies Score	B+ ESG Combined Score
B+ Environmental Pillar Score	A Social Pillar Score	C Governance Pillar Score

ESG SUMMARY

ASE Technology Holding Co Ltd is a(n) Semiconductors & Semiconductor Equipment company headquartered in the Taiwan. For the fiscal year ended in December 2022, 3711.TW received an ESG score of 69.68 (Grade: B+).

Over the last 5 years, the company has an average ESG score of 76.16, and a median ESG score of 76.57. Refinitiv ESG score is calculated as a sum of weighted individual pillar scores. For 3711.TW, Environmental, Social, and Governance pillars are weighted 31.17%, 42.86%, and 25.97% respectively in ESG score weighting, consistent with companies within the Semiconductors & Semiconductor Equipment industry groups.

3711.TW's controversy score of 100.00 (Grade: A+) is calculated based on total count of controversies related to the company, as collected by Refinitiv ESG team and normalized based on company's market capitalization. Discounted by its controversies, 3711.TW received an ESG Combined score of 69.68 (Grade: B+) for the year.

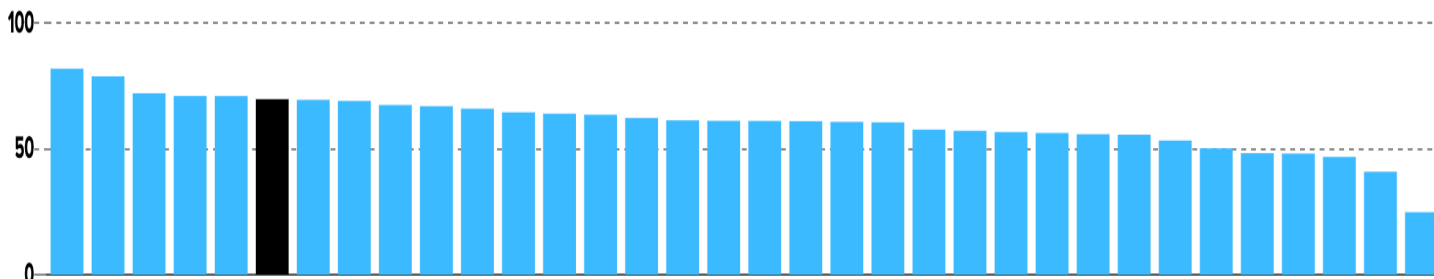
COMPANY RELATIVE PERFORMANCE

Company Ranking Compared to	Refinitiv ESG Universe	Refinitiv ESG Universe	Semiconductors & Semiconductor Equipment	Taiwan	Semiconductors & Semiconductor Equipment / Taiwan
Number of Companies	11751		222	182	34
ESG Combined Score	1193		21	65	6
ESG Score	1622		28	68	6
Environmental Pillar Score	1464		19	59	5
Social Pillar Score	714		12	53	5
Governance Pillar Score	7226		155	117	23
ESG Controversy Score	1		1	1	1

