

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

ESG Risk Rating

23.4

-2.5

Medium Risk

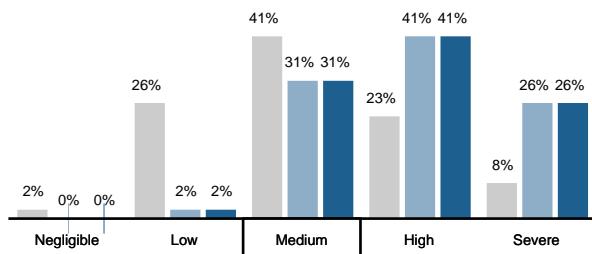
Last Full Update Nov 21, 2024

Momentum



ESG Risk Rating Score Change Log

ESG Risk Rating Distribution



ESG Risk Rating Ranking

UNIVERSE

UNIVERSE	RANK	PERCENTILE
Global Universe	6403/15100	43rd
Construction Materials INDUSTRY	12/128	10th
Construction Materials SUBINDUSTRY	12/128	10th

Peers Table

Peers (Market cap \$6.4 - \$8.9bn)	Exposure	Management	ESG Risk Rating
1. TCC Group Holdings CO., LTD.	54.8 Medium	64.8 Strong	23.4 Medium
2. CEMEX SAB de CV	55.6 High	64.2 Strong	23.9 Medium
3. Buzzi SpA	52.4 Medium	52.3 Strong	28.0 Medium
4. Summit Materials, Inc.	55.6 High	46.1 Average	32.8 High
5. Tianshan Material Co., Ltd.	56.2 High	30.5 Average	40.9 Severe

TCC Group Holdings CO., LTD.

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ESG Risk Analysis

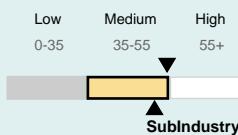
Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

54.8 +0.3

Medium Momentum

Beta = 1.05



The company's carbon footprint is affected by the nature of its operations and the source of energy used to power these operations. Increasingly stringent carbon regulations and energy efficiency requirements could lead to higher energy prices, larger associated costs for the company and compliance issues. There is increasing customer demand for more environmentally or socially responsible products and services. Companies adapting to this trend have the opportunity to improve their brand image and to differentiate on the market, while the others face the risk of losing customers over competitors. Exposure to ethical breaches is mostly derived from the company's business relations within its value chain, as well as countries of operation and size. These may include political lobbying, conflicts of interest, anti-competitive practices, tax and accounting irregularities and others.

The company's overall exposure is medium and is moderately above subindustry average. Carbon -Own Operations, E&S Impact of Products and Services and Business Ethics are notable material ESG issues.

Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

64.8 +5.4

Strong Momentum



The company's ESG-related issues are overseen by the board or the executive team, suggesting that these are integrated in core business strategy. The company's overall ESG-related disclosure follows best practice, signalling strong accountability to investors and the public. Furthermore, the company has established an overall strong environmental policy and whistleblower programme has been put in place.

The company's overall management of material ESG issues is strong.

TCC Group Holdings CO., LTD.

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Material ESG Issues

These are the Material ESG Issues driving the ESG Risk Rating.

Issue Name	ESG Risk Exposure	ESG Risk Management	ESG Risk Rating	Contribution to ESG Risk Rating
	Score Category	Score Category	Score Category	
E&S Impact of Products and Services	6.6 Medium	38.0 Average	4.6 Medium	19.7%
Carbon -Own Operations	11.7 High	77.0 Strong	4.5 Medium	19.2%
Business Ethics	6.6 Medium	55.1 Strong	3.1 Low	13.5%
Corporate Governance	6.7 Medium	60.9 Strong	2.6 Low	11.1%
Water Use -Own Operations	3.8 Low	70.2 Strong	1.7 Negligible	7.1%
Occupational Health and Safety	5.0 Medium	71.9 Strong	1.6 Negligible	6.8%
Human Capital	3.2 Low	59.4 Strong	1.4 Negligible	5.9%
Raw Material Use	2.1 Low	52.9 Strong	1.2 Negligible	5.2%
Community Relations	3.2 Low	70.0 Strong	1.2 Negligible	5.0%
Emissions, Effluents and Waste	4.0 Medium	79.4 Strong	1.1 Negligible	4.9%
Stakeholder Governance	2.0 Low	80.6 Strong	0.4 Negligible	1.7%
Overall	54.8 Medium	64.8 Strong	23.4 Medium	100.0%

Events Overview

Identify events that may negatively impact stakeholders, the environment, or the company's operations.

Category (Events)

5 Severe (0)

4 High (0)

3 Significant (0)

2 Moderate (1)

Anti-Competitive Practices

1 Low (1)

Environmental Impact of Products

TCC Group Holdings CO., LTD.

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Events Overview

Identify events that may negatively impact stakeholders, the environment, or the company's operations.

Category (Events)

⚠ None (15)

Accounting and Taxation

Bribery and Corruption

Business Ethics

Community Relations

Corporate Governance

Emissions, Effluents and Waste

Energy Use and GHG Emissions

Intellectual Property

Labour Relations

Lobbying and Public Policy

Occupational Health and Safety

Sanctions

Scarce Resource Use

Social Impact of Products

Water Use

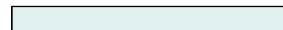
TCC Group Holdings CO., LTD.

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Risk Decomposition

Exposure

Company Exposure 54.8



The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 48.5



Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 31.4



Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 17.1



Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 6.3



Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Overall Unmanaged Risk 23.4



Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

Momentum Details

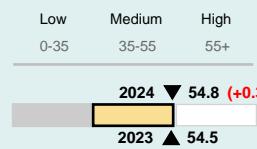
Risk Rating Momentum

-2.5



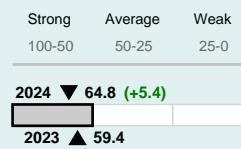
Exposure Momentum

+0.3



Management Momentum

+5.4

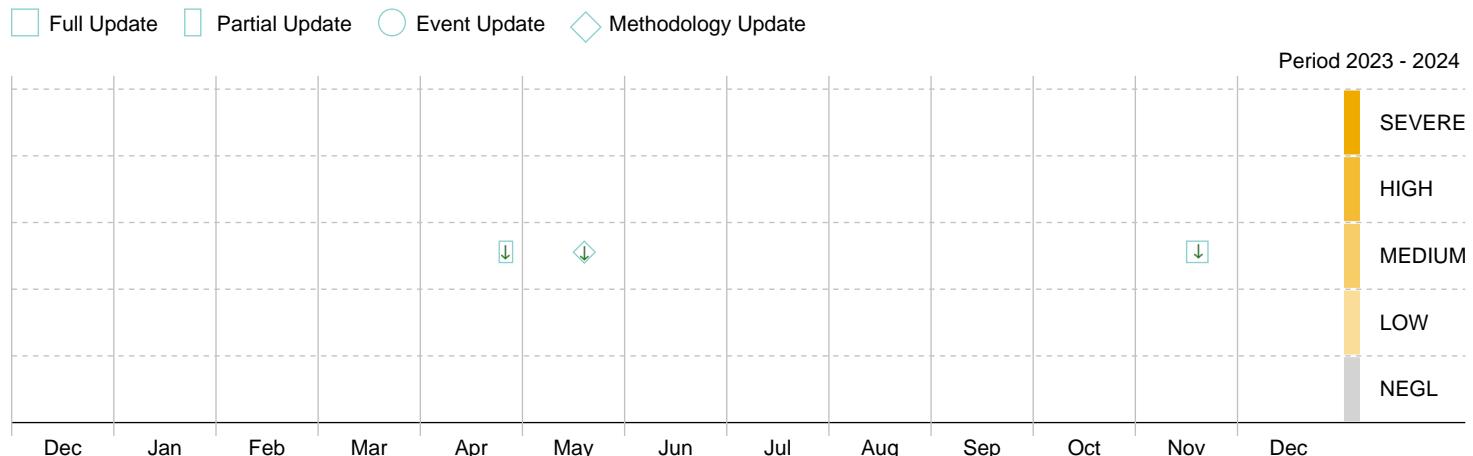


TCC Group Holdings CO., LTD.

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ESG Risk Rating Score Change Log

[View Glossary](#)



Attribute Date	Value Before Change	Value After Change	△ Change In Value	Change Trigger
2024/11/21	23.6	23.4 ↓	-0.2	Full Update
2024/05/23	24.2	23.6 ↓	-0.6	Methodology Update
2024/04/27	25.8	24.2 ↓	-1.6	Partial Update

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Issue



E&S Impact of Products and Services

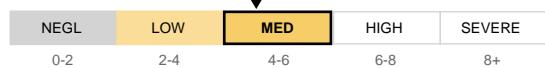
Contribution 19.7 %

Environmental and Social Impact of Products and Services covers how a company manages impacts ranging from product and service design choices to disposal, addressing both inherent risks (e.g. tobacco) and those created by use (e.g. packaging waste).

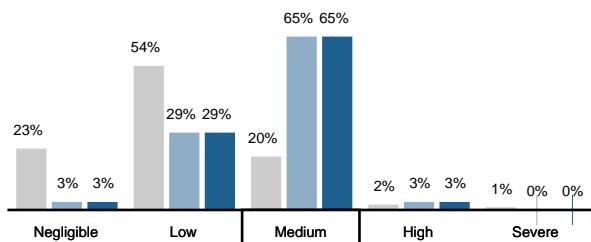
ESG Risk Rating

4.6

Medium Risk



ESG Risk Rating Distribution



ESG Risk Rating Ranking

UNIVERSE	RANK	PERCENTILE
Global Universe	1129/1326	85th
Construction Materials INDUSTRY	21/34	61st
Construction Materials SUBINDUSTRY	21/34	61st

Peers Table

Peers (Market cap \$6.3 - \$10.4bn)	Exposure	Management	ESG Risk Rating
1. CEMEX SAB de CV	6.9 Medium	65.0 Strong	3.3 Low
2. TCC Group Holdings CO., LTD.	6.6 Medium	38.0 Average	4.6 Medium
3. Buzzi SpA	5.7 Medium	24.0 Weak	4.6 Medium
4. China Jushi Co. Ltd.	5.7 Medium	17.0 Weak	4.9 Medium
5. Eagle Materials, Inc.	6.3 Medium	12.0 Weak	5.7 Medium

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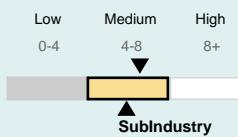
ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

6.6

Medium



Cement's status as a sustainable product has sometimes been questioned, given the energy and water intensity of its production. However, cement has properties that make it a key component of sustainable buildings. For example, cement adds to the durability of buildings, and can reduce a building's energy needs by absorbing and retaining heat, allowing homeowners to lower their energy use. Such products may be favoured by construction customers, helping them to meet their own sustainability targets, and may also help the cement industry cope with rising regulatory requirements on energy use.

The company's exposure to E&S Impact of Products and Services issues is medium and moderately above the subindustry exposure.

Exposure Analysis

Subindustry Issue Exposure	6.0
Issue Beta	x 1.10
Company Issue Exposure	6.6

Beta Indicators

Environmental Impact of	0.01
Social Impact of Products	0.00
Operating Performance	0.00
Solvency	0.03
Financial Flexibility	0.02
Asset Performance	0.02
Headquarters Location	-0.03
Sales Location	0.05
Qualitative Overlay	0.00
Subindustry Correction Factor	0.00
Exceptional Event Adjustment	0.00
Total Beta Signal	0.10
Baseline	+1.00
Overall Beta	1.10

TCC Group Holdings CO., LTD.

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Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

38.0

Average

Strong
100-50

Average
50-25

Weak
25-0

The company has established adequate supplier environmental policy. Furthermore, it is evident that it offers sustainability-related products; however, it lacks disclosure on associated revenues. Lastly, available evidence indicates that between 10 and 50 per cent of the raw material used by the company is made of recycled or reused material. The company has average preparedness measures to address E&S Impact of Products and Services issues and has been implicated in minor controversies related to the issue. In our view, the company's management of the issue is average.

Management Indicators	Raw Score	Weight	Weighted Score
Recycled Material Use	60	19.0%	11.4
Green Building Memberships	50	19.0%	9.5
Supplier Environmental Policy	50	19.0%	9.5
Sustainable Products & Services	20	38.0%	7.6
⚠ Environmental Impact of Products	Category 1	5%	0.0
⚠ Social Impact of Products	Category 0	0%	0.0
Weighted Sum			38.0

TCC Group Holdings CO., LTD.

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Risk Decomposition

Exposure

Company Exposure 6.6

The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 5.3

Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 2.0

Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 3.3

Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 1.3

Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Issue Unmanaged Risk 4.6

Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

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Issue



Carbon - Own Operations

Contribution 19.2 %

Carbon - Own Operations encompasses the management of risks linked to a company's energy use and greenhouse gas emissions within its operational control, excluding emissions during the use phase and end-of-life cycle of its products.

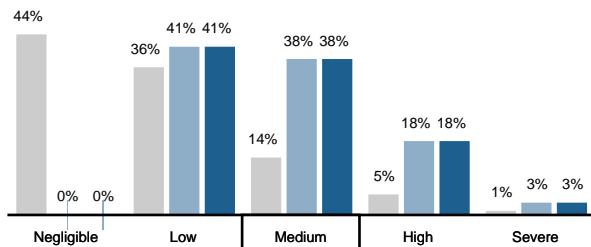
ESG Risk Rating

4.5

Medium Risk



ESG Risk Rating Distribution



ESG Risk Rating Ranking

UNIVERSE	RANK	PERCENTILE (1 st = lowest risk) (1 st = Top Score)
Global Universe	2521/2949	86th
Construction Materials INDUSTRY	17/34	49th
Construction Materials SUBINDUSTRY	17/34	49th

Peers Table

Peers (Market cap \$6.3 - \$10.4bn)

	Exposure	Management	ESG Risk Rating
1. CEMEX SAB de CV	10.4 High	80.8 Strong	3.7 Low
2. TCC Group Holdings CO., LTD.	11.7 High	77.0 Strong	4.5 Medium
3. Buzzi SpA	10.8 High	57.0 Strong	5.9 Medium
4. China Jushi Co. Ltd.	8.1 High	25.9 Average	6.4 High
5. Eagle Materials, Inc.	8.6 High	24.5 Weak	6.9 High

TCC Group Holdings CO., LTD.

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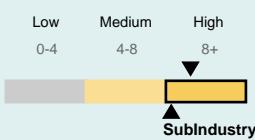
ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

11.7

High



Cement production requires significant quantities of energy, sourced primarily from the direct combustion of fossil fuels and the electrical grid. Energy is among the most significant costs in the cement industry, typically comprising 12-30% of a company's total operating spend, and even modest improvements in energy practices can have material impacts on profitability. As global carbon legislation for GHG emissions tightens, increasing energy efficiency becomes crucial for companies to mitigate operating and compliance costs.

The company's exposure to Carbon -Own Operations issues is high and significantly above the subindustry exposure.

Exposure Analysis

Subindustry Issue Exposure	9.0
Issue Beta	x 1.30
Company Issue Exposure	11.7

Beta Indicators

Energy Use and GHG Emissions	0.00
Operating Performance	0.00
Solvency	0.03
Financial Flexibility	0.02
Asset Performance	0.02
Carbon Emissions	0.10
Clinker Efficiency	0.15
Qualitative Overlay	0.00
Subindustry Correction Factor	0.00
Exceptional Event Adjustment	0.00
Total Beta Signal	0.30
Baseline	+1.00
Overall Beta	1.30

TCC Group Holdings CO., LTD.

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Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

77.0
Strong



The company has established a strong programme to manage greenhouse gas emissions. Additionally, it has a strong environmental policy and management system, that is, to a large extent, certified to ISO 14001 standards. However, over the last three years, TCC's carbon intensity, despite being on a decreasing trend, sits well above the industry benchmark. In our view, the company's management of the issue is above average.

Management Indicators	Raw Score	Weight	Weighted Score
Carbon Intensity Trend	100	15.0%	15.0
EMS Certification	100	2.5%	2.5
Environmental Management System	100	10.0%	10.0
Environmental Policy	100	5.0%	5.0
GHG Reduction Programme	100	20.0%	20.0
GHG Risk Management	100	5.0%	5.0
Renewable Energy Programmes	100	5.0%	5.0
Scope of GHG Reporting	100	5.0%	5.0
Green Logistics Programmes	50	7.5%	3.8
Carbon Intensity	25	15.0%	3.8
Renewable Energy Use	20	10.0%	2.0
⚠ Energy Use and GHG Emissions	Category 0	0%	0.0
Weighted Sum			77.0

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Risk Decomposition

Exposure

Company Exposure 11.7

Management

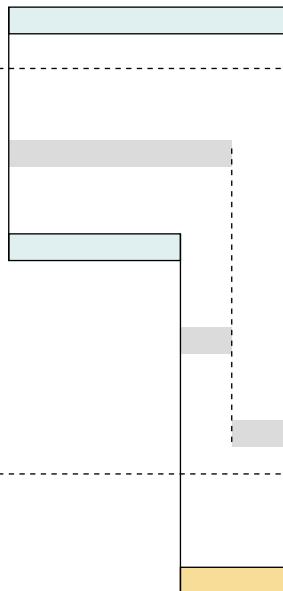
Manageable Risk 9.4

Managed Risk 7.2

Management Gap 2.2

Unmanageable Risk 2.3

Issue Unmanaged Risk 4.5



The company's sensitivity or vulnerability to ESG risks.

Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

ESG Risk Rating

TCC Group Holdings CO., LTD.

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Issue

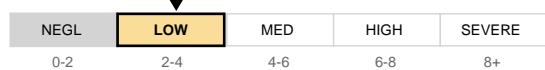


Contribution 13.5 %

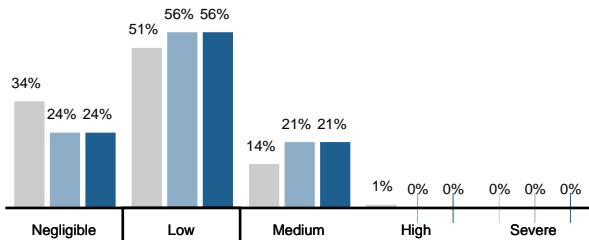
ESG Risk Rating

3.1

Low Risk



ESG Risk Rating Distribution



ESG Risk Rating Ranking

UNIVERSE	RANK	PERCENTILE
Global Universe	2905/4295	68th
Construction Materials INDUSTRY	22/34	64th
Construction Materials SUBINDUSTRY	22/34	64th

Peers Table

Peers (Market cap \$6.3 - \$10.4bn)

	Exposure	Management	ESG Risk Rating
1. Buzzi SpA	5.7 Medium	61.2 Strong	2.4 Low
2. TCC Group Holdings CO., LTD.	6.6 Medium	55.1 Strong	3.1 Low
3. Eagle Materials, Inc.	5.7 Medium	38.1 Average	3.6 Low
4. CEMEX SAB de CV	6.9 Medium	46.7 Average	3.8 Low
5. China Jushi Co. Ltd.	5.4 Medium	0.0 Weak	5.4 Medium

TCC Group Holdings CO., LTD.

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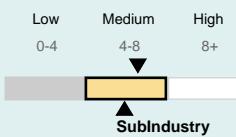
ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

6.6

Medium



The Construction Materials industry is dominated by a small number of players, and companies have regularly been involved in controversies related to anti-competitive practices, such as price fixing and collusion. Additionally, some subindustry companies have been implicated in corruption or tax and accounting fraud. Investigations of companies for abuse of market dominance are becoming more frequent in both developed and emerging countries. Regulators may prohibit companies from selling products in certain jurisdictions, or may arrest top management in case of accounting fraud.

The company's exposure to Business Ethics issues is medium and moderately above the subindustry exposure.

Exposure Analysis

Subindustry Issue Exposure	6.0
Issue Beta	x 1.10
Company Issue Exposure	6.6

Beta Indicators

Accounting and Taxation	0.00
Anti-Competitive Practices	0.02
Bribery and Corruption	0.00
Business Ethics	0.00
Intellectual Property	0.00
Lobbying and Public Policy	0.00
Sanctions	0.00
Operating Performance	0.00
Solvency	0.03
Financial Flexibility	0.02
Asset Performance	0.02
Qualitative Overlay	0.00
Subindustry Correction Factor	0.00
Exceptional Event Adjustment	0.00
Total Beta Signal	0.10
Baseline	+1.00
Overall Beta	1.10

TCC Group Holdings CO., LTD.

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Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

55.1
Strong

Strong Average Weak
100-50 50-25 25-0

The company has a strong bribery and corruption policy and programme, and has established a strong business ethics programme. It also has strong whistleblowing mechanisms; however, it lacks an independent reporting hotline that is accessible 24/7. Finally, its policy addressing political involvement and contributions is assessed as weak, and its disclosure on lobbying and donation activities is partial.

The company has above average preparedness measures to address Business Ethics issues and has been implicated in minor controversies related to the issue. In our view, the company's management of the issue is above average.

Management Indicators	Raw Score	Weight	Weighted Score
Bribery & Corruption Policy	75	6.8%	5.1
Bribery & Corruption Programmes	75	22.5%	16.9
Whistleblower Programmes	75	20.3%	15.2
Business Ethics Programme	50	22.5%	11.3
Transparency on Lobbying and	50	9.0%	4.5
Political Involvement Policy	25	9.0%	2.3
⚠️ Anti-Competitive Practices	Category 2	10%	0.0
⚠️ Accounting and Taxation	Category 0	0%	0.0
⚠️ Bribery and Corruption	Category 0	0%	0.0
⚠️ Business Ethics	Category 0	0%	0.0
⚠️ Intellectual Property	Category 0	0%	0.0
⚠️ Lobbying and Public Policy	Category 0	0%	0.0
⚠️ Sanctions	Category 0	0%	0.0
Weighted Sum			55.1

TCC Group Holdings CO., LTD.

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Risk Decomposition

Exposure

Company Exposure 6.6



The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 6.3



Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 3.5



Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 2.8



Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 0.3



Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Issue Unmanaged Risk 3.1



Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

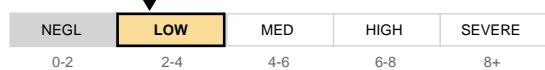
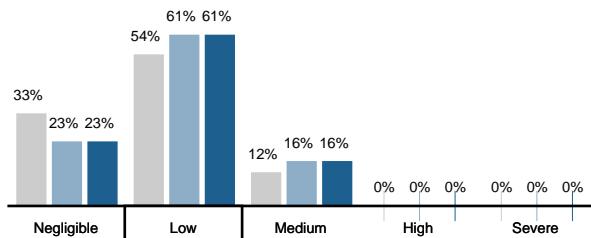
TCC Group Holdings CO., LTD.

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Issue**Corporate Governance**

Contribution 11.1 %

Corporate Governance encompasses the mechanisms, processes and policies by which a company is managed and overseen to ensure its ability to mitigate risks, increase long-term value creation and safeguard its reputation.

ESG Risk Rating**2.6****Low Risk****ESG Risk Rating Distribution****ESG Risk Rating Ranking**

UNIVERSE	RANK	PERCENTILE
Global Universe	2068/4215	50th
Construction Materials INDUSTRY	12/31	37th
Construction Materials SUBINDUSTRY	12/31	37th

Peers Table**Peers (Market cap \$6.3 - \$10.4bn)**

	Exposure	Management	ESG Risk Rating
1. Eagle Materials, Inc.	6.7 Medium	66.6 Strong	2.2 Low
2. TCC Group Holdings CO., LTD.	6.7 Medium	60.9 Strong	2.6 Low
3. China Jushi Co. Ltd.	7.0 Medium	57.7 Strong	3.0 Low
4. Buzzi SpA	8.1 High	62.2 Strong	3.0 Low
5. CEMEX SAB de CV	6.7 Medium	51.0 Strong	3.3 Low

TCC Group Holdings CO., LTD.

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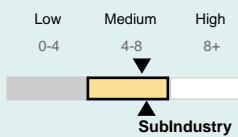
ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

6.7

Medium



Corporate Governance has risen in prominence over the past 20 years, following a series of high-profile company failures throughout the world. These failures have resulted in value destruction through record fines, bankruptcies, or the dilution of existing shareholder equity. As a result, stricter standards on company disclosure and practices have emerged among institutional investors, stock exchanges, regulators, and other market actors. In practice, Corporate Governance focuses on issues such as board and committee composition, audit, shareholder voting rights, risk oversight and executive remuneration. Shortcomings in any one of these areas may signal increased risk for shareholders (especially minority shareholders) and other stakeholders. This growing emphasis on governance has led to the adoption of frameworks and guidelines designed to enhance transparency, ensure accountability, and protect the interests of all stakeholders. Enhanced governance practices can not only mitigate risks but also contribute to companies' sustainable growth and long-term value creation.

The company's exposure to Corporate Governance issues is medium and similar to the subindustry exposure.

Exposure Analysis

Subindustry Issue Exposure	7.0
Issue Beta	x 0.95
Company Issue Exposure	6.7

Beta Indicators

Largest Shareholder Voting	-0.07
Corporate Governance	0.00
Qualitative Overlay	0.00
Exceptional Event Adjustment	0.00
Total Beta Signal	-0.05
Baseline	+1.00
Overall Beta	0.95

Beta Signal

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

60.9
Strong



In our view, the company's management of the issue is above average.

Management Indicators	Raw Score	Weight	Weighted Score
Board Committee Structure	100	6.1%	6.1
Board Executive Experience	100	5.1%	5.1
Board Non-Executive Experience	100	5.1%	5.1
Risk Oversight	100	5.1%	5.1
Shareholder Dissent	100	3.1%	3.1
Voting Proportionality	100	10.2%	10.2
Remuneration Committee	75	6.1%	4.6
Board Gender Diversity	66	3.1%	2.0
Audit Committee Experience	50	7.1%	3.6
Audit Committee Independence	50	7.1%	3.6
Board Gender Representation Target	50	2.0%	1.0
Nominating Committee Independence	50	6.1%	3.1
Short-Term Incentive Programme	50	5.1%	2.6
Board Effectiveness	25	6.1%	1.5
Board Independence	25	7.1%	1.8
Long-Term Incentive Programme	25	6.1%	1.5
Say on Pay	25	4.1%	1.0
CEO Pay Magnitude (Region)	0	2.0%	0.0
Executive Compensation Clawback	0	3.1%	0.0
⚠️ Corporate Governance	Category 0	0%	0.0
Weighted Sum			60.9

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Risk Decomposition

Exposure

Company Exposure 6.7



The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 6.7



Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 4.1



Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 2.6



Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 0.0



Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Issue Unmanaged Risk 2.6



Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Issue

Water Use - Own Operations

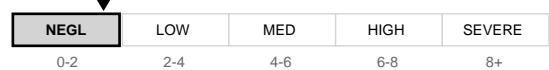
Contribution 7.1 %

Water Use - Own Operations focuses on how a company directly uses water in its production and operations and how it manages contextual, localized water risks that could affect other water users in the same watershed, especially at sites most at risk.

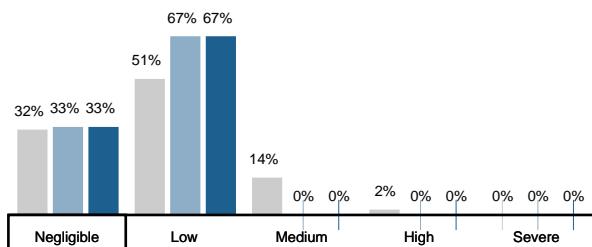
ESG Risk Rating

1.7

Negligible Risk



ESG Risk Rating Distribution



ESG Risk Rating Ranking

UNIVERSE	RANK	PERCENTILE
Global Universe	80/395	21st
Construction Materials INDUSTRY	3/9	26th
Construction Materials SUBINDUSTRY	3/9	26th

Peers Table

Peers (Market cap \$6.3 - \$7.8bn)

	Exposure	Management	ESG Risk Rating
1. CEMEX SAB de CV	4.0 Medium	82.7 Strong	1.4 Negligible
2. TCC Group Holdings CO., LTD.	3.8 Low	70.2 Strong	1.7 Negligible
3. China Jushi Co. Ltd.	4.2 Medium	7.9 Weak	3.9 Low

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

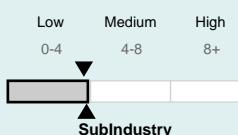
ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

3.8

Low



Companies in the Construction Materials subindustry are heavily reliant on water for various stages of their production processes, including the extraction, processing and manufacturing of materials such as cement, sand, concrete and clay. The subindustry's high level of dependence on water – particularly for cement, which requires significant water for cooling kilns, power generators and exhaust gases – makes it vulnerable to water scarcity issues, which are intensifying as a result of climate change. According to the World Resources Institute, Southern Europe, Africa, Asia and the west coast of the US face an enhanced level of water risk. In addition, the world is projected to face a 40% global water deficit by 2030. To counteract this, the EU and China have adopted increasingly stringent regulations on water usage in recent years. Misalignment with legislative requirements, for instance by exceeding usage limits, could therefore enhance compliance costs and result in financial penalties or the loss of water permits. In addition, companies and their suppliers with operations in water-stressed regions, are more exposed to operational disruptions, which can lead to declining revenue and increased transportation expenses, as they will have to source water from alternative sites. Finally, limited water availability may incite competition with local communities over water use and may trigger protests and lawsuits that could result in costly settlements. To mitigate these risks, construction materials companies can follow a dry manufacturing process and employ a closed-loop wastewater management system to increase water reuse. Moreover, companies should conduct regular water risk assessments and set and work towards achieving freshwater reduction targets. They could also engage with suppliers and local communities to ensure the sustainable use of water.

The company's exposure to Water Use -Own Operations issues is low and similar to the subindustry exposure.

Exposure Analysis

Subindustry Issue Exposure	4.0
Issue Beta	x 0.95
Company Issue Exposure	3.8

Beta Indicators

Water Use	0.00
Operating Performance	0.00
Solvency	0.03
Financial Flexibility	0.02
Asset Performance	0.02
Geographic Water Risk	0.00
Water Intensity Exposure	-0.10
Qualitative Overlay	0.00
Subindustry Correction Factor	0.00
Exceptional Event Adjustment	0.00
Total Beta Signal	-0.05
Baseline	+1.00
Overall Beta	0.95

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

70.2
Strong



In our view, the company's management of the issue is above average.

Management Indicators	Raw Score	Weight	Weighted Score
EMS Certification	100	2.5%	2.5
Effluent Management	100	5.0%	5.0
Environmental Management System	100	2.5%	2.5
Environmental Policy	100	2.5%	2.5
Water Risk Management	100	20.0%	20.0
Water Intensity	75	15.0%	11.3
Physical Climate Risk Management	66	7.5%	5.0
Water Intensity Trend	50	10.0%	5.0
Water Stewardship Commitment	50	25.0%	12.5
Scope of Water Reporting	40	10.0%	4.0
⚠ Water Use	Category 0	0%	0.0
Weighted Sum			70.2

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Risk Decomposition

Exposure

Company Exposure 3.8



The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 3.0



Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 2.1



Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 0.9



Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 0.8



Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Issue Unmanaged Risk 1.7



Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Issue



Occupational Health and Safety

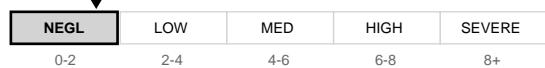
Contribution 6.8 %

Occupational Health and Safety refers to a company's ability to ensure its workforce is safe and healthy and to mitigate the risk of occupational hazards such as employee injuries or fatalities.

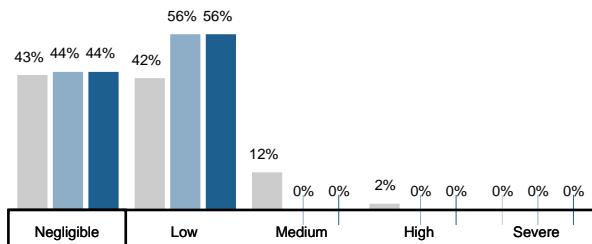
ESG Risk Rating

1.6

Negligible Risk



ESG Risk Rating Distribution



ESG Risk Rating Ranking

UNIVERSE	RANK	PERCENTILE
Global Universe	602/2044	30th
Construction Materials INDUSTRY	10/34	28th
Construction Materials SUBINDUSTRY	10/34	28th

Peers Table

Peers (Market cap \$6.3 - \$10.4bn)	Exposure	Management	ESG Risk Rating
1. TCC Group Holdings CO., LTD.	5.0 Medium	71.9 Strong	1.6 Negligible
2. Buzzi SpA	4.5 Medium	63.0 Strong	1.8 Negligible
3. CEMEX SAB de CV	5.3 Medium	49.9 Average	2.8 Low
4. Eagle Materials, Inc.	4.8 Medium	43.9 Average	2.8 Low
5. China Jushi Co. Ltd.	4.5 Medium	26.3 Average	3.4 Low

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

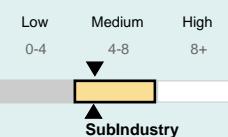
ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

5.0

Medium



Employees in the construction materials subindustry are vulnerable to on-the-job safety hazards as well as less visible but more prevalent occupational health issues, such as musculoskeletal disorders, skin diseases (from direct contact with cement) and respiratory diseases (from air and dust emissions), particularly silicosis and asbestos-related mesothelioma. Ensuring healthy and safe working conditions for employees is a key industry challenge. In an industry with higher than average fatality rates, poor health and safety records can increase regulatory compliance costs from more stringent oversight. In addition, a poor health and safety record can affect a company's insurance premiums and operating costs, while exposing a company to lawsuits from affected workers or their families. Though safety fines may be inconsequential in some markets, long-term payouts to workers related to asbestos exposure and other respiratory diseases may in the aggregate cost the company up to billions of dollars in some markets. Additionally, poor safety practices can negatively impact employee morale and productivity, while causing operational disruptions as accidents are investigated. Best practice includes strong health and safety management programmes, and transparent reporting on injury rates and company responses to incidents.

