S&P Global Ratings

Second Party Opinion

Sunny Optical Technology (Group) Co. Ltd.'s Sustainability-Linked Financing Framework

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Primary Analyst

Evian Wee
Singapore
+65 6239 6363
evian.wee
@spglobal.com

Secondary Analysts

Joyee Lam
Hong Kong
+852 2912 3057
joyee.lam
@spglobal.com

Bertrand Jabouley
Singapore
+65 6239 6303
bertrand.jabouley
@spglobal.com

Established in 1984, Sunny Optical Technology (Group) Co. Ltd. (Sunny Optical) engages in the manufacture and sale of integrated optical components, optoelectronic products, and optical instruments. It operates through eight business sectors, covering: mobile phones; automobiles; security; microscopes; robots; augmented reality (AR) and virtual reality (VR); industrial detection; and medical diagnostics.

The company is headquartered in Yuyao, Zhejiang province, China and has been listed on the Hong Kong Stock Exchange since 2007. In 2021, the company posted revenue of Chinese renminbi (RMB) 37.5 billion (US$5.4 billion).

In our view, Sunny Optical's sustainability-linked financing framework, published in December 2022, is aligned with:

- ✔ Sustainability-Linked Bond Principles, ICMA, 2020 (SLBP)
- ✔ Sustainability-Linked Loan Principles, LMA/LSTA/APLMA, 2022 (SLLP)

Issuer's Sustainability Objectives

Sunny Optical aims to minimize adverse environmental and social impacts while achieving its long-term economic objectives. The company states that it wants to leverage technological innovation to protect the environment and achieve sustainable development.

As part of its environmental responsibilities, Sunny Optical aims to reduce greenhouse gas emissions and hazardous waste. It conserves resources by optimizing its use of electricity, water and paper. In addition, the company commits to maintaining equal and safe working conditions and providing training and development opportunities for its employees.

Sunny Optical has identified climate change, greenhouse gas and energy management as topics that are material to its business development. It targets peak carbon emissions by 2028 and carbon neutrality by 2058, two years ahead of China's 2030/2060 carbon peak and carbon neutrality agenda. Sunny Optical has developed a sustainability-linked financing framework to highlight its efforts in the management of carbon emissions and meeting its sustainability commitments.

Selected Key Performance Indicators (KPIs) And Sustainability Performance Targets (SPTs)

KPI	SPT	Baseline	2021 performance
Reduction of scope 1 and 2 greenhouse gas (GHG) emissions intensity	Reduction of scope 1 and 2 GHG emissions intensity (in million RMB revenue) by 20% by 2025 versus a 2021 baseline	10.30 tCO2e/RMB million revenue (2021)	10.30 tCO2e/RMB million revenue

Second Party Opinion Summary

Selection of key performance indicators (KPIs)

Alignment ✓ Sunny Optical's sustainability-linked financing framework is aligned with this component of the SLBP and SLLP.

		Not aligned	Aligned	Strong	Advanced
KPI 1	Reduction of scope 1 and 2 GHG emissions intensity (tCO2e/million RMB revenue)		**Aligned**		

Calibration of sustainability performance targets (SPTs)

Alignment ✓ Sunny Optical's sustainability-linked financing framework is aligned with this component of the SLBP and SLLP.

		Not aligned	Aligned	Strong	Advanced
SPT 1	Reduction of scope 1 and 2 GHG emissions intensity (in million RMB revenue) by 20% in 2025 versus a 2021 baseline			**Strong**	

Instrument characteristics

Alignment ✓ Sunny Optical's sustainability-linked financing framework is aligned with this component of the SLBP and SLLP.

All sustainability-linked instruments (SLIs) issued under this framework will be subject to a premium payment if the company does not achieve the SPT by the target observation date. Each instrument's documentation will specify the margin adjustment. Likewise, if Sunny Optical is unable to calculate or report on the SPT, or does not publish the relevant verification assurance certificate within the time specified in the instrument's documentation, the SLI will be subject to the premium payment.

Reporting

Alignment ✓ Sunny Optical's sustainability-linked financing framework is aligned with this component of the SLBP and SLLP.