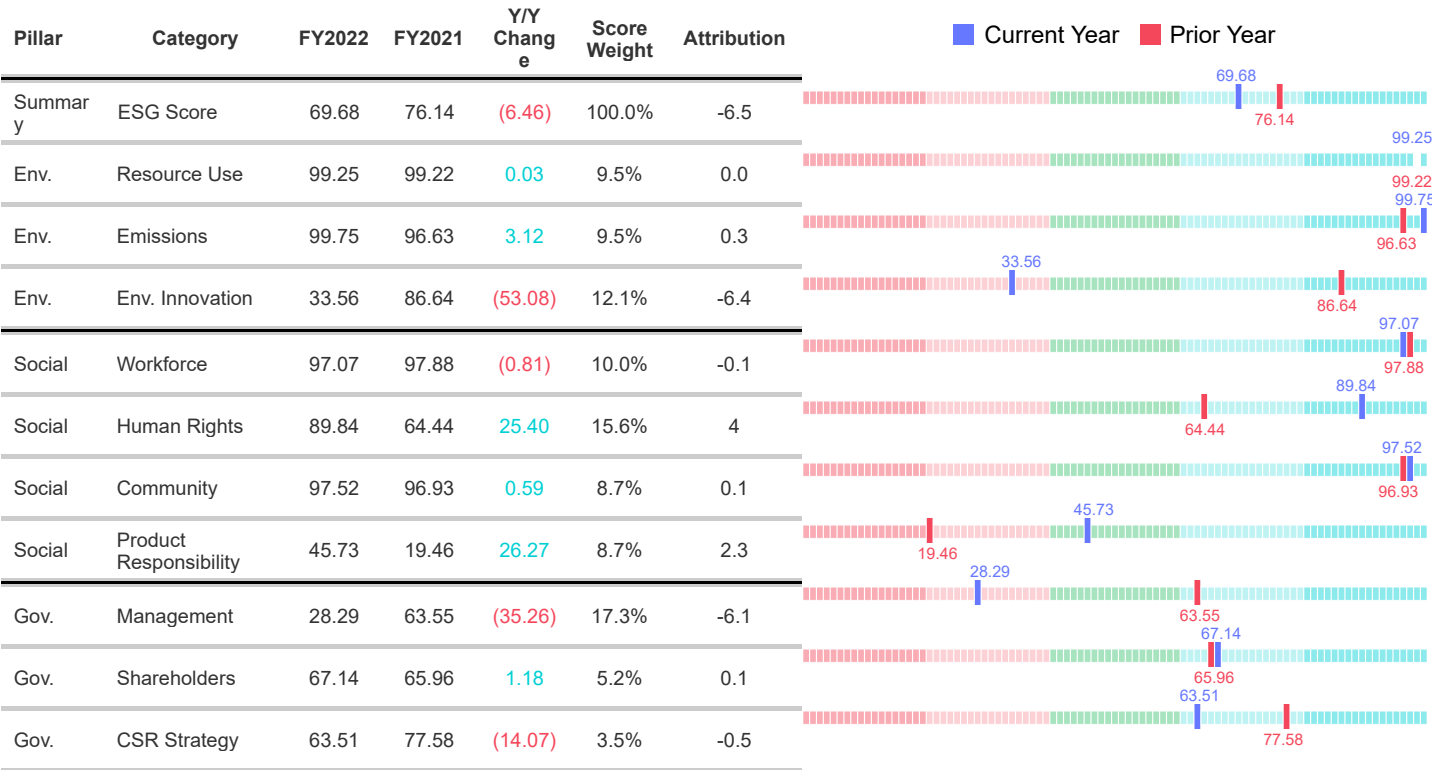
ASE Technology Holding Co Ltd - 69.68 (B+) - Ranked 6 of 34

Metric: ESG Score

Peers: Semiconductors & Semiconductor Equipment / Taiwan



YEAR-OVER-YEAR ESG PERFORMANCE - ATTRIBUTION



YEAR-OVER-YEAR ESG PERFORMANCE - MATERIAL FACTORS

Changes in company's year-over-year ESG scores are driven by two factors: Company's relative ranking against its peers, and changes in underlying data as reported by company. In the table below, "Metric Score" section identifies material changes in scores and the "Metric Value" section highlights any changes in the underlying values. Materiality is defined as any directional changes in scores greater than 8.33 (approximately one letter grade).