The company's exposure to Occupational Health and Safety issues is medium and similar to the subindustry exposure.

Exposure Analysis

Subindustry Issue Exposure	5.0
Issue Beta	x 1.00
Company Issue Exposure	5.0

Beta Indicators

Occupational Health and Safety	0.00
Operating Performance	0.00
Solvency	0.03
Financial Flexibility	0.02
Asset Performance	0.02
Headquarters Location	-0.03
Assets Location	-0.05
Qualitative Overlay	0.00
Subindustry Correction Factor	0.00
Exceptional Event Adjustment	0.00
Total Beta Signal	0.00
Baseline	+1.00
Overall Beta	1.00

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

71.9
Strong



In our view, the company's management of the issue is above average.

Management Indicators	Raw Score	Weight	Weighted Score
Contractor Safety Programme	100	12.5%	12.5
Employee Fatality Rate	100	12.5%	12.5
Health and Safety Certifications	100	12.5%	12.5
Health and Safety Management	100	25.0%	25.0
Contractor Fatalities	75	12.5%	9.4
Lost-Time Incident Rate Trend	0	25.0%	0.0
⚠️ Occupational Health and Safety	Category 0	0%	0.0
Weighted Sum			71.9

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Risk Decomposition

Exposure

Company Exposure 5.0



The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 4.8

Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 3.4

Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 1.3

Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 0.3

Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Issue Unmanaged Risk 1.6



Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Issue



Human Capital

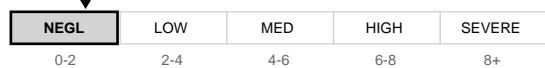
Contribution 5.9 %

Human Capital encompasses a company's management of its human resources, from acquiring and retaining top talent, to providing advancement opportunities in a diverse and equal work environment, and adopting an inclusive corporate culture.

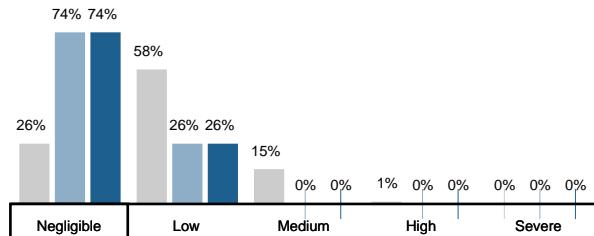
ESG Risk Rating

1.4

Negligible Risk



ESG Risk Rating Distribution



ESG Risk Rating Ranking

UNIVERSE	RANK	PERCENTILE
Global Universe	385/4343	10th
Construction Materials INDUSTRY	7/34	19th
Construction Materials SUBINDUSTRY	7/34	19th

Peers Table

Peers (Market cap \$6.3 - \$10.4bn)	Exposure	Management	ESG Risk Rating
1. TCC Group Holdings CO., LTD.	3.2 Low	59.4 Strong	1.4 Negligible
2. CEMEX SAB de CV	3.3 Low	59.4 Strong	1.4 Negligible
3. Buzzi SpA	2.9 Low	40.6 Average	1.8 Negligible
4. Eagle Materials, Inc.	2.9 Low	26.0 Average	2.1 Low
5. China Jushi Co. Ltd.	2.7 Low	11.0 Weak	2.4 Low

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

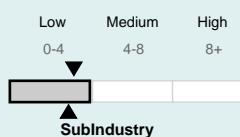
ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

3.2

LOW



The construction materials subindustry employs millions of employees and contractors worldwide; publicly traded companies alone directly employ more than two million people across the globe. As cement companies look for innovative products and processes to optimize energy and resource use, they must attract and retain skilled R&D staff to maintain competitive and cost advantages. Additionally, labour relations issues and employee strikes are also common within the subindustry. A large proportion of cement plant workers are unionized; however, some companies' violations of freedom of association and the right to form unions, as well as discriminatory practices, have led to work stoppages and have caused reputational damage. On the other hand, strong relationships with unions can help management minimize operational disruptions from strikes. Best practice includes strong Human Capital development and engagement programmes, as well as strong labour standards and anti-discrimination policies.

The company's exposure to Human Capital issues is low and similar to the subindustry exposure.

Exposure Analysis

Subindustry Issue Exposure	3.0
Issue Beta	x 1.05
Company Issue Exposure	3.2

Beta Indicators

Labour Relations	0.00
Operating Performance	0.00
Solvency	0.03
Financial Flexibility	0.02
Asset Performance	0.02
Qualitative Overlay	0.00
Subindustry Correction Factor	0.00
Exceptional Event Adjustment	0.00
Total Beta Signal	0.05
Baseline	+1.00
Overall Beta	1.05

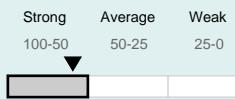
TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

59.4
Strong



In our view, the company's management of the issue is above average.

Management Indicators	Raw Score	Weight	Weighted Score
Collective Bargaining Agreements	100	15.0%	15.0
Discrimination Policy	100	7.5%	7.5
Freedom of Association Policy	100	5.0%	5.0
Human Capital Development	75	30.0%	22.5
Diversity Programmes	50	12.5%	6.3
Working Hours Policy	25	12.5%	3.1
Employee Turnover Rate	0	17.5%	0.0
⚠ Labour Relations	Category 0	0%	0.0
Weighted Sum			59.4

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Risk Decomposition

Exposure

Company Exposure 3.2



The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 3.0



Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 1.8



Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 1.2



Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 0.2



Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Issue Unmanaged Risk 1.4



Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Issue



Raw Material Use

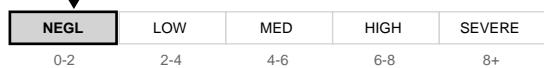
Contribution 5.2 %

Raw Materials Use encompasses a company's management of raw material inputs (excluding energy and petroleum-based products) in the production process. It includes the selection, use and efficiency of raw material inputs.

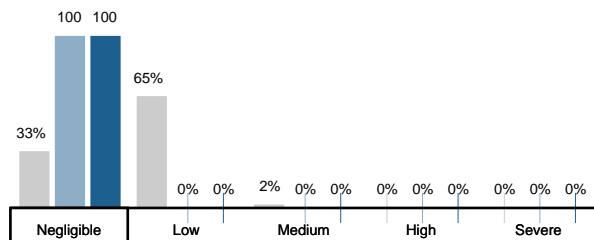
ESG Risk Rating

1.2

Negligible Risk



ESG Risk Rating Distribution



ESG Risk Rating Ranking

UNIVERSE	RANK	PERCENTILE
Global Universe	7/137	5th
Construction Materials INDUSTRY	3/9	26th
Construction Materials SUBINDUSTRY	3/9	26th

Peers Table

Peers (Market cap \$6.3 - \$7.8bn)	Exposure	Management	ESG Risk Rating
1. CEMEX SAB de CV	2.2 Low	59.9 Strong	1.1 Negligible
2. TCC Group Holdings CO., LTD.	2.1 Low	52.9 Strong	1.2 Negligible
3. China Jushi Co. Ltd.	1.8 Low	17.1 Weak	1.6 Negligible

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

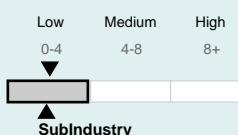
ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

2.1

Low



The Construction Materials subindustry relies heavily on raw materials such as sand, stone, clay, brick, limestone and gypsum. Demand for these materials is expected to rise due to population growth and improved living standards. However, this increased demand, along with issues such as the scarcity and accessibility of these raw materials, poses operational and financial risks to companies in the subindustry. Environmental laws and zoning regulations, in the US, China and Europe, have affected limestone and sand mining, as they place restrictions on quarrying and mining permits, due to potential damage to reserves, biodiversity, and pollution of air, soil and water. Additionally, conflicts around mining locations, particularly in sand mining, can lead to supply disruptions. On the other hand, the growing demand for sustainable construction materials, like greener cement, as well as positive policies supporting decarbonization, such as the EU Emissions Trading System (ETS) and the US Inflation Reduction Act, present new opportunities. Companies that use recycled construction materials or alternative materials that partially substitute clinker, such as slag and fly ash, are well positioned to compete and benefit from this trend. Other companies are exploring new materials such as timber and bamboo, provided they are logged legally and sustainably. To manage risks and seize opportunities, companies should implement robust management practices, invest in eco-design and circularity, and seek substitutes for raw materials. Moreover, they should avoid involvement in unauthorized resource exploration or exceeding allotted amounts, which could lead to reputational damage and regulatory penalties.

The company's exposure to Raw Material Use issues is low and similar to the subindustry exposure.

Exposure Analysis

Subindustry Issue Exposure	2.0
Issue Beta	x 1.05
Company Issue Exposure	2.1

Beta Indicators

Scarce Resource Use	0.00
Operating Performance	0.00
Solvency	0.03
Financial Flexibility	0.02
Asset Performance	0.02
Qualitative Overlay	0.00
Subindustry Correction Factor	0.00
Exceptional Event Adjustment	0.00
Total Beta Signal	0.05
Baseline	+1.00
Overall Beta	1.05

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

52.9
Strong



In our view, the company's management of the issue is above average.

Management Indicators	Raw Score	Weight	Weighted Score
EMS Certification	100	2.5%	2.5
Environmental Management System	100	5.0%	5.0
Environmental Policy	100	2.5%	2.5
Eco-Design	75	22.5%	16.9
Raw Material Innovation Programmes	75	10.0%	7.5
Recycled Material Use	60	10.0%	6.0
Recycled Material Programmes	50	15.0%	7.5
Recycled Material Use Commitment	50	10.0%	5.0
End-of-Life Product Stewardship	0	22.5%	0.0
⚠ Scarce Resource Use	Category 0	0%	0.0
Weighted Sum			52.9

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Risk Decomposition

Exposure

Company Exposure 2.1

The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 1.7

Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 0.9

Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 0.8

Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 0.4

Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Issue Unmanaged Risk 1.2

Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Issue



Community Relations

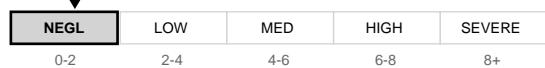
Contribution 5.0 %

Community Relations focuses on how companies engage with communities by assessing how they involve local communities in business decisions, minimize adverse impacts on their wellbeing and foster sustainable community development over the long term.

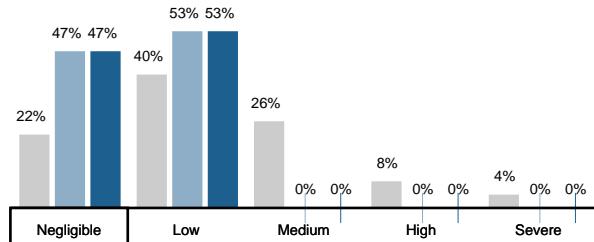
ESG Risk Rating

1.2

Negligible Risk



ESG Risk Rating Distribution



ESG Risk Rating Ranking

UNIVERSE	RANK	PERCENTILE
Global Universe	45/881	6th
Construction Materials INDUSTRY	7/34	19th
Construction Materials SUBINDUSTRY	7/34	19th

Peers Table

Peers (Market cap \$6.3 - \$10.4bn)	Exposure	Management	ESG Risk Rating
1. CEMEX SAB de CV	3.3 Low	76.5 Strong	1.0 Negligible
2. TCC Group Holdings CO., LTD.	3.2 Low	70.0 Strong	1.2 Negligible
3. Buzzi SpA	2.9 Low	50.0 Average	1.6 Negligible
4. China Jushi Co. Ltd.	2.7 Low	0.0 Weak	2.7 Low
5. Eagle Materials, Inc.	2.9 Low	0.0 Weak	2.8 Low

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

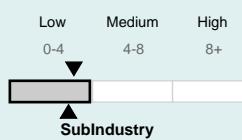
ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

3.2

LOW



Exposure to Community Relations issues for companies in the Construction Materials subindustry is mainly driven by the production of aggregates, such as gravel, crushed stone and sand. Aggregates are the primary raw material for asphalt and cement production and can also be sold as a product in and of themselves, as they are employed in many construction activities, such as foundations and levelling. Aggregates can be extracted from pits, quarries and mines; these operations generally release significant dust and air pollution and consume a great deal of water, making them prone to community opposition. Quarries located near Indigenous communities face the added challenge of working with stakeholders who have stronger connections to the land. Community opposition to a mine commonly manifests in the form of protests or blockades that can delay or prevent the development of the quarry. While community opposition is most common at the beginning of a mine's life cycle, it can occur at any time during development, especially in the case of environmental accidents, mine expansions or layoffs, which may trigger community tensions. Some aggregates can also be extracted from rivers and ocean deposits, which could cause erosion, water pollution and damage to biodiversity. This is the case for sand: Many countries worldwide, such as China and India, are extracting sand at unsustainable levels far exceeding the replenishment rate, leading to increased government scrutiny. These countries also face severe cases of illegal mining and have witnessed violence against community opposition. As such, companies that fail to maintain good community relations may face opposition to their aggregates production, which can lead to reputational, operational and financial risks. Best practice includes formal commitments to respect Indigenous populations' rights, community consultation initiatives, and community development action throughout a mine's life cycle.

The company's exposure to Community Relations issues is low and similar to the subindustry exposure.

Exposure Analysis

Subindustry Issue Exposure	3.0
Issue Beta	x 1.05
Company Issue Exposure	3.2

Beta Indicators

Community Relations	0.00
Operating Performance	0.00
Solvency	0.03
Financial Flexibility	0.02
Asset Performance	0.02
Qualitative Overlay	0.00
Subindustry Correction Factor	0.00
Exceptional Event Adjustment	0.00
Total Beta Signal	0.05
Baseline	+1.00
Overall Beta	1.05

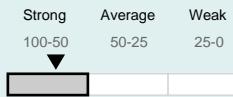
TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

70.0
Strong



In our view, the company's management of the issue is above average.

Management Indicators	Raw Score	Weight	Weighted Score
Community Development	75	30.0%	22.5
Community Involvement Programmes	75	50.0%	37.5
Indigenous Rights Policy	50	20.0%	10.0
⚠️ Community Relations	Category 0	0%	0.0
Weighted Sum			70.0

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Risk Decomposition

Exposure

Company Exposure 3.2

The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 2.8

Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 2.0

Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 0.9

Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 0.3

Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Issue Unmanaged Risk 1.2

Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Issue



Emissions, Effluents and Waste

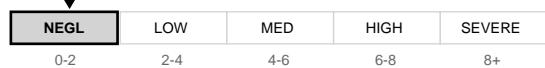
Contribution 4.9 %

Emissions Effluents and Waste encompasses a company's practices to minimize non-greenhouse gas emissions, waste and wastewater discharges across its operations, as well as its preparedness and response measures for potential pollution emergencies.

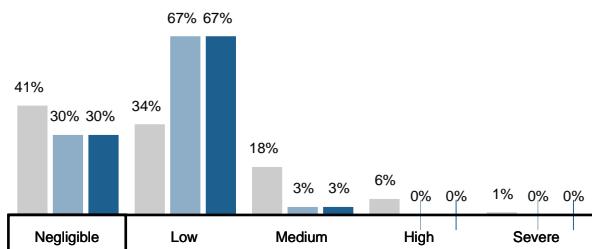
ESG Risk Rating

1.1

Negligible Risk



ESG Risk Rating Distribution



ESG Risk Rating Ranking

UNIVERSE	RANK	PERCENTILE
Global Universe	259/1880	15th
Construction Materials INDUSTRY	1/33	1st
Construction Materials SUBINDUSTRY	1/33	1st

Peers Table

Peers (Market cap \$6.3 - \$10.4bn)	Exposure	Management	ESG Risk Rating
1. TCC Group Holdings CO., LTD.	4.0 Medium	79.4 Strong	1.1 Negligible
2. CEMEX SAB de CV	4.8 Medium	68.9 Strong	1.8 Negligible
3. Buzzi SpA	4.3 Medium	51.4 Strong	2.3 Low
4. China Jushi Co. Ltd.	3.3 Low	29.0 Average	2.4 Low
5. Eagle Materials, Inc.	4.8 Medium	21.8 Weak	3.8 Low

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

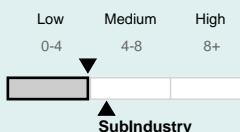
ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

4.0

Medium



Cement plants release harmful emissions such as sulfur dioxide (SO_x), nitrogen oxide (NO_x) and particulate matter in the cement manufacturing process, and may also contaminate local water sources through stormwater discharges that contain alkaline compounds, oil and grease, or other toxic substances. Companies are subject to a wide variety of regulated emissions limits that vary from region to region. On July 1, 2015, the US EPA finalized amendments to its air emissions regulations for the Portland cement industry, and established "maximum achievable control technology" standards (known as PC MACT). The PC MACT standards EPA have set stricter standards for toxic air emissions for new and existing cement kilns. China, which is globally the largest exporter of cement, tightened air emissions standards for the cement industry in 2014, including tougher limits on NO_x and particulate matter. In China, cement kilns may also process a variety of hazardous and solid wastes to fuel cement production, which can contribute to toxic emissions. India, another top producer of cement globally, has less stringent air emissions limits than the US or China, but there is a global trend toward lowering emissions limits to combat the negative effects of air pollution. Failure to manage emissions has led to regulatory fines for companies, as well as remediation costs. Reducing emissions for cement companies involves using alternative fuel sources rather than coal, adopting costly coal cleaning technologies, or installing scrubbers. Leading companies are proactively investing in reducing their air emissions to stay ahead of the regulatory curve, while proactively managing hazardous waste. Best practice includes strong air emissions reduction programmes, as well as hazardous and solid waste management programmes.