	Not aligned	Aligned	Strong	Advanced
Score			**Strong**	

Sunny Optical commits to disclosing the performance of its KPI against its SPT--at least on an annual basis, in its sustainability report or in stand-alone reports. These will be published on the company's website. The company will also report on the positive sustainability impacts from its operational carbon intensity reduction, on any drivers that have impacted performance, and/or on any reassessment of KPIs and/or restatement of SPTs, when applicable.

Post-issuance review

Alignment ✓ Sunny Optical's sustainability-linked financing framework is aligned with this component of the SLBP and SLLP.

Sunny Optical commits to having independent third-party verification of the KPI's performance against the SPT, at least on an annual basis. Subject to the relevant documentation of each SLI, the external review will be publicly disclosed.

Framework Assessment

Selection of key performance indicators (KPIs)

The Principles make optional recommendations for stronger structuring practices, which inform our relevancy opinion as aligned, strong, or advanced. For each KPI, we consider how relevant the KPI is for sustainability by exploring the clarity and characteristics of the defined KPI; its significance for the issuer's sustainability disclosures; and how material it is to the issuer's industry and strategy.

✔ Sunny Optical's sustainability-linked financing framework is aligned with this component of the SLBP and SLLP.

KPI 1	Reduction of scope 1 and 2 GHG emissions intensity (tCO2e/million RMB revenue)	Not aligned	**Aligned**	Strong	Advanced

The framework outlines the scope, objective and calculation methodology of the KPI. The KPI addresses the important sustainability challenge of climate change mitigation for the technology hardware and equipment sector.

Sunny Optical specifies that the scope 1 and 2 emissions will cover four key subsidiaries, namely: Zhejiang Sunny Optics Co. Ltd.; Ningbo Sunny Opotech Co. Ltd.; Ningbo Sunny Automotive Optech Co. Ltd.; and Yuyao Sunny Optical Intelligence Technology Co. Ltd. These four subsidiaries account together for more than 90% of the company's total revenues and scope 1 and 2 emissions. Scope 1 emissions stem from owned or controlled operations, including the combustion of diesel oil, gasoline and air conditioning coolants. Sunny Optical has identified emissions from its air conditioning coolants to be the major source of its scope 1 emissions. The company will exclude from its calculations GHG emissions from its employee canteens and dormitories, considering they are immaterial (< 1% of scope 1 emissions). Scope 2 emissions (location-based) from the company's purchased electricity account for 99.3% of Sunny Optical's scope 1 and 2 emissions inventory. Sunny Optical has chosen total revenues, in million RMB, as the normalizing factor for its scope 1 and 2 GHG emissions, since volumes could prove challenging to estimate given the nature and diversity of its product slate. This revenue-based KPI is inherently exposed to price uncertainties and fluctuation, limiting its comparability.

The reduction in scope 1 and 2 GHG emissions intensity aligns with the material environmental topics in Sunny Optical's annual materiality assessment, namely, greenhouse gas, energy management and climate change. The company also identifies a few governance and social topics, such as product safety and quality, or health and safety, that are more material to its business. However, its environmental objectives--carbon emissions peak (by 2028) and carbon neutrality (by 2058)--illustrate that climate change mitigation is still one of its sustainability strategy's priorities. The framework articulates the rationale for selecting the KPI, which is to highlight the company's efforts to decarbonize, particularly during its expansion in production. The KPI is currently being reported in the company's annual sustainability reports, which we view as good practice.

The company has adopted the GHG Protocol for calculating the GHG emissions disclosed in the framework. It references national and international standards, such as the 2012 China Regional Grid Average Carbon Dioxide Emission Factors and the 2014 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories, among others for the calculation of scope 1 and 2 GHG emissions. Relying on standards that are not up to date may temper accuracy when performing external benchmarking. The company will use the latest standards whenever these updates result in a material difference in its carbon inventories.

The selected KPI is relevant to the technology hardware and equipment sector because of the energy-intensive nature of manufacturing such products. That said, the industry's most material emissions stem from its suppliers and the end-use of its products. The company is still formulating an action plan to estimate its scope 3 emissions, which would have a greater impact on the sector's decarbonization efforts. Finally, the KPI is based on reducing intensity-based emissions rather than absolute emissions. We view the latter to be more meaningful, and in line with the recommendations of the Science-Based Target Initiative (SBTi).

