

Sustainable Finance Analysis of Zijin Mining Group

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Overview

- Zijin Mining: a prominent player in the Chinese mining industry
- A solid risk-return profile in China
- But...
- Lacking ESG performance → a higher risk perception



ESG Practices —— key achievements

- ESG — Environment (E)
 1. Total greenhouse gas emissions 7.26 million tCO₂e Greenhouse gas emissions intensity 32.25 tCO₂e/ RMB million revenue, down 9.49% year-on-year
 2. Renewable energy ratio is 2.3%, up 1.32% year-on-year
 3. Water re-use rate 92.02%
 4. SO₂ emissions intensity reduced by 15.95% year-on-year, NOX emissions intensity reduced by 11.96% year-on-year
 5. Restored 7.756 million square metres of land, all restorable land in this year has been restored



ESG Practices — key achievements

- ESG — Scoiety (S)
 1. Using 2019 LTIR as the benchmark, lower 2022 LTIR by 30% (LTIR 0.30)
 2. Using 2019 TRIR as the benchmark, lower 2022 TRIR by 30% (TRIR 0.68)
 3. Maintain employee and contractor safety training rate at 100%: 100% of employees and contractors received safety training with an average of 5.0 training sessions received per employee and contractor
 4. Committed to invest 1% of profit for every financial year: A total of RMB424 million (1.68% of the profit) was invested in communities



ESG Practices — key achievements

- ESG — Governance (G)
 1. Continuously improve Board diversity: ratio of female in the Board 7.7%
 2. Continuously improve Board independence: ratio of non-executive director and independent directors 53.8% (Audit and Internal Control Committee)
 3. Increase Board's influence on ESG management: 30% of the proposals considered and approved by the Board related to ESG issues
 4. Establish a sound ESG risk management system: key ESG risks have been preliminarily identified




ESG Practices — potential risks

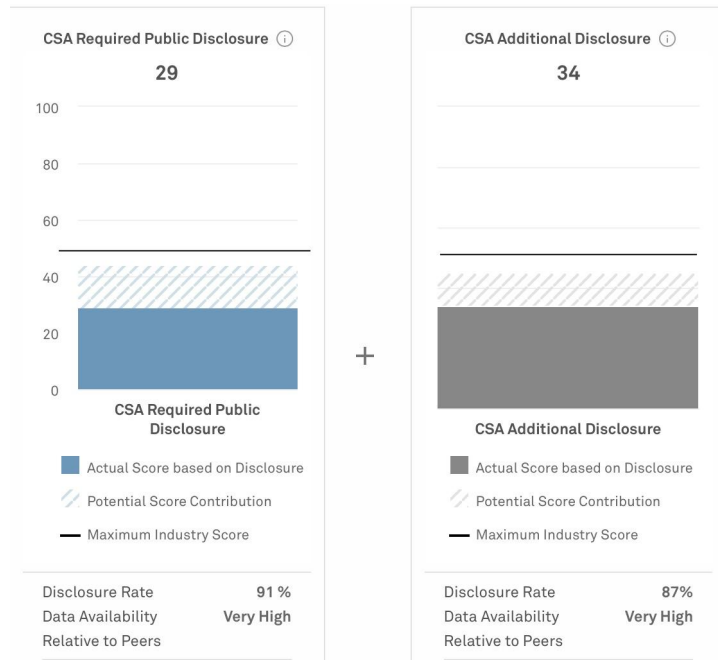
1. Geopolitical risk
2. Environmental risk
3. Market risk
4. Climate change risk
5. Human rights risk



Accountability & Reliability of the Self-Reported Information

- In general, Zijin Mining's ESG report is credible.
- Disclosure rate data & availability compared to peers are rated relatively high.
- ISO 14001 & ISO 45001 certification coverage → 87.5%

Data Availability :  Very High



Source: S&P Global



Accountability & Reliability of the Self-Reported Information

Ambiguous information

- Insufficient details → hard to tell the real efforts
- E.g. innovated equipment and processes → improve water reuse rate
- Specific innovation points and results?