The company's exposure to Emissions, Effluents and Waste issues is medium and moderately below the subindustry exposure.

Exposure Analysis

Subindustry Issue Exposure	5.0
Issue Beta	x 0.80
Company Issue Exposure	4.0

Beta Indicators

Emissions, Effluents and Waste	0.00
Operating Performance	0.00
Solvency	0.03
Financial Flexibility	0.02
Asset Performance	0.02
Headquarters Location	-0.03
Assets Location	-0.05
NOx Emissions	-0.10
SOx Emissions	-0.10
Qualitative Overlay	0.00
Subindustry Correction Factor	0.00
Exceptional Event Adjustment	0.00

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. Our exposure score takes into consideration subindustry and company-specific factors such as its business model.

Beta Indicators	Beta Signal
Total Beta Signal	-0.20
Baseline	+1.00
Overall Beta	0.80

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

79.4
Strong



In our view, the company's management of the issue is above average.

Management Indicators	Raw Score	Weight	Weighted Score
EMS Certification	100	7.5%	7.5
Effluent Management	100	17.5%	17.5
Environmental Management System	100	10.0%	10.0
Environmental Policy	100	5.0%	5.0
Non-GHG Air Emissions Programmes	100	20.0%	20.0
NOx Intensity	75	5.0%	3.8
SOx Intensity	75	5.0%	3.8
Solid Waste Management	50	17.5%	8.8
Hazardous Waste Management	25	12.5%	3.1
⚠️ Emissions, Effluents and Waste	Category 0	0%	0.0
Weighted Sum			79.4

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Risk Decomposition

Exposure

Company Exposure 4.0



The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 3.6



Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 2.9



Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 0.7



Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 0.4



Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Issue Unmanaged Risk 1.1



Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Issue



Stakeholder Governance

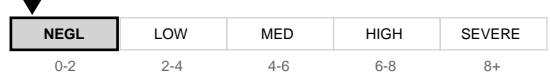
Contribution 1.7 %

Stakeholder Governance encompasses the mechanisms, processes and policies used by a company to manage its extra-financial risks and broader stakeholder relationships beyond focusing solely on shareholders.

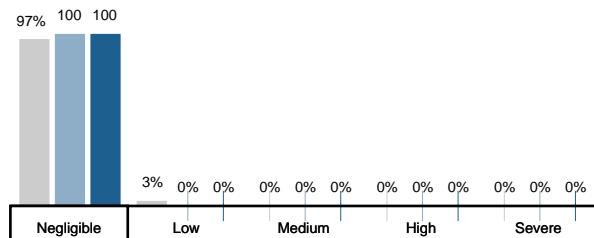
ESG Risk Rating

0.4

Negligible Risk



ESG Risk Rating Distribution



ESG Risk Rating Ranking

UNIVERSE	RANK	PERCENTILE
(1 st = lowest risk) (1 st = Top Score)		
Global Universe	350/4575	9th
Construction Materials INDUSTRY	5/34	13th
Construction Materials SUBINDUSTRY	5/34	13th

Peers Table

Peers (Market cap \$6.3 - \$10.4bn)

	Exposure	Management	ESG Risk Rating
1. CEMEX SAB de CV	2.0 Low	83.1 Strong	0.3 Negligible
2. TCC Group Holdings CO., LTD.	2.0 Low	80.6 Strong	0.4 Negligible
3. Buzzi SpA	2.0 Low	57.1 Strong	0.9 Negligible
4. Eagle Materials, Inc.	2.0 Low	47.7 Average	1.0 Negligible
5. China Jushi Co. Ltd.	2.0 Low	21.9 Weak	1.6 Negligible

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

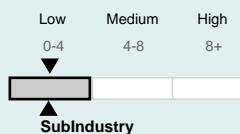
ESG Risk Analysis

Exposure refers to the extent to which a company is exposed to different material ESG Issues. The exposure score takes into consideration subindustry and company-specific factors such as its business model.

ESG Risk Exposure

2.0

Low



Public and private companies across all industries are increasingly expected to demonstrate how they have considered their business' impact on a broad range of stakeholders, beyond focusing solely on the needs of shareholders. A core element of this includes establishing safeguards and controls to manage the environmental, social and governance risks arising from a company's operations. At the same time, due to increasing regulatory requirements, firms are being required to enhance disclosures and adopt more robust processes and policies to monitor and manage ESG risks. Companies that fail to adopt the necessary structures to address stakeholders' expectations are subject to increased scrutiny and pressure from a range of interested parties demanding transparency and action. This can leave firms exposed to operational, reputational and financial risks. Companies in which the board and senior management have oversight of and assume responsibility for ensuring that there are appropriate mechanisms in place to mitigate the firm's environmental and social impacts and ensure ethical business conduct are considered to have a competitive advantage.

The company's exposure to Stakeholder Governance issues is low and similar to the subindustry exposure.

Exposure Analysis

Subindustry Issue Exposure	2.0
Issue Beta	x 1.00
Company Issue Exposure	2.0

Beta Indicators

Qualitative Overlay	0.00
Exceptional Event Adjustment	0.00
Ownership	0.00
Total Beta Signal	0.00
Baseline	+1.00
Overall Beta	1.00

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Management refers to how well a company is managing its relevant ESG issues. The management score assesses the robustness of a company's ESG programs, practices, and policies.

ESG Risk Management

80.6
Strong



In our view, the company's management of the issue is above average.

Management Indicators	Raw Score	Weight	Weighted Score
Discrimination Policy	100	10.2%	10.2
ESG Governance	100	11.2%	11.2
ESG Reporting Standards	100	6.4%	6.4
Environmental Policy	100	9.1%	9.1
GHG Reduction Programme	100	10.2%	10.2
Scope of Social Supplier Standards	100	4.8%	4.8
Bribery & Corruption Policy	75	11.2%	8.4
Whistleblower Programmes	75	11.2%	8.4
Supplier Environmental Policy	50	3.7%	1.9
Tax Disclosure	50	9.1%	4.5
Transparency on Lobbying and	50	3.7%	1.9
Verification of ESG Reporting	50	5.3%	2.7
Political Involvement Policy	25	3.7%	0.9
Weighted Sum			80.6

TCC Group Holdings CO., LTD.

Construction Materials Taiwan TAI:1101

Risk Decomposition

Exposure

Company Exposure 2.0



The company's sensitivity or vulnerability to ESG risks.

Management

Manageable Risk 2.0



Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk 1.6



Material ESG risk that has been managed by a company through suitable policies, programmes or initiatives.

Management Gap 0.4



Measures the difference between material ESG risk that could be managed by the company and what the company is managing.

Unmanageable Risk 0.0



Material ESG risk inherent in the products or services of a company and/or the nature of a company's business, which cannot be managed by the company.

ESG Risk Rating

Issue Unmanaged Risk 0.4



Material ESG risk that has not been managed by a company, and includes two types of risk: unmanageable risk, as well as risks that could be managed by a company through suitable initiatives but which may not yet be managed.

Appendix



Exposure Details



E&S Impact of Products and Services

EA.E.17 - Environmental Impact of Products

0.01

Beta Signal

Category 1

EA.E.32 - Social Impact of Products

0.00

Beta Signal

No evidence of relevant controversies

EA.F.1 - Operating Performance

0.00

Beta Signal

The company has an average net income margin.

Average Net Income Margin (Trailing 3 Years): 10.33

Subindustry Median (Trailing 3 Years): 9.59

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.2 - Solvency

0.03

Beta Signal

The company has a very weak debt-equity ratio.

Average Debt to Equity Ratio (Trailing 3 Years): 0.76

Subindustry Median (Trailing 3 Years): 0.39

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.3 - Financial Flexibility

0.02

Beta Signal

The company has a weak cash flow ratio.

Average Free Cash Flow Ratio (Trailing 3 Years): 6.51

Subindustry Median (Trailing 3 Years): 8.46

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.4 - Asset Performance

0.02

Beta Signal

The company has a weak return on assets.

Average Return on Assets (Trailing 3 Years): 2.6

Subindustry Median (Trailing 3 Years): 5.25

Source: Morningstar, August 2024. All Rights Reserved.

EA.G.1 - Headquarters Location

- 0.03

Beta Signal

The location of the company's headquarters indicates slightly lower exposure to this issue.

Taiwan: Lower exposure

Source: Sustainalytics Country Risk Rating, November 2023.

EA.G.3 - Sales Location

0.05

Beta Signal

The location of the company's sales indicates slightly higher exposure to this issue.

Taiwan 53% (Slightly higher exposure)

China 23% (Average exposure)

Other: 24%

Source: Sustainalytics Country Risk Rating, November 2023.

Morningstar, November 2023. All Rights Reserved.

Appendix



Exposure Details

EA.S.1 - Qualitative Overlay

0.00

Beta Signal

Answer category for neutral beta signal adjustment

EA.S.2 - Subindustry Correction Factor

0.00

Beta Signal

EA.S.3 - Exceptional Event Adjustment

0.00

Beta Signal

Appendix



Management Details

E.2.1 - Supplier Environmental Policy

50 Raw Score	19.00% Weight	9.5 Weighted Score
-----------------	------------------	-----------------------

The company has an adequate policy

Criteria

- The company has a general statement on green procurement
- The company's policy includes a commitment to consider suppliers' environmental performance in its procurement decision-making process
- The company's policy includes a commitment to engage with suppliers to improve their environmental performance
- The company's policy includes a commitment to monitor suppliers' environmental performance

Citations

Taiwan Cement Corp. Stakeholder Engagement Policy, released February 2024

The company provided feedback on 01 November 2024

E.2.1.7 - Recycled Material Use

60 Raw Score	19.00% Weight	11.4 Weighted Score
-----------------	------------------	------------------------

The company uses a moderate amount of recycled/reused materials in its products

Further Quantitative Criteria Details

FY: 2023 Source: -

Metric	Metric Value
Share of Recycled Input Material - Percentage of Total Input Material	14.1 %

E.3.1.1 - Sustainable Products & Services

20 Raw Score	38.00% Weight	7.6 Weighted Score
-----------------	------------------	-----------------------

There is evidence that the company offers sustainability-related products or services but the revenues obtained from these are not disclosed

Citations

Taiwan Cement Corp. TCFD Report 2023; released June 2024

G.1.3.4 - Green Building Memberships

50 Raw Score	19.00% Weight	9.5 Weighted Score
-----------------	------------------	-----------------------

The company has limited involvement in key industry initiatives

Citations

Taiwan Green Building Council, www.taiwangbc.org.tw; accessed 22 July 2024

The company provided feedback on 01 November 2024

Appendix



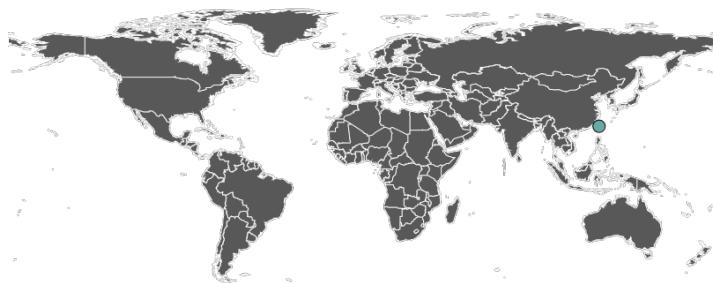
Management Details

Environmental Impact of Products Events



Category 1 Event - Low

Incident History



Authorities request additional information on power plant in Taiwan
Global Energy Monitor - 25 August 2022

Locations: Hualien County, Taiwan

Tags: Environmental impact of products

Appendix



Exposure Details



Carbon - Own Operations

EA.E.15 - Energy Use and GHG Emissions

0.00

Beta Signal

No evidence of relevant controversies

EA.F.1 - Operating Performance

0.00

Beta Signal

The company has an average net income margin.

Average Net Income Margin (Trailing 3 Years): 10.33

Subindustry Median (Trailing 3 Years): 9.59

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.2 - Solvency

0.03

Beta Signal

The company has a very weak debt-equity ratio.

Average Debt to Equity Ratio (Trailing 3 Years): 0.76

Subindustry Median (Trailing 3 Years): 0.39

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.3 - Financial Flexibility

0.02

Beta Signal

The company has a weak cash flow ratio.

Average Free Cash Flow Ratio (Trailing 3 Years): 6.51

Subindustry Median (Trailing 3 Years): 8.46

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.4 - Asset Performance

0.02

Beta Signal

The company has a weak return on assets.

Average Return on Assets (Trailing 3 Years): 2.6

Subindustry Median (Trailing 3 Years): 5.25

Source: Morningstar, August 2024. All Rights Reserved.

EA.P.1 - Carbon Emissions

0.10

Beta Signal

The company's carbon emissions intensity is above its subindustry or industry benchmark

Appendix



Exposure Details

EA.P.23 - Clinker Efficiency

0.15

Beta Signal

The company's clinker ratio is 76% or higher.

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

EA.S.1 - Qualitative Overlay

0.00

Beta Signal

Answer category for neutral beta signal adjustment

EA.S.2 - Subindustry Correction Factor

0.00

Beta Signal

EA.S.3 - Exceptional Event Adjustment

0.00

Beta Signal

Appendix



Management Details

E.1.1 - Environmental Policy

100 Raw Score	5.00% Weight	5.0 Weighted Score
------------------	-----------------	-----------------------

The company has a very strong policy

Criteria

- Approved by senior management or the board of directors
- Commitment to consult with stakeholders on environmental issues
- Commitment to create environmental awareness
- Commitment to environmental protection
- Commitment to implement an environmental management system
- Commitment to monitor the company's environmental performance
- Commitment to reduce emissions, releases and waste
- Commitment to report regularly on environmental issues
- Commitment to use natural resources or energy more efficiently

Citations

TCC Corporate Social Responsibility Best Practice Principles, released August 2020

Taiwan Cement Corp. Environmental Protection Policy, released August 2023

Taiwan Cement Corp. Stakeholder Engagement Policy, released February 2024

The company provided feedback on 01 November 2024

E.1.2 - Environmental Management System

100 Raw Score	10.00% Weight	10.0 Weighted Score
------------------	------------------	------------------------

The company has a very strong EMS

Criteria

- Assigned roles and responsibilities
- Compliance with environmental regulation
- Corrective actions to stimulate continual improvement
- Environmental performance records
- Environmental programmes
- External environmental audits
- Identification of products, activities and services that have significant impacts on the environment
- Internal and external communications on environmental management issues
- Internal environmental audits
- Managerial or board level responsibility for environmental issues
- Monitoring and measurement
- Objectives, targets and deadlines
- Training and awareness programmes for employees

Citations

Taiwan Cement Corp. Corporate Website, Environment, www.taiwancement.com; accessed 19 July 2024

E.1.3 - EMS Certification

100 Raw Score	2.50% Weight	2.5 Weighted Score
------------------	-----------------	-----------------------

90% or more of the company's activities have received external certification

Citations

Taiwan Cement Corp. Corporate Website, Environment, www.taiwancement.com; accessed 19 July 2024

E.1.6 - Scope of GHG Reporting

100 Raw Score	5.00% Weight	5.0 Weighted Score
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The company discloses emissions data in full

Taiwan Cement Corp. Sustainability Report 2019

Criteria

- Based on available evidence, the company does not disclose any GHG emissions
- The company discloses scope 1 emissions
- The company discloses scope 2 emissions
- The company discloses scope 3 emissions as a total
- The company discloses scope 3 emissions with category split
- The company only discloses total emissions, without disclosing by emission scope

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. Corporate Website, GHG Management, www.taiwancement.com; accessed 12 November 2024