Calibration of sustainability performance targets (SPTs)

The Principles make optional recommendations for stronger structuring practices, which inform our ambition opinion as aligned, strong, or advanced. We consider the level of ambition for each target by assessing its clarity and characteristics, how the issuer defines the target with reference either to its past performance, or to external or competitor benchmarks, and how it explains what factors could influence future performance.

✔ Sunny Optical's sustainability-linked financing framework is aligned with this component of the SLBP and SLLP.

SPT 1	Reduction of scope 1 and 2 GHG emissions intensity (in million RMB revenue) by 20% by 2025 versus a 2021 baseline	Not aligned	Aligned	**Strong**	Advanced

Sunny Optical's framework outlines the baseline year (2021), expected observation date (Dec. 31, 2025), and the target percentage reduction (20%) in its scope 1 and 2 GHG emissions intensity. It also covers relevant trigger events, such as the failure to achieve the SPT on the target observation date. The company's baseline GHG emissions intensity performance has been externally verified with a reasonable level of assurance. The SPT is benchmarked against the issuer's historical performance as well as against global peers in its wider technology hardware and equipment sector.

The SPT is compared against three years of Sunny Optical's historical performance (2019-2021). The company will need a significant improvement in performance to achieve this SPT, since its GHG emissions intensity has risen by 29% between 2019 and 2021. While revenues have stagnated from 2019 to 2021, total scope 1 and 2 GHG emissions have increased, mirroring a growth in production volumes and an unsupportive pricing environment. Based on a business-as-usual trajectory, Sunny Optical expects its operations to be increasingly energy-intensive due to the increase in demand for higher accuracy and precision products and the shift towards VR- and electric vehicle-related optical components. However, meeting the SPT implies that the company will incrementally reduce its scope 1 and 2 GHG emissions intensity by 5% annually from 2022 until 2025.

The company intends to achieve its SPT primarily through on-site green energy generation, purchase of renewable energy, and energy efficiencies. Sunny Optical will significantly accelerate its invesments in solar panel photovoltaic installation projects at its facilities, upgrading and retrofitting of existing equipment, implementation of resource- and energy-efficiency technologies, and optimization of industrial processes. These intiatives go beyond its past energy-related investments. Sunny Optical does not anticipate the use of carbon offsets to achieve its SPT.

Sunny Optical has conducted a benchmarking exercise against its global peers in the technology hardware and equipment sector. The peers selected are adequate since they include close competitors that are comparable in scope of operations, and the broader sector globally. The company's baseline performance (10.30 tCO_2e/million RMB revenue) compared well with its close competitors' average (27.5 tCO_2e/million RMB revenue), but its emissions were higher than the average of the wider technology hardware and equipment sector (4.9 tCO_2e/million RMB revenue). The difference in performance compared with its global peers is likely driven by the source of electricity. China's electricity grid still relies heavily on fossil fuels: 82.7% according to BP's Statistical Review of World Energy (2022). That said, many peers in the sector have yet to report on their environmental performance, in contrast to Sunny Optical's environmental disclosures. Sunny Optical's target looks more ambitious than four out of six close peers which have targets. Few peers in the broader wider technology hardware and equipment sector have targets, and fewer are validated by the SBTi.

The SPT has some limitations. Firstly, there is a risk that the company will achieve the target solely through a growth in total revenues from increasing its products' average selling price (ASP). However,the ASP has been decreasing over the last three years and seems unlikely to rebound vigorously, given the highly competitive climate in the current market. This means volumes are more likely to be the main drivers of revenues in 2022-2025. Further, Sunny Optical's absolute emissions will continue to increase in line with its commitment to achieve carbon peak by 2028, limiting the sustainability benefit of the target. Finally, achieving a 20% reduction in its GHG emissions intensity (target: 8.24 tCO_2e/million RMB revenue) remains slightly higher in comparison with the 8.00 tCO_2e/million RMB revenue in 2019. Nonetheless, the volumes of production and energy consumption levels are expected to rise in the years to 2025, given the shift in demand for more energy-intensive products.