Accountability & Reliability of the Self-Reported Information

Selective disclosure

According to the report,

- Water discharge volume and intensity increased in 2021
- Attributed the increase mainly to the high rainfall at the mines located in South America

However...

- Suspended by Serbia government due to environmental standard violations
- Mandated to construct a wastewater treatment plant



Accountability & Reliability of the Self-Reported Information

Selective disclosure

According to the report,

- Conduct environmental impact assessment in accordance with local the laws and regulations of the country (region)
- Investigate and assess the adverse impacts and risks on the surrounding environment throughout the life cycle of the project
- Formulate reasonable risk response measures to lower and eliminate any possible adverse impacts

However...

- Without necessary permits, local consent, or transparency, leading to significant environmental pollution, particularly in the village of Ostrelj and the city of Bor
- Negatively affected lives and health of local residents and the environment

--Source: Just Finance



Accountability & Reliability of the Self-Reported Information

Third-Party Evaluation – Relative Low

Zijin Mining Group Co., Ltd

Climate Change 2021

2021



Zijin Mining Group Co., Ltd

Water Security 2021

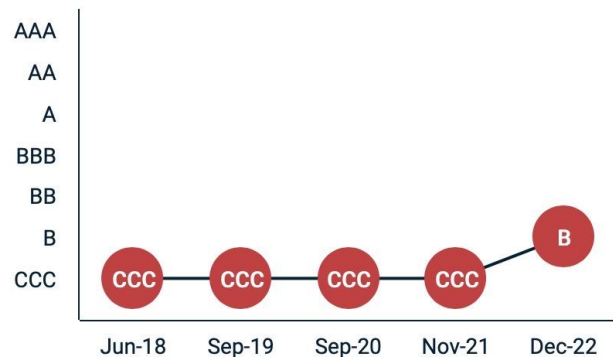
2021



CDP ESG Rating

ESG Rating history

MSCI ESG Rating history data over the last five years or since records began.



MSCI ESG Rating



Relevance of the claimed ESG goals

- Specific ESG Goals:
 - The company has set:
 - Short-term ESG goal: **not explicitly listed**
 - Medium-term ESG goal: achieve carbon peak by 2029
 - Long-term ESG goal: achieve carbon neutrality by 2059



Relevance of the claimed ESG goals

- Zijin Mining Group is roughly aligned with ESG goals
 - Zijin Mining aligns its activities with the United Nations Sustainable Development Goals (SDGs)→a focus on broader societal and environmental objectives
 - They have clear strategies and practices in line with these goals:
 - ✓ reducing greenhouse gas emissions
 - ✓ promoting renewable energy
 - ✓ ensuring high standards of environmental protection



Financial Analysis

- ZIJIN MINING(601899.SH) is the best in domestic mining industry;
- We choose another mining company in the global stock market-FREEPORT MCMORAN (FCX.N) as the benchmark.
 - Since this two companies market values are almost the same.
 - Zijin:
 - FCX.N:
 - Source: Wind
- Data time horizon:2017-2021(recent five years)



Financial Analysis-Profitability Ratios

- The Net Profit Margin, ROA, and ROE of FREEPORT MCMORAN are both higher than Zijin on average.

Table 1. Profitability Description

Variable	601899.SH	FCX.N
Net Profit Margin (%)	5.042 (2.133066)	11.31448 (9.417495)
ROE (%)	12.416 (5.504773)	16.69053651 (14.32823)
ROA (%)	5.622 (2.556965)	7.94828 (6.120934)

Notes: The Stand Deviations in parentheses



Financial Analysis-Efficiency of Asset Utilization Ratios

- Zijin's Efficiency of Using Asset is higher, but the stability shows no significant difference.