The company provided feedback on 01 November 2024

Appendix



Management Details

E.1.6.1 - GHG Risk Management

100	5.00%	5.0
Raw Score	Weight	Weighted Score

The company has a very strong risk management programme

Criteria

- Board level responsibility for climate-related transition risk
- Climate-related responsibilities to management level positions or committees
- Description of the impact of climate change related transition risks including downside risks and opportunities on business strategy and financial planning
- Description of the resilience of the strategy, taking into account different climate scenarios -qualitatively relating to previously disclosed transition risks and opportunities
- Description of the resilience of the strategy, taking into account different climate scenarios -utilising quantitative scenario analysis -relating to previously disclosed transition risks and opportunities
- Management embeds and integrates transition risk into wider business processes and procedures
- Organisational responsibility for climate-related transition risk
- Prioritisation of adaptation and mitigation plans and measures associated with transition risks, with integration into business and financial planning including Capex spent and/or R
- Recognition and description of climate change related transition risks including downside risks and opportunities identified by the organisation over the short, medium and long term
- There is no reporting available yet, but the company does have a commitment to report on any of the above over the next three years

Citations

Taiwan Cement Corp. TCFD Report 2023; released June 2024

E.1.7.0 - GHG Reduction Programme

100	20.00%	20.0
Raw Score	Weight	Weighted Score

The company has a very strong programme

Criteria

- Adoption of key mitigation technologies
- Demonstration of how initiatives put in place close the emissions gap between current performance and the targeted emissions reduction
- Emissions reduction coverage
- GHG emissions monitoring and measurement
- GHG reduction target
- Initiatives are linked to wider TCFD reporting
- Initiatives in place to reduce emissions
- Interim targets
- Net Zero and Science Alignment
- Regular GHG audits or verification

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. TCFD Report 2023; released June 2024

The company provided feedback on 01 November 2024

E.1.7.1 - Green Logistics Programmes

50	7.50%	3.8
Raw Score	Weight	Weighted Score

The company has an adequate programme

Criteria

- The company has a commitment to improve the environmental performance of its own logistic operations
- The company has a programme related to the environmental performance of its own logistics operations, but it is limited in scope
- The company has initiatives to improve the environmental performance of its own logistics operations
- The company has set targets and deadlines related to the environmental performance of its own logistics operations

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. TCFD Report 2023; released June 2024

E.1.8 - Renewable Energy Programmes

100	5.00%	5.0
Raw Score	Weight	Weighted Score

The company has a strong programme

Criteria

- The company has a formal programme which covers less than 50% of operations
- The company has a formal programme which covers more than 50% of operations
- The company has a target with a deadline to increase renewable energy use
- There are a clear set of initiatives in place to aid in the use of renewable energy
- The use of renewable energy is solely via the use of corporate or other direct wire PPAs, green tariff energy, and renewable integrated grid
- The use of renewable energy is solely via the use of decentralized or embedded site renewables, or offsite company-funded renewable energy projects
- The use of renewable energy is solely via the use of Virtual Power Purchase Agreements (VPPAs) and other market instruments of this type (for example RECs/ROCs), or other mechanisms which facilitate wider use of renewable energy, but are not direct wire nor offsetting mechanisms
- The use of renewable energy is via a combination of the above

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Appendix



Management Details

Taiwan Cement Corp. TCFD Report 2023; released June 2024

E.1.9 - Carbon Intensity

25	15.00%	3.8
Raw Score	Weight	Weighted Score

The company's carbon emissions intensity is above its subindustry or industry benchmark

Further Quantitative Criteria Details

FY: 2023 Source: Reported

Metric	Metric Value
GHG Emissions_Scope 1 & 2 - Intensity	6164.5 tCO2e/US\$m

E.1.10 - Carbon Intensity Trend

100	15.00%	15.0
Raw Score	Weight	Weighted Score

The company's carbon emissions intensity trend is well below its subindustry or industry benchmark

Further Quantitative Criteria Details

FY: 2023 Source: -

Metric	Metric Value
%Trend * Trend Average	-32.4 %

E.1.11 - Renewable Energy Use

20	10.00%	2.0
Raw Score	Weight	Weighted Score

Some portion of the company's primary energy use comes from renewable energy sources or less than 5%

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Appendix



Exposure Details



Business Ethics

EA.E.2 - Accounting and Taxation

0.00

Beta Signal

No evidence of relevant controversies

EA.E.4 - Anti-Competitive Practices

0.02

Beta Signal

Category 2

EA.E.6 - Bribery and Corruption

0.00

Beta Signal

No evidence of relevant controversies

EA.E.7 - Business Ethics

0.00

Beta Signal

No evidence of relevant controversies

EA.E.21 - Intellectual Property

0.00

Beta Signal

No evidence of relevant controversies

EA.E.23 - Lobbying and Public Policy

0.00

Beta Signal

No evidence of relevant controversies

EA.E.30 - Sanctions

0.00

Beta Signal

No evidence of relevant controversies

EA.F.1 - Operating Performance

0.00

Beta Signal

The company has an average net income margin.

Average Net Income Margin (Trailing 3 Years): 10.33

Subindustry Median (Trailing 3 Years): 9.59

Source: Morningstar, August 2024. All Rights Reserved.

Appendix



Exposure Details

EA.F.2 - Solvency

0.03

Beta Signal

The company has a very weak debt-equity ratio.

Average Debt to Equity Ratio (Trailing 3 Years): 0.76

Subindustry Median (Trailing 3 Years): 0.39

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.3 - Financial Flexibility

0.02

Beta Signal

The company has a weak cash flow ratio.

Average Free Cash Flow Ratio (Trailing 3 Years): 6.51

Subindustry Median (Trailing 3 Years): 8.46

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.4 - Asset Performance

0.02

Beta Signal

The company has a weak return on assets.

Average Return on Assets (Trailing 3 Years): 2.6

Subindustry Median (Trailing 3 Years): 5.25

Source: Morningstar, August 2024. All Rights Reserved.

EA.S.1 - Qualitative Overlay

0.00

Beta Signal

Answer category for neutral beta signal adjustment

EA.S.2 - Subindustry Correction Factor

0.00

Beta Signal

EA.S.3 - Exceptional Event Adjustment

0.00

Beta Signal

Appendix



Management Details

G.1.1 - Bribery & Corruption Policy

75	6.75%	5.1
Raw Score	Weight	Weighted Score

The company has a strong policy

Criteria

- Definition and prohibition of facilitation payments
- Definition of bribery or corruption
- Definition of conflicts of interest and commitment to minimize these
- Guidelines of what is considered acceptable behaviour
- Prohibition of bribery
- There is no evidence of a formal policy but the company has a general statement addressing the issue

Citations

On Friday, October 18, 2024, Sustainalytics sent Taiwan Cement Corp. the Sustainalytics ESG Feedback Report

On Wednesday, August 9, 2023, Sustainalytics sent Taiwan Cement Corp. the Sustainalytics ESG Feedback Report

TCC Anti Corruption and Anti Bribery Policy; released August 2020

Taiwan Cement Corp. Ethical Corporate Management Best Practice Principles, released May 2021

The company provided feedback on 01 November 2024

The company provided feedback on 23 August 2023

The company provided feedback on 24 September 2020

The company provided feedback on 28 September 2021

G.1.1.1 - Bribery & Corruption Programmes

75	22.50%	16.9
Raw Score	Weight	Weighted Score

The company has a strong programme

Criteria

- Annual signoff of the policy on bribery and corruption by employees
- Internal monitoring system to detect corruption
- Managerial responsibility for bribery and corruption
- Mechanisms for employees to consult on ethical issues
- Operating guidelines addressing record keeping, approval procedures and appropriate behaviour
- Regular bribery and corruption risk assessments
- Regular training on bribery and corruption

Citations

TCC Anti Corruption and Anti Bribery Policy; released August 2020

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

G.1.2 - Whistleblower Programmes

75	20.25%	15.2
Raw Score	Weight	Weighted Score

The company has a strong programme

Criteria

- An independent, reporting hotline available 24/7
- Available in local languages
- Available to suppliers, customers and other third parties
- Disclosure on the number of reports received, the types of misconduct and measures taken
- Non-retaliation policy
- Possibility for anonymous reporting and reports are treated confidentially
- Proactively communicated to employees
- Structures in place to process whistleblower reports

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. Anti-Corruption and Anti-Bribery Policy, released August 2020

Taiwan Cement Corp. Code of Ethical Conduct, released August 2020

Taiwan Cement Corp. Reporting Mechanism for Violation of Code of Conduct; released November 2021

The company provided feedback on 01 November 2024

The company provided feedback on 24 September 2020

G.1.2.1 - Business Ethics Programme

50	22.50%	11.3
Raw Score	Weight	Weighted Score

The company has an adequate programme

Criteria

- Annual training of employees on the Code of Conduct
- Board responsibility for business ethics issues
- Commitment to address major business ethics risks
- Ethical risk assessments
- Incident investigation and corrective actions
- Managerial responsibility for business ethics
- Measures to deter non-compliance and reduce exposure to unethical opportunities
- Operating guidelines

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. Consolidated Financial Statements 2023 (FY2023)

Taiwan Cement Corp. Ethical Corporate Management Best Practice Principles, released May 2021

Appendix



Management Details

The company provided feedback on 28 September 2021

G.3.1 - Political Involvement Policy

25	9.00%	2.3
Raw Score	Weight	Weighted Score

The company has a weak policy

Criteria

- Approved by senior management
- Commits the company to disclose political donations and/or lobbying expenditures
- Partially prohibits political involvement
- Prohibits political involvement of any kind on the company's behalf

Citations

Taiwan Cement Corp. Ethical Corporate Management Best Practice Principles, released May 2021

G.3.2.1 - Transparency on Lobbying and Political Expenses

50	9.00%	4.5
Raw Score	Weight	Weighted Score

The company has adequate disclosure

Criteria

- The company discloses a detailed breakdown of lobbying and political expenses per recipients/ beneficiaries and per country
- The company discloses expenditures and/or beneficiaries supported via its lobbying or political finance activities, but with only limited scope
- The company discloses that it does not engage in any lobbying and political finance activities
- The company discloses the causes or themes that it supports through lobbying and political finance activities
- The company discloses the overall monetary value of lobbying and political expenses
- The company partially discloses expenditures and/or beneficiaries supported via its lobbying or political finance activities

Citations

European Union Transparency Register, www.transparency-register.europa.eu; accessed 22 July 2024

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. Corporate Website, Social Engagement, www.taiwancement.com; accessed 12 November 2024

The company provided feedback on 01 November 2024

Appendix



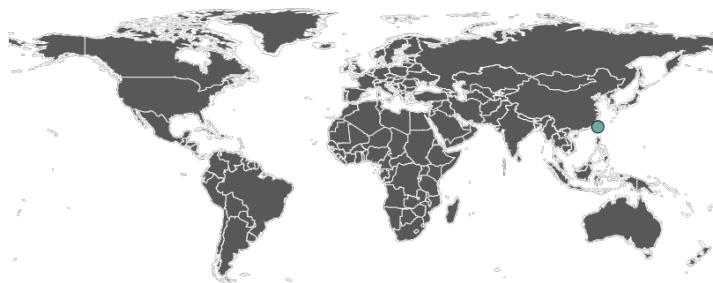
Management Details

Anti-Competitive Practices Events



Category 2 Event - Moderate

Incident History



Fair Trade Commission fines companies over price-fixing scheme in Taiwan
Taipei Times Online - 20 February 2023

Locations: Taiwan

Tags: Anti-competitive Practices

Appendix



Exposure Details



Corporate Governance

EA.CG.1 - Largest Shareholder Voting Power

- 0.07

Beta Signal

No single shareholder or shareholder grouping controls more than 15% of voting power.

EA.E.13 - Corporate Governance

0.00

Beta Signal

No evidence of relevant controversies

EA.S.1 - Qualitative Overlay

0.00

Beta Signal

Answer category for neutral beta signal adjustment

EA.S.3 - Exceptional Event Adjustment

0.00

Beta Signal

Appendix



Management Details

G.2.3.2 - Executive Compensation Clawback

0 Raw Score	3.06% Weight	0.0 Weighted Score
----------------	-----------------	-----------------------

Based on available evidence, the company does not have a programme

Criteria

- The clawback provisions do not require malfeasance or misconduct on the part of the executive in order for the recoupment of incentive payouts
- The company has clawback provisions in place, providing for recoupment of executive incentive payouts

Citations

Taiwan Cement Corp. Annual Report 2023 (FY2023)

G.2.3.4 - CEO Pay Magnitude (Region)

0 Raw Score	2.04% Weight	0.0 Weighted Score
----------------	-----------------	-----------------------

Disclosure is insufficient to determine the company's CEO remuneration

Further Quantitative Criteria Details

FY: 2023 Source: Reported

Metric	Metric Value
CEO Three-Year Average Pay	- USD

G.2.3.5 - Say on Pay

25 Raw Score	4.08% Weight	1.0 Weighted Score
-----------------	-----------------	-----------------------

The company has a weak programme

Criteria

- Shareholders have a binding vote on prospective pay decisions, i.e. the remuneration policy
- Shareholders have a binding vote on retrospective pay decisions, i.e. the remuneration report
- Shareholders have an advisory vote on prospective pay decisions, i.e. the remuneration policy
- Shareholders have an advisory vote on retrospective pay decisions, i.e. the remuneration report
- Shareholders must approve equity executive remuneration plans

G.2.6.2 - Long-Term Incentive Programme

25 Raw Score	6.12% Weight	1.5 Weighted Score
-----------------	-----------------	-----------------------

The company has a weak programme

Criteria

- Actual LTI payouts are disclosed
- Half or more of the target LTI award is based on performance metrics measured over a period of five years or more
- Half or more of the target LTI award is based on performance metrics measured over a period of three years or more
- Half or more of the target LTI award is linked to performance metrics with disclosed targets
- Half or more of the target LTI award is paid out as performance-based equity awards
- The company discloses an LTI programme
- The target LTI award is linked to sustainability-related performance metrics with disclosed targets

Citations

Taiwan Cement Corp. Annual Report 2023 (FY2023)

G.2.6.3 - Short-Term Incentive Programme

50 Raw Score	5.10% Weight	2.6 Weighted Score
-----------------	-----------------	-----------------------

The company has an adequate programme

Criteria

- Actual STI payouts are disclosed
- Half or more of the target STI award is linked to performance metrics
- Half or more of the target STI award is linked to performance metrics with disclosed targets
- The company discloses an STI programme
- The target STI award is linked to sustainability-related performance metrics with disclosed targets

G.2.7.2 - Board Gender Representation Target

50 Raw Score	2.04% Weight	1.0 Weighted Score
-----------------	-----------------	-----------------------

The company has an adequate target

Criteria

- The company has a quantitative target for board gender representation
- The company's board gender representation quantitative targets are aligned with international standards
- The company's board gender representation quantitative targets are tied to specific timelines
- The company states it aims to ensure gender representation or considers gender during the recruitment of directors

Citations

Appendix



Management Details

Citations

Taiwan Cement Corp. Annual Report 2023 (FY2023)

Taiwan Cement Corp. Annual Report 2023 (FY2023)

G.2.7.3 - Board Gender Diversity

66	3.06%	2.0
Raw Score	Weight	Weighted Score

The company's board has an adequate gender balance

Further Quantitative Criteria Details

FY: 2024 Source: Reported

Metric	Metric Value
Majority Gender on Board - Percentage	73.3 %

G.2.8.2 - Risk Oversight

100	5.10%	5.1
Raw Score	Weight	Weighted Score

The company has a very strong management system

Criteria

- The company discloses risk mitigation measures for industry-specific risk
- The company has a risk management framework in place
- The company identifies and assesses the main risks faced by the business
- There is a separate board committee in charge of oversight of industry-specific risks
- There is board-level oversight of industry-specific risks

Citations

Taiwan Cement Corp. Annual Report 2023 (FY2023)

Taiwan Cement Corp. Sustainability Report 2023 (FY2023)

G.2.8.3 - Board Executive Experience

100	5.10%	5.1
Raw Score	Weight	Weighted Score

The company's board has adequate executive expertise

Further Quantitative Criteria Details

FY: 2024 Source: Reported

Metric	Metric Value
Board Experience (from Executive Positions)	2.0

G.2.8.4 - Board Non-Executive Experience

100	5.10%	5.1
Raw Score	Weight	Weighted Score

The company's board has adequate non-executive expertise

Further Quantitative Criteria Details

FY: 2024 Source: Reported

Metric	Metric Value
Board Experience (from Non-Executive Positions)	5.0

G.2.8.5 - Board Effectiveness

25	6.12%	1.5
Raw Score	Weight	Weighted Score

The company has a weak level of board effectiveness

Criteria

- A senior or lead independent director or an independent vice-chair has been appointed in conjunction with the non-independent chair
- No more than one non-executive director serves on an excessive number of outside boards
- None of the non-executive directors serves on an excessive number of outside boards
- The chair and CEO roles are separate