			Metric Score			Metric Value		
Pillar	Category	Metric Name	FY2022	FY2021	YoY Change	FY2022	FY2021	YoY Change
Env.	Emissions	Ozone-Depleting Substances To Revenues USD in million	50.00	66.67	(16.67)	0.00	0.00	0.00
Env.	Emissions	Waste Recycled To Total Waste	67.58	58.72	8.86	88.31%	84.10%	4.22%
Env.	Emissions	e-Waste Reduction	85.81	0.00	85.81	TRUE	FALSE	Yes
Env.	Emissions	Staff Transportation Impact Reduction	84.01	0.00	84.01	TRUE	FALSE	Yes
Env.	Environmental Innovation	Hybrid Vehicles	0.00	95.75	(95.75)	FALSE	TRUE	(Yes)
Social	Workforce	Employee Satisfaction	--	63.46	(63.46)	--	85.00%	(85.00%)
Social	Workforce	Injuries To Million Hours	54.59	65.50	(10.91)	0.64	0.57	0.07
Social	Human Rights	Human Rights Breaches Contractor	83.56	0.00	83.56	TRUE	FALSE	Yes
Social	Product Responsibility	Customer Satisfaction	72.62	47.30	25.32	94.00%	90.00%	4.00%
Gov.	Management	Compensation Improvement Tools	56.00	74.70	(18.70)	TRUE	TRUE	No
Gov.	Management	Internal Audit Department Reporting	0.00	77.41	(77.41)	FALSE	TRUE	(Yes)
Gov.	Management	Succession Plan	65.43	74.70	(9.27)	TRUE	TRUE	No
Gov.	Management	External Consultants	53.43	67.47	(14.04)	TRUE	TRUE	No
Gov.	Management	Board Meeting Attendance Average	7.76	33.84	(26.08)	97.25%	98.97%	(1.72%)
Gov.	Management	Non-Executive Board Members	32.57	51.81	(19.24)	69.23%	73.33%	(4.10%)
Gov.	Management	Independent Board Members	8.57	18.67	(10.10)	23.08%	26.67%	(3.59%)
Gov.	Management	Board Individual Re-election	52.86	0.00	52.86	TRUE	FALSE	Yes
Gov.	Shareholders	Director Election Majority Requirement	0.00	83.13	(83.13)	FALSE	TRUE	(Yes)
Gov.	Shareholders	Anti Takeover Devices Above Two	62.86	3.61	59.25	0	3	(3)
Gov.	Shareholders	Non-audit to Audit Fees Ratio	32.78	21.43	11.35	45.41%	53.10%	(7.69%)
Gov.	CSR Strategy	Integrated Strategy in MD&A	52.00	67.17	(15.17)	TRUE	TRUE	No

PERFORMANCE DRIVER SUMMARY

3711.TW's ESG score changed from previous year's 76.14 to 69.68, deteriorating marginally, driven by changes in 10 of the 10 ESG categories.

Relative improvements in Product Responsibility, Human Rights, Emissions categories were more than offset by relative deteriorations in Env. Innovation, Management, CSR Strategy categories (See Year-Over-Year ESG Performance - Attribution section for details)

At the metrics level, changes in 120 out of 152 number of metric scores are the primary drivers for category and summary score changes.

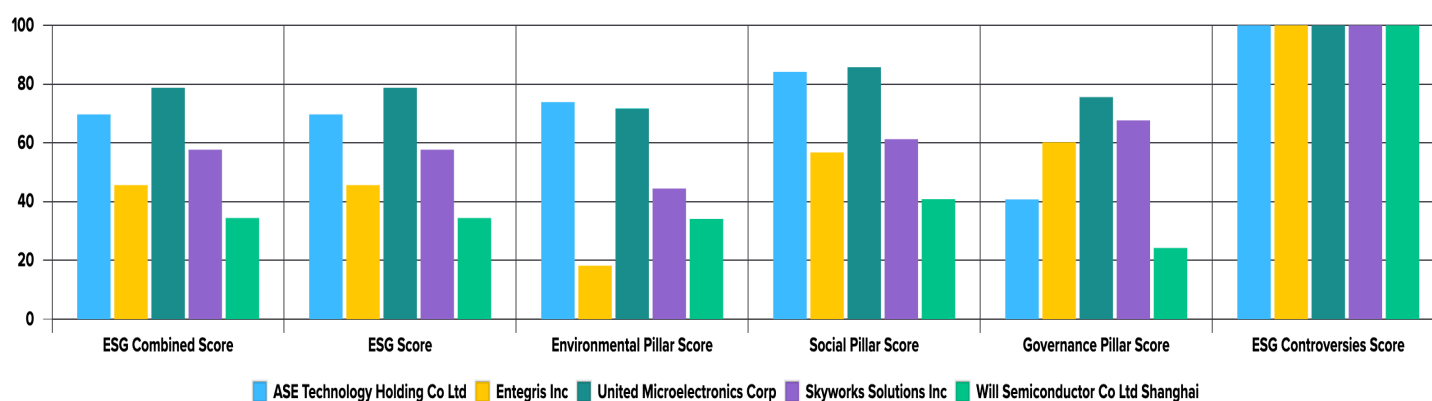
Of the 120 metrics identified, changes in relative ranking against peers drove 78 number of changes while changes in underlying reported metric values drove the rest (See Year-Over-Year ESG Performance - Material Factor section for details)

Please note changes in ESG scores are driven by two primary factors: Changes in underlying company-reported metric values and/or their relative ranking to the peer group.