Baseline	Reduce scope 1 and 2 GHG emissions intensity (in million RMB revenue) by 20% by 2025 versus a 2021 baseline
2021	**2025**
10.30 tCO_2e/million RMB revenue	8.24 tCO_2e/million RMB revenue
	Equivalent to 20% reduction

Instrument characteristics

The Principles require disclosure of the type of financial and/or structural impact involving trigger event(s), as well as the potential variation of the instrument's financial and/or structural characteristics.

✔ Sunny Optical's sustainability-linked financing framework is aligned with this component of the SLBP and SLLP.

Sunny Optical states that instruments issued under the framework will be subject to a premium payment in the form of a coupon or margin step-up if the company does not achieve the SPT by the target observation date. Sunny Optical will define the exact adjustment of the premium payment in the terms and conditions of each SLI.

The framework also describes relevant fallback mechanisms if the KPI cannot be calculated, which we view positively. The SLI will be subject to a premium payment if the company's performance against the SPT cannot be measured in a satisfactory manner, with the calculations validated by an independent external reviewer's verification certificate, or if the company does not publish the verification certificate within the time limit in a given SLI's documentation.

Furthermore, the company will use the same KPI and SPT of equal or greater ambition for any future SLIs issued. Following the issuance of new SLIs, any outstanding SLIs will also be updated to reflect the more ambitious targets, in line with international market best practice.

Reporting

The Principles make optional recommendations for stronger disclosure practices, which inform our disclosure opinion as aligned, strong, or advanced. We consider plans for updates on the sustainability performance of the issuer for general purpose funding, or the sustainability performance of the financed projects over the lifetime of any dedicated funding, including any commitments to post-issuance reporting.

✔ Sunny Optical's sustainability-linked financing framework is aligned with this component of the SLBP and SLLP.

Disclosure score	Not aligned	Aligned	**Strong**	Advanced

We consider Sunny Optical's overall reporting practices to be strong.

Sunny Optical commits to disclosing the progress against its SPT through its sustainability report or in stand-alone reports at least on an annual basis, and in any case for any date/period relevant for assessing the SPT performance leading to a potential adjustment of the SLIs' financing characteristics. These disclosures will be publicly available on Sunny Optical's corporate website. The company will also publish the external verification assurance report outlining the KPI's performance against the SPT and any other relevant information that would help investors monitor the company's progress on the SPT.

The framework features additional, stronger reporting commitments. Sunny Optical will disclose any recalculation of the base year or target, and any reassessment of the KPI, restatement of the

SPT and/or pro-forma adjustments of baselines or KPI scope. It will also report on the qualitative or quantitative drivers contributing to the performance of the KPI, including merger and acquisition activities, and illustrate any positive sustainability impacts from the performance improvement of the KPI, when applicable.

Post-issuance review

The Principles require post-issuance review commitments including the type of post-issuance third-party verification, periodicity and how this will be made available to key stakeholders. Our opinion describes whether the documentation is aligned or not aligned with these requirements. Please note, our second party opinion is not itself a post-issuance review.

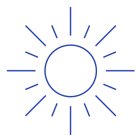
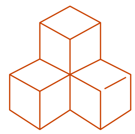
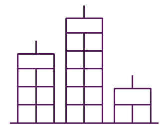
✔ Sunny Optical's sustainability-linked financing framework is aligned with this component of the SLBP and SLLP.

Sunny Optical commits to obtaining independent and external post-issuance verification of its performance level against the SPT for its KPI, at least on an annual basis, and in any case for any date/period relevant for assessing the SPT performance leading to a potential adjustment of the financing characteristics of the SLI. Subject to the nature of the SLI and its relevant documentation, the company will publish the verification assurance certificate in its annual sustainability report, or in stand-alone reports, which will be publicly available on the company's corporate website.

Mapping To The U.N.'s Sustainable Development Goals

The Sustainable Development Goals (SDGs), which the United Nations (U.N.) set up in 2015, form an agenda for achieving sustainable development by 2030.

Sunny Optical's sustainability-linked financing framework intends to contribute to the following SDGs:

KPI	SDGs			
Scope 1 and 2 greenhouse gas emissions intensity per revenue (tCO2e/million RMB)§	 **7. Affordable and clean energy**	 **9. Industry, innovation and infrastructure**	 **11. Sustainable cities and communities**	 **13. Climate action**

§The KPI is likely to contribute to the SDGs.