G.2.9.2 - Board Independence

25	7.14%	1.8
Raw Score	Weight	Weighted Score

The company has a weak level of board independence

Further Quantitative Criteria Details

FY: 2024 Source: Reported

Metric	Metric Value
Independent Board Members - Percentage	26.7 %

Appendix



Management Details

- The chair does not concurrently hold any executive role
- The chair has relevant financial and/or industry experience and is independent
- The chair is independent
- The company has appointed a chairperson of the board

Citations

Taiwan Cement Corp. AGM Handbook 2024, released April 2024

Taiwan Cement Corp. Annual Report 2023 (FY2023)

Taiwan Cement Corp. Corporate Website, Board of Directors, www.taiwancement.com; accessed 15 July 2024

G.2.10.2 - Audit Committee Experience

50	7.14%	3.6
Raw Score	Weight	Weighted Score

There is adequate industry and/or financial expertise among the independent audit committee members

Criteria

- The audit committee includes at least one independent member with financial expertise
- The audit committee includes at least one independent member with industry expertise
- The audit committee includes at least two independent members with financial expertise
- The audit committee includes at least two independent members with industry expertise

Citations

Taiwan Cement Corp. AGM Handbook 2024, released April 2024

Taiwan Cement Corp. Annual Report 2023 (FY2023)

Taiwan Cement Corp. Taiwan Stock Exchange Website, Audit Committee, emops.twse.com.tw; released May 2024

G.2.10.3 - Audit Committee Independence

50	7.14%	3.6
Raw Score	Weight	Weighted Score

The company has an adequate audit committee independence

Further Quantitative Criteria Details

FY: 2024 Source: Reported

Metric	Metric Value
Independent Audit Committee Members - Percentage	80.0 %

G.2.12.2 - Remuneration Committee Independence

75	6.12%	4.6
Raw Score	Weight	Weighted Score

The remuneration committee's independence is adequate

Further Quantitative Criteria Details

FY: 2024 Source: Reported

Metric	Metric Value
Independent Remuneration Committee Members - Percentage	80.0 %

G.2.14 - Voting Proportionality

100	10.20%	10.2
Raw Score	Weight	Weighted Score

The company has a strong programme

Criteria

- The largest shareholder does not secure control through control-enhancing mechanisms
- There are no caps on voting rights.
- There are no cross-shareholdings with other entities
- There are no golden shares
- There are no other violations of the "one share, one vote" principle
- There are no supervoting shares
- Voting rights are not differentiated by duration of ownership

Citations

Taiwan Cement Corp. Annual Report 2023 (FY2023)

Taiwan Cement Corp. Articles of Incorporation, released May 2024

Appendix



Management Details

G.2.15 - Nominating Committee Independence

50	6.12%	3.1
Raw Score	Weight	Weighted Score

The company has an adequate level of nominating committee independence

Further Quantitative Criteria Details

FY: 2024 Source: Reported

Metric	Metric Value
Independent Nominating Committee Members - Percentage	60.0 %

G.2.16 - Board Committee Structure

100	6.12%	6.1
Raw Score	Weight	Weighted Score

The company has a strong committee structure

Criteria

- The company has established an Audit Committee
- The company has established a Nominating Committee
- The company has established a Remuneration Committee
- There are no representatives of the controlling shareholder on the Audit Committee
- There are no representatives of the controlling shareholder on the Nominating Committee
- There are no representatives of the controlling shareholder on the Remuneration Committee

Citations

Taiwan Cement Corp. AGM Handbook 2024, released April 2024

Taiwan Cement Corp. Annual Report 2023 (FY2023)

Taiwan Cement Corp. Taiwan Stock Exchange Website, Audit Committee, emops.twse.com.tw; released May 2024

Taiwan Cement Corp. Taiwan Stock Exchange Website, Nomination Committee, emops.twse.com.tw; released May 2024

Taiwan Cement Corp. Taiwan Stock Exchange Website, Remuneration Committee, emops.twse.com.tw; released May 2024

G.2.17 - Shareholder Dissent

100	3.06%	3.1
Raw Score	Weight	Weighted Score

The company did not register instances of elevated shareholder dissent

Further Quantitative Criteria Details

FY: 2024 Source: Reported

Metric	Metric Value
Shareholder Dissent - Percentage	17.5 %

Appendix



Exposure Details



Water Use - Own Operations

EA.E.33 - Water Use

0.00

Beta Signal

No evidence of relevant controversies

EA.F.1 - Operating Performance

0.00

Beta Signal

The company has an average net income margin.

Average Net Income Margin (Trailing 3 Years): 10.33

Subindustry Median (Trailing 3 Years): 9.59

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.2 - Solvency

0.03

Beta Signal

The company has a very weak debt-equity ratio.

Average Debt to Equity Ratio (Trailing 3 Years): 0.76

Subindustry Median (Trailing 3 Years): 0.39

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.3 - Financial Flexibility

0.02

Beta Signal

The company has a weak cash flow ratio.

Average Free Cash Flow Ratio (Trailing 3 Years): 6.51

Subindustry Median (Trailing 3 Years): 8.46

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.4 - Asset Performance

0.02

Beta Signal

The company has a weak return on assets.

Average Return on Assets (Trailing 3 Years): 2.6

Subindustry Median (Trailing 3 Years): 5.25

Source: Morningstar, August 2024. All Rights Reserved.

EA.G.5 - Geographic Water Risk

0.00

Beta Signal

Data for this company is not yet available

Country | Percentage of assets | Water stress level

Taiwan: 48% (Low to Med. Stress)

China: 24% (High Stress)

Japan: 7% (Med. to High Stress)

Other: 20%

Source: World Resources Institute, November 2023, <https://www.wri.org>

Morningstar, November 2023. All Rights Reserved.

Appendix



Exposure Details

EA.P.24 - Water Intensity Exposure

- 0.10

Beta Signal

The company's water intensity is below its subindustry or industry benchmark

EA.S.1 - Qualitative Overlay

0.00

Beta Signal

Answer category for neutral beta signal adjustment

EA.S.2 - Subindustry Correction Factor

0.00

Beta Signal

EA.S.3 - Exceptional Event Adjustment

0.00

Beta Signal

Appendix



Management Details

E.1.1 - Environmental Policy

100 Raw Score	2.50% Weight	2.5 Weighted Score
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The company has a very strong policy

Criteria

- Approved by senior management or the board of directors
- Commitment to consult with stakeholders on environmental issues
- Commitment to create environmental awareness
- Commitment to environmental protection
- Commitment to implement an environmental management system
- Commitment to monitor the company's environmental performance
- Commitment to reduce emissions, releases and waste
- Commitment to report regularly on environmental issues
- Commitment to use natural resources or energy more efficiently

Citations

TCC Corporate Social Responsibility Best Practice Principles, released August 2020

Taiwan Cement Corp. Environmental Protection Policy, released August 2023

Taiwan Cement Corp. Stakeholder Engagement Policy, released February 2024

The company provided feedback on 01 November 2024

E.1.2 - Environmental Management System

100 Raw Score	2.50% Weight	2.5 Weighted Score
------------------	-----------------	-----------------------

The company has a very strong EMS

Criteria

- Assigned roles and responsibilities
- Compliance with environmental regulation
- Corrective actions to stimulate continual improvement
- Environmental performance records
- Environmental programmes
- External environmental audits
- Identification of products, activities and services that have significant impacts on the environment
- Internal and external communications on environmental management issues
- Internal environmental audits
- Managerial or board level responsibility for environmental issues
- Monitoring and measurement
- Objectives, targets and deadlines
- Training and awareness programmes for employees

Citations

Taiwan Cement Corp. Corporate Website, Environment, www.taiwancement.com; accessed 19 July 2024

E.1.2.6.3 - Effluent Management

100 Raw Score	5.00% Weight	5.0 Weighted Score
------------------	-----------------	-----------------------

The company has a strong programme

Criteria

- Incident investigation and corrective action
- Initiatives to reduce, reuse or recycle effluents
- Monitoring and measurement of effluent and effluent management
- Objectives or targets related to effluent management
- Policy commitment to manage or reduce effluents
- Reporting on effluent issues

Citations

TCC Corporate Social Responsibility Best Practice Principles, released August 2020

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

E.1.2.7 - Water Intensity

75 Raw Score	15.00% Weight	11.3 Weighted Score
-----------------	------------------	------------------------

The company's water intensity is below its subindustry or industry benchmark

Further Quantitative Criteria Details

FY: 2023 Source: Reported

Metric	Metric Value
Water Withdrawal - Intensity	3693.4 m3/US\$M

Appendix



Management Details

E.1.2.7.1 - Water Risk Management

100	20.00%	20.0
Raw Score	Weight	Weighted Score

The company has a very strong programme

Criteria

- The company assigns executive or board-level responsibility for addressing water-related risks
- The company discloses a general statement on water risk management
- The company has implemented climate mitigation and/or adaptation initiatives based on water risk assessment outcomes
- The company integrates risk assessment outcomes into its business strategy
- The company recognizes water-related physical, regulatory and reputational risks for its business
- The company reports on water risk assessment outcomes

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. TCFD Report 2023; released June 2024

The company provided feedback on 01 November 2024

E.1.2.7.2 - Water Intensity Trend

50	10.00%	5.0
Raw Score	Weight	Weighted Score

The company's water intensity trend is in line with its subindustry or industry benchmark

Further Quantitative Criteria Details

FY: 2023 Source: -

Metric	Metric Value
Water Intensity Trend	-22.4 %

E.1.2.7.4 - Water Stewardship Commitment

50	25.00%	12.5
Raw Score	Weight	Weighted Score

The company has an adequate commitment

Criteria

- Responsibility of senior management or the board of directors regarding water stewardship
- The company has an investment plan related to its water stewardship commitment
- The company has been involved in relevant R&D work that supports water stewardship
- The company has established partnerships (incl. joint ventures) with other companies, independent (research) institutions, NGOs, and industry initiatives supporting water stewardship
- The company has initiatives directly related to water stewardship
- The company has set (a) quantitative water stewardship target(s) for its own operations based on a water risk assessment
- The company has set (a) quantitative water stewardship target(s) for its supply chain
- The company reports on progress towards its water stewardship targets

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

The company provided feedback on 01 November 2024

E.1.2.7.5 - Scope of Water Reporting

40	10.00%	4.0
Raw Score	Weight	Weighted Score

The company has weak disclosure

Criteria

- The company discloses its total water consumption
- The company discloses its total water discharge
- The company discloses its total water withdrawal
- The company discloses its water discharge by destination
- The company discloses its water withdrawal sources
- The company discloses key water accounting metrics at its sites located in water stressed areas
- The company discloses the amount of reused or recycled water
- The company has a general statement on water use
- The company has been reporting on its key water accounting metrics for at least three consecutive years

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Appendix



Management Details

E.1.3 - EMS Certification

100 Raw Score	2.50% Weight	2.5 Weighted Score
------------------	-----------------	-----------------------

90% or more of the company's activities have received external certification

Citations

Taiwan Cement Corp. Corporate Website, Environment, www.taiwancement.com; accessed 19 July 2024

E.1.6.2 - Physical Climate Risk Management

66 Raw Score	7.50% Weight	5.0 Weighted Score
-----------------	-----------------	-----------------------

The company has an adequate programme

Criteria

- Detailed reporting on physical climate change risk drivers
- Initiatives to manage or adapt to physical climate change risks
- Integration of physical climate change into regular risk assessments and business strategy
- Managerial or board level responsibility for climate change risks
- Recognition of the physical risks related to climate change

Citations

Taiwan Cement Corp. TCFD Report 2023; released June 2024

Appendix



Exposure Details



Occupational Health and Safety

EA.E.20 - Occupational Health and Safety

0.00

Beta Signal

No evidence of relevant controversies

EA.F.1 - Operating Performance

0.00

Beta Signal

The company has an average net income margin.

Average Net Income Margin (Trailing 3 Years): 10.33

Subindustry Median (Trailing 3 Years): 9.59

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.2 - Solvency

0.03

Beta Signal

The company has a very weak debt-equity ratio.

Average Debt to Equity Ratio (Trailing 3 Years): 0.76

Subindustry Median (Trailing 3 Years): 0.39

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.3 - Financial Flexibility

0.02

Beta Signal

The company has a weak cash flow ratio.

Average Free Cash Flow Ratio (Trailing 3 Years): 6.51

Subindustry Median (Trailing 3 Years): 8.46

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.4 - Asset Performance

0.02

Beta Signal

The company has a weak return on assets.

Average Return on Assets (Trailing 3 Years): 2.6

Subindustry Median (Trailing 3 Years): 5.25

Source: Morningstar, August 2024. All Rights Reserved.

EA.G.1 - Headquarters Location

- 0.03

Beta Signal

The location of the company's headquarters indicates slightly lower exposure to this issue.

Taiwan: Lower exposure

Source: Sustainalytics Country Risk Rating, November 2023.

Appendix



Exposure Details

EA.G.2 - Assets Location

- 0.05

Beta Signal

The location of the company's assets indicates slightly lower exposure to this issue.

Taiwan 48% (Slightly lower exposure)

China 24% (Average exposure)

Other: 27%

Source: Sustainalytics Country Risk Rating, November 2023.

Morningstar, November 2023. All Rights Reserved.

EA.S.1 - Qualitative Overlay

0.00

Beta Signal

Answer category for neutral beta signal adjustment

EA.S.2 - Subindustry Correction Factor

0.00

Beta Signal

EA.S.3 - Exceptional Event Adjustment

0.00

Beta Signal

Appendix



Management Details

S.1.6.2.1 - Health and Safety Management System

100	25.00%	25.0
Raw Score	Weight	Weighted Score

The company has a very strong management system

Criteria

- Emergency preparedness procedures
- Formal health and safety policy commitment
- Internal or external health and safety audits conducted at least every three years
- Managerial responsibility for health and safety issues
- Operating guidelines or procedures that are relevant for the industry
- Performance monitoring and measurement
- Procedures for hazard identification and risk assessment
- Regular health and safety training programmes for employees
- Reporting on health and safety programmes and performance
- Targets to reduce health and safety incidents

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. Corporate Website, Health and Safety, www.taiwancement.com; accessed 23 July 2024

Taiwan Cement Corp. Human Rights Policy, available online at www.taiwancement.com; accessed 22 July 2024

S.1.6.4 - Health and Safety Certifications

100	12.50%	12.5
Raw Score	Weight	Weighted Score

The company's percentage of operational locations that have received health and safety certifications is very high

Further Quantitative Criteria Details

FY: 2023 Source: Reported

Metric	Metric Value
Health and Safety Certifications	100.0 %

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

S.1.6.5 - Lost-Time Incident Rate Trend

0	25.00%	0.0
Raw Score	Weight	Weighted Score

The company's lost-time incident rate has increased

Further Quantitative Criteria Details

FY: 2023 Source: Reported

Metric	Metric Value
Lost-Time Incident Rate – Three-Year Trend	11.6 %

S.1.6.6 - Employee Fatality Rate

100	12.50%	12.5
Raw Score	Weight	Weighted Score

No employee fatalities have occurred in the last three years

Further Quantitative Criteria Details

FY: 2023 Source: -

Metric	Metric Value
Employee Fatality Rate – Three-Year Average	- Rate of fatalities per 100,000 workers

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Appendix



Management Details

S.2.2.5 - Contractor Safety Programme

100 Raw Score	12.50% Weight	12.5 Weighted Score
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The company has a very strong programme

Criteria

- Compliance with safety guidelines included in contractual agreements.
- Monitoring of contractor safety performance
- Objectives or targets regarding contractor safety
- Operating guidelines on contractor safety management
- Policy commitment to protect the safety of contractors
- Prescreening of contractors for safety performance and risks
- Reporting on contractor safety management
- Safety training for contractors

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. Corporate Website, Health and Safety, www.taiwacement.com; accessed 14 November 2024

Taiwan Cement Corp. Occupational Safety and Health Policy Statement, released May 2024

The company provided feedback on 01 November 2024

S.2.2.6 - Contractor Fatalities

75 Raw Score	12.50% Weight	9.4 Weighted Score
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The company's total number of contractor fatalities is low

Further Quantitative Criteria Details

FY: 2023 Source: Reported

Metric	Metric Value
Contractor Fatalities – Three-Year Sum	3.0 Fatalities

Appendix



Exposure Details



Human Capital

EA.E.22 - Labour Relations

0.00

Beta Signal

No evidence of relevant controversies

EA.F.1 - Operating Performance

0.00

Beta Signal

The company has an average net income margin.

Average Net Income Margin (Trailing 3 Years): 10.33

Subindustry Median (Trailing 3 Years): 9.59

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.2 - Solvency

0.03

Beta Signal

The company has a very weak debt-equity ratio.