Table 2. Efficiency of Asset Utilization Ratio

Variable	601899.SH	FCX.N
Asset turnover ratio	1.106 (0.05)	0.4208 (0.07)
Inventory turnover ratio	8.5909 (1.22)	3.10746 (0.17)

Notes: The Stand Deviations in parentheses



Financial Analysis-Liquidity Ratios

- Zijin's Short-term solvency is weak, and there may be a risk of cash flow difficulties or debt crisis.

Table 3. Liquidity Ratio

Variable	601899.SH	FCX.N
Current Ratio	0.443742299 (0.07)	2.61316 (0.40)
Quick Ratio	0.250673741 (0.06)	1.53834 (0.25)
Notes: The Stand Deviations in parentheses		



Financial Analysis-Market Price Ratios

- Zijin is more stable and has a potential growth opportunity.

Table 4. Potential Growth (P/E)

Year	601899.SH	FCX.N
2021	19.29	15.69
2020	40.30	-378.04
2019	31.08	80.32
2018	16.56	4.73
2017	40.20	25.70

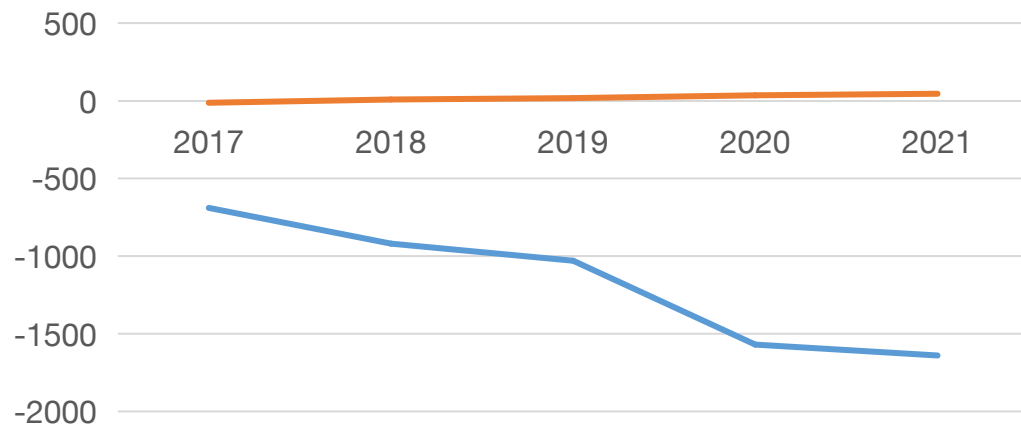
Notes: The Stand Deviations in parentheses



Financial Analysis-Economic Value Added

- Zijin Mining's EVA turned from negative to positive, rather than all negative as Freeport McMoran

Table5.EVA Time Line



Unit: Million USD

— FCX.N — 601899.SH



Financial Analysis-Final Suggestion

- Zijin Mining is still a good option when comparing with mining company in global market.
- The performance is more stable than FREEPORT MCMORAN;
- Final choice depends on the risk-aversion attitude.
- But overall, Zijin has outperformed benchmark company in most of these indices.

This is a stock worthy of recommendation in terms of Financial analysis



Conclusion

- Potential risks regarding the ESG strategies;
- ESG practices;
- Credibility of ESG practices:
 - Selection bias
 - Environmental pollution event has not been revealed.
- Financial performance:
 - Relatively stable than FREEPORT MCMORAN



Conclusion

- Zijin Mining may not be the best investing option;
- ESG rating is too low
 - CCC in MSCI 2021
 - C for water security, and D for climate change in CDP 2021
- ESG has a positive correlation with company performance (Chen, and Xie, 2022)
- Better considering other mining companies with higher ESG.
 - Such as FREEPORT MCMORAN (BB in MSCI 2021)
 - Or ANGLO AMERICAN PLC (A in MSCI 2021)



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Data resources are all from Wind Database



Thanks for your listening