PEER SUMMARY

Closest four peers by market capitalization and Semiconductors & Semiconductor Equipment

	3711.TW	ENTG.OQ	2303.TW	SWKS.OQ	603501.SS
	ASE Technology Holding Co Ltd	Entegris Inc	United Microelectronics Corp	Skyworks Solutions Inc	Will Semiconductor Co Ltd Shanghai
Company Market Cap (Mil USD)	\$19,130	\$20,207	\$19,134	\$16,811	\$15,907
Total Revenue (Mil USD)	\$18,966	\$3,524	\$7,253	\$4,772	\$2,911
ESG Combined Score	69.68	45.62	78.74	57.68	34.43
ESG Score	69.68	45.62	78.74	57.68	34.43
Environmental Pillar Score	73.86	18.20	71.73	44.46	34.12
Social Pillar Score	84.16	56.73	85.75	61.25	40.84
Governance Pillar Score	40.75	60.19	75.57	67.64	24.23
ESG Controversies Score	100.00	100.00	100.00	100.00	100.00

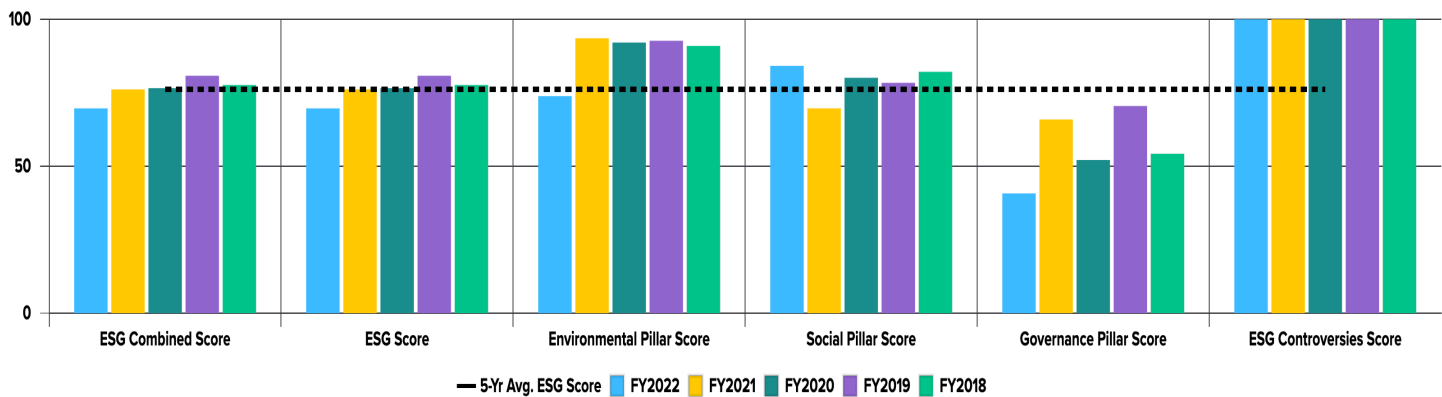


PEER DETAIL

	3711.TW	ENTG.OQ	2303.TW	SWKS.OQ	603501.SS
	ASE Technology Holding Co Ltd	Entegris Inc	United Microelectronics Corp	Skyworks Solutions Inc	Will Semiconductor Co Ltd Shanghai
Policy Water Efficiency	TRUE	TRUE	TRUE	TRUE	TRUE
Policy Energy Efficiency	TRUE	TRUE	TRUE	TRUE	TRUE
Targets Water Efficiency	TRUE	TRUE	TRUE	TRUE	FALSE
Targets Energy Efficiency	TRUE	TRUE	TRUE	FALSE	FALSE
Total Energy Use To Revenues USD in million	713.14	358.16	1,569.85	276.39	78.86
Renewable Energy Use Ratio	18.85%	1.50%	--	7.36%	--
Water Use To Revenues USD in million	1,066.48	404.16	1,909.96	360.23	86.05
Water Recycled	40,121,100.00	--	35,130,000.00	908,985.00	--