Average Debt to Equity Ratio (Trailing 3 Years): 0.76

Subindustry Median (Trailing 3 Years): 0.39

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.3 - Financial Flexibility

0.02

Beta Signal

The company has a weak cash flow ratio.

Average Free Cash Flow Ratio (Trailing 3 Years): 6.51

Subindustry Median (Trailing 3 Years): 8.46

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.4 - Asset Performance

0.02

Beta Signal

The company has a weak return on assets.

Average Return on Assets (Trailing 3 Years): 2.6

Subindustry Median (Trailing 3 Years): 5.25

Source: Morningstar, August 2024. All Rights Reserved.

EA.S.1 - Qualitative Overlay

0.00

Beta Signal

Answer category for neutral beta signal adjustment

Appendix



Exposure Details

EA.S.2 - Subindustry Correction Factor

0.00
Beta Signal

EA.S.3 - Exceptional Event Adjustment

0.00
Beta Signal

Appendix



Management Details

S.1.1 - Freedom of Association Policy

100 Raw Score	5.00% Weight	5.0 Weighted Score
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The company has a strong policy on freedom of association

Citations

Taiwan Cement Corp. Human Rights Policy, available online at www.taiwancement.com; accessed 22 July 2024

S.1.1.1 - Working Hours Policy

25 Raw Score	12.50% Weight	3.1 Weighted Score
-----------------	------------------	-----------------------

The company has a weak policy

Criteria

- The company has a general statement on working hours
- The policy includes a commitment on the maximum length of the normal workday
- The policy includes a commitment on the maximum length of the normal work week
- The policy is aligned with relevant international standards on maximum normal working hours

Citations

Taiwan Cement Corp. Human Rights Policy, available online at www.taiwancement.com; accessed 22 July 2024

The company provided feedback on 01 November 2024

S.1.2 - Discrimination Policy

100 Raw Score	7.50% Weight	7.5 Weighted Score
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The company has a strong policy

Criteria

- Commitment to ensure equal opportunity
- List of the types of discrimination the company is committed to eliminate
- Reference to the ILO conventions

Citations

Taiwan Cement Corp. Human Rights Policy, available online at www.taiwancement.com; accessed 22 July 2024

S.1.3 - Diversity Programmes

50 Raw Score	12.50% Weight	6.3 Weighted Score
-----------------	------------------	-----------------------

The company has an adequate programme

Criteria

- Diversity monitoring or audits
- Employee affinity groups, diversity councils, or networking groups
- Initiatives supporting a diverse workforce
- Initiatives to recruit from diverse talent
- Managerial or board level responsibility for diversity initiatives
- Mentorship programmes
- The company has a programme that applies to less than 50% of operations
- Training and guidance regarding diversity

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

S.1.4 - Collective Bargaining Agreements

100 Raw Score	15.00% Weight	15.0 Weighted Score
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75% or more of the company's employees are covered by collective bargaining agreements

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

S.1.5 - Employee Turnover Rate

0 Raw Score	17.50% Weight	0.0 Weighted Score
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The company's employee turnover rate is high

Further Quantitative Criteria Details

FY: 2023 Source: Reported

Metric	Metric Value
Employee Turnover Rate	30.7 %

Appendix



Management Details

S.1.5.2 - Human Capital Development

75	30.00%	22.5
Raw Score	Weight	Weighted Score

The company has a strong programme

Criteria

- Formal mechanisms to promote an open feedback culture
- Initiatives for talent development
- Initiatives for talent recruitment
- Initiatives for talent retention
- Quantitative targets related to human capital development
- Regular formal performance reviews for all permanent employees aligned with career development
- Reporting on human capital development metrics
- Reporting on human capital risk assessment

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Appendix



Exposure Details



Raw Material Use

EA.E.53 - Scarce Resource Use

0.00

Beta Signal

No evidence of relevant controversies

EA.F.1 - Operating Performance

0.00

Beta Signal

The company has an average net income margin.

Average Net Income Margin (Trailing 3 Years): 10.33

Subindustry Median (Trailing 3 Years): 9.59

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.2 - Solvency

0.03

Beta Signal

The company has a very weak debt-equity ratio.

Average Debt to Equity Ratio (Trailing 3 Years): 0.76

Subindustry Median (Trailing 3 Years): 0.39

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.3 - Financial Flexibility

0.02

Beta Signal

The company has a weak cash flow ratio.

Average Free Cash Flow Ratio (Trailing 3 Years): 6.51

Subindustry Median (Trailing 3 Years): 8.46

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.4 - Asset Performance

0.02

Beta Signal

The company has a weak return on assets.

Average Return on Assets (Trailing 3 Years): 2.6

Subindustry Median (Trailing 3 Years): 5.25

Source: Morningstar, August 2024. All Rights Reserved.

EA.S.1 - Qualitative Overlay

0.00

Beta Signal

Answer category for neutral beta signal adjustment

Appendix



Exposure Details

EA.S.2 - Subindustry Correction Factor

0.00
Beta Signal

EA.S.3 - Exceptional Event Adjustment

0.00
Beta Signal

Appendix



Management Details

E.1.1 - Environmental Policy

100 Raw Score	2.50% Weight	2.5 Weighted Score
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The company has a very strong policy

Criteria

- Approved by senior management or the board of directors
- Commitment to consult with stakeholders on environmental issues
- Commitment to create environmental awareness
- Commitment to environmental protection
- Commitment to implement an environmental management system
- Commitment to monitor the company's environmental performance
- Commitment to reduce emissions, releases and waste
- Commitment to report regularly on environmental issues
- Commitment to use natural resources or energy more efficiently

Citations

TCC Corporate Social Responsibility Best Practice Principles, released August 2020

Taiwan Cement Corp. Environmental Protection Policy, released August 2023

Taiwan Cement Corp. Stakeholder Engagement Policy, released February 2024

The company provided feedback on 01 November 2024

E.1.2 - Environmental Management System

100 Raw Score	5.00% Weight	5.0 Weighted Score
------------------	-----------------	-----------------------

The company has a very strong EMS

Criteria

- Assigned roles and responsibilities
- Compliance with environmental regulation
- Corrective actions to stimulate continual improvement
- Environmental performance records
- Environmental programmes
- External environmental audits
- Identification of products, activities and services that have significant impacts on the environment
- Internal and external communications on environmental management issues
- Internal environmental audits
- Managerial or board level responsibility for environmental issues
- Monitoring and measurement
- Objectives, targets and deadlines
- Training and awareness programmes for employees

Citations

Taiwan Cement Corp. Corporate Website, Environment, www.taiwancement.com; accessed 19 July 2024

E.1.3 - EMS Certification

100 Raw Score	2.50% Weight	2.5 Weighted Score
------------------	-----------------	-----------------------

90% or more of the company's activities have received external certification

Citations

Taiwan Cement Corp. Corporate Website, Environment, www.taiwancement.com; accessed 19 July 2024

E.1.17 - Recycled Material Use Commitment

50 Raw Score	10.00% Weight	5.0 Weighted Score
-----------------	------------------	-----------------------

The company has an adequate commitment

Criteria

- Responsibility of senior management or the board of directors towards the objective of recycled materials in production
- The company has an investment plan related to using recycled material in production
- The company has been involved in relevant R&D work supporting the use of recycled materials in production
- The company has established (a) quantitative target(s) to manufacture products using at least 25% recycled materials
- The company has established (a) quantitative target(s) to manufacture products using at least 50% recycled materials
- The company has established partnerships (including joint ventures) with peers, independent research institutions, NGOs or industry initiatives to achieve the usage of recycled materials in the production process
- The company has initiatives related to using recycled material in production
- The company has set specific timeframes for its stated target(s)
- The company reports on progress towards its recycled materials use target

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

The company provided feedback on 01 November 2024

Appendix



Management Details

E.1.17.1 - Recycled Material Programmes

50	15.00%	7.5
Raw Score	Weight	Weighted Score

The company has an adequate programme

Criteria

- The company has a general statement addressing the increased use of recycled and/or reused material inputs
- The company has a programme that is limited in scope or whose scope cannot be assessed
- The company has initiatives to increase or maintain the use of recycled and/or reused byproducts
- The company has initiatives to increase or maintain the use of recycled direct input materials
- The company has initiatives to increase or maintain the use of reused direct input materials

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

E.1.18 - Raw Material Innovation Programmes

75	10.00%	7.5
Raw Score	Weight	Weighted Score

The company has a strong programme

Criteria

- The company discloses targets and deadlines for innovation initiatives and/or R&D programmes related to critical raw material inputs
- The company has a general statement addressing critical resource substitution or efficiency
- The company has innovation initiatives and/or R&D programmes to address risks related to critical raw material inputs through resource efficiency
- The company has innovation initiatives and/or R&D programmes to address risks related to critical raw material inputs through resource substitution
- The company monitors progress and reports on its innovation initiatives and/or R&D programmes related to critical raw material inputs
- The company participates in relevant strategic partnerships and/or joint ventures

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

The company provided feedback on 01 November 2024

E.2.1.7 - Recycled Material Use

60	10.00%	6.0
Raw Score	Weight	Weighted Score

The company uses a moderate amount of recycled/reused materials in its products

Further Quantitative Criteria Details

FY: 2023 Source: -

Metric	Metric Value
Share of Recycled Input Material - Percentage of Total Input Material	14.1 %

E.3.1.6 - Eco-Design

75	22.50%	16.9
Raw Score	Weight	Weighted Score

The company has a strong programme

Criteria

- The company has a general statement addressing the issue
- The company has a programme in place, but it is limited in scope, or its scope cannot be assessed
- The company has product design initiatives that minimize the environmental impact of products during their use and/or at end of life
- The company has product design initiatives to minimize the environmental impact of input materials
- The company has product design initiatives to minimize the environmental impact of products during the manufacturing process
- The company has set guidelines and procedures for assessing, during the design phase, the environmental impact of the product across its life cycle
- The company has set targets and deadlines related to designing and manufacturing products with a limited environmental impact
- The company monitors and reports on eco-design initiatives
- The company participates in relevant multi-stakeholder or industry initiatives

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Appendix



Management Details

E.3.1.7 - End-of-Life Product Stewardship Programmes

0	22.50%	0.0
Raw Score	Weight	Weighted Score

Based on available evidence, the company does not have a programme

Criteria

- The company has a general statement addressing the issue
 - The company has a programme that is limited in scope, or where the scope cannot be assessed
 - The company has initiatives for end-of-life product stewardship such as product take-back/buy-back programmes, refurbishing or remanufacturing
 - The company has targets and deadlines related to end-of-life product stewardship
 - The company is pioneering Waste-to-X technologies
 - The company monitors and reports on end-of-life product stewardship activities
 - The company participates in multi-stakeholder or industry initiatives pertaining to product stewardship
-

Appendix



Exposure Details



Community Relations

EA.E.10 - Community Relations

0.00

Beta Signal

No evidence of relevant controversies

EA.F.1 - Operating Performance

0.00

Beta Signal

The company has an average net income margin.

Average Net Income Margin (Trailing 3 Years): 10.33

Subindustry Median (Trailing 3 Years): 9.59

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.2 - Solvency

0.03

Beta Signal

The company has a very weak debt-equity ratio.

Average Debt to Equity Ratio (Trailing 3 Years): 0.76

Subindustry Median (Trailing 3 Years): 0.39

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.3 - Financial Flexibility

0.02

Beta Signal

The company has a weak cash flow ratio.

Average Free Cash Flow Ratio (Trailing 3 Years): 6.51

Subindustry Median (Trailing 3 Years): 8.46

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.4 - Asset Performance

0.02

Beta Signal

The company has a weak return on assets.

Average Return on Assets (Trailing 3 Years): 2.6

Subindustry Median (Trailing 3 Years): 5.25

Source: Morningstar, August 2024. All Rights Reserved.

EA.S.1 - Qualitative Overlay

0.00

Beta Signal

Answer category for neutral beta signal adjustment

Appendix



Exposure Details

EA.S.2 - Subindustry Correction Factor

0.00
Beta Signal

EA.S.3 - Exceptional Event Adjustment

0.00
Beta Signal

Appendix



Management Details

S.4.2.2 - Community Involvement Programmes

75 Raw Score	50.00% Weight	37.5 Weighted Score
-----------------	------------------	------------------------

The company has a strong programme

Criteria

- Accessible mechanism to collect, record and address complaints or grievances
- A formal system for identifying local stakeholders or communities of interest
- Community consultation guidelines
- Consultation conducted at early stages of a project
- Executive responsibility for community relations
- Ongoing consultation mechanisms
- Operation-specific responsibility for community relations
- Policy commitment to consult with local communities

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)
 Taiwan Cement Corp. Stakeholder Engagement Policy, released February 2024
 The company provided feedback on 01 November 2024

S.4.2.9 - Indigenous Rights Policy

50 Raw Score	20.00% Weight	10.0 Weighted Score
-----------------	------------------	------------------------

The company has an adequate policy

Criteria

- Commitment to avoid involuntary resettlement of indigenous peoples
- Commitment to promote the full realization of the social, economic and cultural rights of indigenous people
- Commitment to promote the socio-economic development of indigenous people
- Commitment to protect culturally sensitive areas
- Commitment to report periodically on policy implementation
- Commitment to respect the land rights of indigenous people
- Commitment to seek or respect the right to Free Prior and Informed Consent of indigenous peoples
- Commitment to seek the effective representation and participation of indigenous peoples
- Reference to ILO Convention 169 or the United Nations Declaration on the Rights of Indigenous Peoples
- There is no evidence of a formal policy but the company has a general statement addressing the issue

Citations

Taiwan Cement Corp. Human Rights Policy, available online at www.taiwancement.com; accessed 22 July 2024
 The company provided feedback on 01 November 2024

S.4.2.11 - Community Development Programmes

75 Raw Score	30.00% Weight	22.5 Weighted Score
-----------------	------------------	------------------------

The company has strong programme

Criteria

- Commitment to promote community development
- Community development initiatives
- Community development targets and deadlines
- Initiatives to promote economic development after closure
- Monitoring of community development programmes
- Reporting on community development programmes and results
- Systematic involvement of local stakeholders in community development planning and/or monitoring

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Appendix



Exposure Details



Emissions, Effluents and Waste

EA.E.14 - Emissions, Effluents and Waste

0.00

Beta Signal

No evidence of relevant controversies

EA.F.1 - Operating Performance

0.00

Beta Signal

The company has an average net income margin.

Average Net Income Margin (Trailing 3 Years): 10.33

Subindustry Median (Trailing 3 Years): 9.59

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.2 - Solvency

0.03

Beta Signal

The company has a very weak debt-equity ratio.

Average Debt to Equity Ratio (Trailing 3 Years): 0.76

Subindustry Median (Trailing 3 Years): 0.39

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.3 - Financial Flexibility

0.02

Beta Signal

The company has a weak cash flow ratio.

Average Free Cash Flow Ratio (Trailing 3 Years): 6.51

Subindustry Median (Trailing 3 Years): 8.46

Source: Morningstar, August 2024. All Rights Reserved.

EA.F.4 - Asset Performance

0.02

Beta Signal

The company has a weak return on assets.

Average Return on Assets (Trailing 3 Years): 2.6

Subindustry Median (Trailing 3 Years): 5.25

Source: Morningstar, August 2024. All Rights Reserved.

EA.G.1 - Headquarters Location

- 0.03

Beta Signal

The location of the company's headquarters indicates slightly lower exposure to this issue.

Taiwan: Lower exposure

Source: Sustainalytics Country Risk Rating, November 2023.

Appendix



Exposure Details

EA.G.2 - Assets Location

- 0.05

Beta Signal

The location of the company's assets indicates slightly lower exposure to this issue.

Taiwan 48% (Slightly lower exposure)

China 24% (Average exposure)

Other: 27%

Source: Sustainalytics Country Risk Rating, November 2023.

Morningstar, November 2023. All Rights Reserved.

EA.P.18 - NOx Emissions

- 0.10

Beta Signal

The company's NOx intensity is below its subindustry or industry benchmark

EA.P.19 - SOx Emissions

- 0.10

Beta Signal

The company's SOx intensity is below its subindustry or industry benchmark

EA.S.1 - Qualitative Overlay

0.00

Beta Signal

Answer category for neutral beta signal adjustment

EA.S.2 - Subindustry Correction Factor

0.00

Beta Signal

EA.S.3 - Exceptional Event Adjustment

0.00

Beta Signal

Appendix



Management Details

E.1.1 - Environmental Policy

100 Raw Score	5.00% Weight	5.0 Weighted Score
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The company has a very strong policy

Criteria

- Approved by senior management or the board of directors
- Commitment to consult with stakeholders on environmental issues
- Commitment to create environmental awareness
- Commitment to environmental protection
- Commitment to implement an environmental management system
- Commitment to monitor the company's environmental performance
- Commitment to reduce emissions, releases and waste
- Commitment to report regularly on environmental issues
- Commitment to use natural resources or energy more efficiently

Citations

TCC Corporate Social Responsibility Best Practice Principles, released August 2020

Taiwan Cement Corp. Environmental Protection Policy, released August 2023

Taiwan Cement Corp. Stakeholder Engagement Policy, released February 2024

The company provided feedback on 01 November 2024

E.1.2 - Environmental Management System

100 Raw Score	10.00% Weight	10.0 Weighted Score
------------------	------------------	------------------------

The company has a very strong EMS

Criteria

- Assigned roles and responsibilities
- Compliance with environmental regulation
- Corrective actions to stimulate continual improvement
- Environmental performance records
- Environmental programmes
- External environmental audits
- Identification of products, activities and services that have significant impacts on the environment
- Internal and external communications on environmental management issues
- Internal environmental audits
- Managerial or board level responsibility for environmental issues
- Monitoring and measurement
- Objectives, targets and deadlines
- Training and awareness programmes for employees

Citations

Taiwan Cement Corp. Corporate Website, Environment, www.taiwancement.com; accessed 19 July 2024

E.1.2.6.1 - Solid Waste Management

50 Raw Score	17.50% Weight	8.8 Weighted Score
-----------------	------------------	-----------------------

The company has an adequate programme

Criteria

- Initiatives to ensure proper disposal of hazardous waste
- Initiatives to recycle solid waste
- Initiatives to reduce solid waste
- Initiatives to reuse solid waste
- Objectives or targets related to solid waste management
- Policy commitment to manage waste responsibly or reduce solid waste
- Reporting on solid waste issues
- Solid waste monitoring and measurement

Citations

TCC Corporate Social Responsibility Best Practice Principles, released August 2020

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. Corporate Website, Waste Management, <http://www.taiwancement.com>; accessed 12 November 2024

The company provided feedback on 01 November 2024

The company provided feedback on 23 August 2023

E.1.2.6.3 - Effluent Management

100 Raw Score	17.50% Weight	17.5 Weighted Score
------------------	------------------	------------------------

The company has a strong programme

Criteria

- Incident investigation and corrective action
- Initiatives to reduce, reuse or recycle effluents
- Monitoring and measurement of effluent and effluent management
- Objectives or targets related to effluent management
- Policy commitment to manage or reduce effluents
- Reporting on effluent issues

Citations

TCC Corporate Social Responsibility Best Practice Principles, released August 2020

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Appendix



Management Details

E.1.3 - EMS Certification

100 Raw Score	7.50% Weight	7.5 Weighted Score
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90% or more of the company's activities have received external certification

Citations

Taiwan Cement Corp. Corporate Website, Environment, www.taiwancement.com; accessed 19 July 2024

E.1.3.2 - Hazardous Waste Management

25 Raw Score	12.50% Weight	3.1 Weighted Score
-----------------	------------------	-----------------------

The company has a weak programme

Criteria

- Commitment to reduce hazardous waste
- Initiatives to reduce hazardous waste
- Monitoring and measurement
- Targets and deadlines

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

E.1.3.3 - Non-GHG Air Emissions Programmes

100 Raw Score	20.00% Weight	20.0 Weighted Score
------------------	------------------	------------------------

The company has a strong programme

Criteria

- Commitment to reduce non-GHG air emissions
- Deadlines to reduce non-GHG air emissions
- Identification of relevant non-GHG air emissions
- Initiatives to reduce non-GHG air emissions
- Non-GHG air emission monitoring
- Targets to reduce non-GHG air emissions

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

E.1.13 - SOx Intensity

75 Raw Score	5.00% Weight	3.8 Weighted Score
-----------------	-----------------	-----------------------

The company's SOx intensity is below its subindustry or industry benchmark

Further Quantitative Criteria Details

FY: 2023 Source: Reported

Metric	Metric Value
SOx Emissions Intensity	0.3 t/US\$m

E.1.14 - NOx Intensity

75 Raw Score	5.00% Weight	3.8 Weighted Score
-----------------	-----------------	-----------------------

The company's NOx intensity is below its subindustry or industry benchmark

Further Quantitative Criteria Details

FY: 2023 Source: Reported

Metric	Metric Value
NOx Emissions Intensity	3.0 t/US\$m

Appendix



Exposure Details



Stakeholder Governance

EA.S.1 - Qualitative Overlay

0.00

Beta Signal

Answer category for neutral beta signal adjustment

EA.S.3 - Exceptional Event Adjustment

0.00

Beta Signal

EA.S.4 - Ownership

0.00

Beta Signal

The company is publicly traded.

Appendix



Management Details

E.1.1 - Environmental Policy

100 Raw Score	9.09% Weight	9.1 Weighted Score
------------------	-----------------	-----------------------

The company has a very strong policy

Criteria

- Approved by senior management or the board of directors
- Commitment to consult with stakeholders on environmental issues
- Commitment to create environmental awareness
- Commitment to environmental protection
- Commitment to implement an environmental management system
- Commitment to monitor the company's environmental performance
- Commitment to reduce emissions, releases and waste
- Commitment to report regularly on environmental issues
- Commitment to use natural resources or energy more efficiently

Citations

TCC Corporate Social Responsibility Best Practice Principles, released August 2020

Taiwan Cement Corp. Environmental Protection Policy, released August 2023

Taiwan Cement Corp. Stakeholder Engagement Policy, released February 2024

The company provided feedback on 01 November 2024

E.1.7.0 - GHG Reduction Programme

100 Raw Score	10.16% Weight	10.2 Weighted Score
------------------	------------------	------------------------

The company has a very strong programme

Criteria

- Adoption of key mitigation technologies
- Demonstration of how initiatives put in place close the emissions gap between current performance and the targeted emissions reduction
- Emissions reduction coverage
- GHG emissions monitoring and measurement
- GHG reduction target
- Initiatives are linked to wider TCFD reporting
- Initiatives in place to reduce emissions
- Interim targets
- Net Zero and Science Alignment
- Regular GHG audits or verification

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. TCFD Report 2023; released June 2024

The company provided feedback on 01 November 2024

E.2.1 - Supplier Environmental Policy

50 Raw Score	3.74% Weight	1.9 Weighted Score
-----------------	-----------------	-----------------------

The company has an adequate policy

Criteria

- The company has a general statement on green procurement
- The company's policy includes a commitment to consider suppliers' environmental performance in its procurement decision-making process
- The company's policy includes a commitment to engage with suppliers to improve their environmental performance
- The company's policy includes a commitment to monitor suppliers' environmental performance

Citations

Taiwan Cement Corp. Stakeholder Engagement Policy, released February 2024

The company provided feedback on 01 November 2024

S.1.2 - Discrimination Policy

100 Raw Score	10.16% Weight	10.2 Weighted Score
------------------	------------------	------------------------

The company has a strong policy

Criteria

- Commitment to ensure equal opportunity
- List of the types of discrimination the company is committed to eliminate
- Reference to the ILO conventions

Citations

Taiwan Cement Corp. Human Rights Policy, available online at www.taiwancement.com; accessed 22 July 2024

Appendix



Management Details

S.2.1 - Scope of Social Supplier Standards

100 Raw Score	4.81% Weight	4.8 Weighted Score
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The company has very strong social supply chain standards

Criteria

- Addresses acceptable living conditions
- Addresses child labour
- Addresses corporal punishment/disciplinary practices
- Addresses forced labour
- Addresses freedom of association and the right to collective bargaining
- Addresses health and safety
- Addresses maximum working hours
- Addresses minimum living wages
- Addresses non-discrimination

Citations

Taiwan Cement Corp. Supplier Code of Conduct, released June 2024

G.1.1 - Bribery & Corruption Policy

75 Raw Score	11.23% Weight	8.4 Weighted Score
-----------------	------------------	-----------------------

The company has a strong policy

Criteria

- Definition and prohibition of facilitation payments
- Definition of bribery or corruption
- Definition of conflicts of interest and commitment to minimize these
- Guidelines of what is considered acceptable behaviour
- Prohibition of bribery
- There is no evidence of a formal policy but the company has a general statement addressing the issue

Citations

On Friday, October 18, 2024, Sustainalytics sent Taiwan Cement Corp. the Sustainalytics ESG Feedback Report

On Wednesday, August 9, 2023, Sustainalytics sent Taiwan Cement Corp. the Sustainalytics ESG Feedback Report

TCC Anti Corruption and Anti Bribery Policy; released August 2020

Taiwan Cement Corp. Ethical Corporate Management Best Practice Principles, released May 2021

The company provided feedback on 01 November 2024

The company provided feedback on 23 August 2023

The company provided feedback on 24 September 2020

The company provided feedback on 28 September 2021

G.1.2 - Whistleblower Programmes

75 Raw Score	11.23% Weight	8.4 Weighted Score
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The company has a strong programme

Criteria

- An independent, reporting hotline available 24/7
- Available in local languages
- Available to suppliers, customers and other third parties
- Disclosure on the number of reports received, the types of misconduct and measures taken
- Non-retaliation policy
- Possibility for anonymous reporting and reports are treated confidentially
- Proactively communicated to employees
- Structures in place to process whistleblower reports

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. Anti-Corruption and Anti-Bribery Policy, released August 2020

Taiwan Cement Corp. Code of Ethical Conduct, released August 2020

Taiwan Cement Corp. Reporting Mechanism for Violation of Code of Conduct; released November 2021

The company provided feedback on 01 November 2024

The company provided feedback on 24 September 2020

G.1.4 - Tax Disclosure

50 Raw Score	9.09% Weight	4.5 Weighted Score
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The company's tax disclosure is adequate

Criteria

- The company reports on taxes paid by region, continent or using a mixed approach
- The company reports on taxes paid on a country-by-country basis for all of the countries in which it operates

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

The company provided feedback on 01 November 2024

Appendix



Management Details

The company provided feedback on 28 September 2021

G.2.1 - ESG Reporting Standards

100 Raw Score	6.42% Weight	6.4 Weighted Score
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The company's ESG reporting is very strong

Criteria

- The company discloses ESG information on its website or in other publicly available materials, but not as an integrated or standalone report
- The company reports on ESG information, as part of an integrated or standalone report on an annual basis
- The company reports on ESG information as part of an integrated report or a standalone ESG or sustainability report
- The company's ESG reporting follows standards other than best practice standards
- The company's ESG reporting is fully aligned with best practice standards
- The company's ESG reporting is limited in scope or its scope cannot be determined
- The company's ESG reporting is partially aligned with best practice standards

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

G.2.2 - Verification of ESG Reporting

50 Raw Score	5.35% Weight	2.7 Weighted Score
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The company's verification of its ESG reporting is adequate

Criteria

- At least some parts of the company's ESG report have been externally verified
- Data on one ESG topic reported by the company has been externally verified
- The company has received limited assurance for its ESG reporting
- The company has received reasonable assurance for its ESG reporting
- The company's entire ESG report has been externally verified

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

G.2.5 - ESG Governance

100 Raw Score	11.23% Weight	11.2 Weighted Score
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A board member or a board committee is responsible for overseeing ESG issues

Citations

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

G.3.1 - Political Involvement Policy

25 Raw Score	3.74% Weight	0.9 Weighted Score
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The company has a weak policy

Criteria

- Approved by senior management
- Commits the company to disclose political donations and/or lobbying expenditures
- Partially prohibits political involvement
- Prohibits political involvement of any kind on the company's behalf

Citations

Taiwan Cement Corp. Ethical Corporate Management Best Practice Principles, released May 2021

Appendix



Management Details

G.3.2.1 - Transparency on Lobbying and Political Expenses

50	3.74%	1.9
Raw Score	Weight	Weighted Score

The company has adequate disclosure

Criteria

- The company discloses a detailed breakdown of lobbying and political expenses per recipients/ beneficiaries and per country
- The company discloses expenditures and/or beneficiaries supported via its lobbying or political finance activities, but with only limited scope
- The company discloses that it does not engage in any lobbying and political finance activities
- The company discloses the causes or themes that it supports through lobbying and political finance activities
- The company discloses the overall monetary value of lobbying and political expenses
- The company partially discloses expenditures and/or beneficiaries supported via its lobbying or political finance activities

Citations

European Union Transparency Register, www.transparency-register.europa.eu; accessed 22 July 2024

TCC Group Holdings CO., LTD. Sustainability Report 2023 (FY2023)

Taiwan Cement Corp. Corporate Website, Social Engagement, www.taiwancement.com; accessed 12 November 2024

The company provided feedback on 01 November 2024

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GLOSSARY OF TERMS

Attribute Date

Publication Date when there is any change to the ESG Risk Score, ESG Risk Category, Sub-Industry or Framework.

Beta (Beta, β)

A factor that assesses the degree to which a company's exposure deviates from its **subindustry**'s exposure on a **material ESG issue**. It is used to derive a company-specific issue exposure score for a material ESG issue. It ranges from 0 to 10, with 0 indicating no exposure, 1 indicating the subindustry average, and 10 indicating exposure that is ten times the subindustry average.

Change in Value

Delta between current and previous ESG Risk Scores.

Change Trigger

Explains what triggered a company's score to change (e.g., methodology, event, annual update, partial update).

ESG Risk Category

Companies' **ESG Risk Rating scores** are assigned to five ESG risk categories in the **ESG Risk Rating**:

- Negligible risk:** enterprise value is considered to have a negligible risk of material financial impacts driven by ESG factors
- Low risk:** enterprise value is considered to have a low risk of material financial impacts driven by ESG factors
- Medium risk:** enterprise value is considered to have a medium risk of material financial impacts driven by ESG factors
- High risk:** enterprise value is considered to have a high risk of material financial impacts driven by ESG factors
- Severe risk:** enterprise value is considered to have a severe risk of material financial impacts driven by ESG factors

Note that because ESG risks materialize at an unknown time in the future and depend on a variety of unpredictable conditions, no predictions on financial or share price impacts, or on the time horizon of such impacts, are intended or implied by these risk categories.

ESG Risk Rating Score (Unmanaged Risk Score)

The company's final score in the **ESG Risk Rating**; it applies the concept of **risk decomposition** to derive the level of **unmanaged risk** for a company.

Event Category

Sustainalytics categorizes events that have resulted in negative ESG impacts into five event categories: Category 1 (low impact); Category 2 (moderate impact); Category 3 (significant impact); Category 4 (high impact); and Category 5 (severe impact).

Event Indicator

An indicator that provides a signal about a potential failure of management through involvement in controversies.

Event Update

An internal process where an update of an event assessment for a company is performed; the event update is typically done when news about the involvement of a company in a controversy is reaching a certain threshold that requires either an initial event assessment or an update of an existing event assessment.

Excess Exposure

The difference between the company's **exposure** and its **subindustry** exposure.

Exposure

A company or **subindustry**'s sensitivity or vulnerability to ESG risks.

Full Update

An internal process where a full assessment of a company is performed; the full update is typically done on an annual basis for ESG Risk Ratings.

Idiosyncratic Issue

An issue that was not deemed material at the **subindustry** level during the **consultation process** but becomes a **material ESG issue** for a company based on the occurrence of a Category 4 or 5 event.

Manageable Risk

Material ESG risk that can be influenced and managed through suitable policies, programmes and initiatives.

Managed Risk

Material ESG Risk that has been managed by a company through suitable policies, programmes and initiatives.

Management

A company's handling of ESG risks.

Management Gap

Refers to the difference between what a company has managed and what a company could possibly manage. It indicates how far the company's performance is from best practice.

Management Indicator

An indicator that provides a signal about a company's management of an ESG issue through policies, programmes or quantitative performance.

Material ESG Issue

A core building block of the **ESG Risk Rating**. An ESG issue is considered to be material within the rating if it is likely to have a significant effect on the enterprise value of a typical company within a given **subindustry**.

Methodology Update

An internal process where the methodological architecture of a product is changed leading to changes in the rating/assessment of a company; methodological updates typically occur once within 3-5 years and are rolled out for all companies at once.

Partial Update

An internal process where data points that feed a rating/assessment of a company are updated outside of the full update process and limited in scope; the partial update is typically restricted to a limited number of data points and occurring periodically.

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GLOSSARY OF TERMS

Subindustry

Subindustries are defined as part of Sustainalytics' own classification system.

Unmanageable Risk

Material ESG Risk inherent from the intrinsic nature of the products or services of a company and/or the nature of a company's business, which cannot be managed by the company if the company continues to offer the same type of products or services and remains in the same line of business.

Unmanaged Risk

Material ESG risk that has not been managed by a company, and includes two types of risk: **unmanageable risk**, as well as risks that could be managed by a company through suitable initiatives, but which may not yet be managed (**management gap**).

Value after Change

Current ESG Risk Score, ESG Risk Category, Sub-Industry or Framework.

Value before Change

Previous ESG Risk Score, ESG Risk Category, Sub-Industry or Framework.

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