HISTORIC PERFORMANCE

	FY2022	FY2021	FY2020	FY2019	FY2018
Period End Date	2022-12-31	2021-12-31	2020-12-31	2019-12-31	2018-12-31
Historic Market Cap (Mil USD)	\$13,402	\$16,923	\$12,564	\$12,032	\$8,241
Total Revenue (Mil USD)	\$22,569	\$20,415	\$16,207	\$13,380	\$12,322
ESG Combined Score	B+	A-	A-	A-	A-
ESG Score	B+	A-	A-	A-	A-
Environmental Pillar Score	B+	A+	A+	A+	A
Social Pillar Score	A	B+	A-	A-	A-
Governance Pillar Score	C	B	B-	B+	B-
ESG Controversies Score	A+	A+	A+	A+	A+



HISTORIC PERFORMANCE SUMMARY

Over the last 5 reporting periods, 3711.TW has an average ESG score of 76.16, ranging from a high of 80.79 (FY2019) to a low of 69.68 (FY2022).

Of the three pillars that make up the overall ESG score, Environmental pillar performed the best, with an 5-year average score of 88.62, followed by Social pillar (Average score: 78.89) and then Governance pillar (Average score: 56.71).

By category and on average, Resource Use, Workforce, and Community are the three best performing categories over the last 5 years while Product Responsibility, Management, and CSR Strategy are the three laggard categories during the same period.

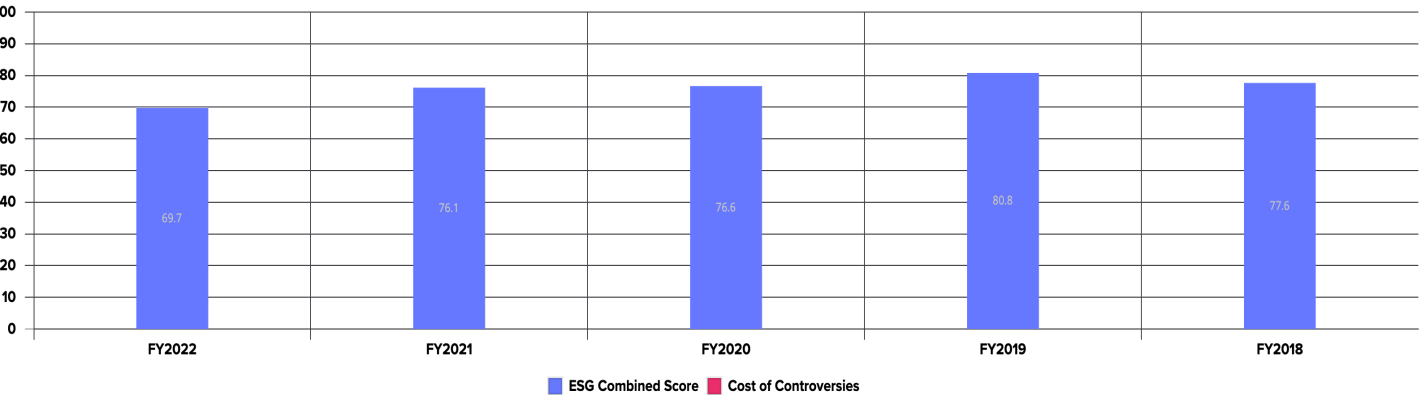
CONTROVERSIAL BUSINESS PRACTICES

Does the company engage in any controversial business activities? **No**

Did the company have any controversies in violation of the Ten Principles of the UN Global Compact? **No**

ESG CONTROVERSIES

Bad press can be costly to companies. Controversies reported in the media can bring damages to reputation, future business opportunities, and ultimately the bottom line. ESG controversies score aims to recognize these potential damages, and account for these factors in the scoring of a company's overall ESG performance. From a scoring perspective, controversies could significantly impact a company's overall rating in a negative way. Below is a list of controversies collected from the public domain.



ESG METHODOLOGY

Refinitiv's ESG Scores are designed to transparently and objectively measure a company's relative ESG performance across ten themes based on company reported data. Below document provides detailed information on ESG scoring methodology. [ESG Scores Methodology](#).

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