

Second-Party Opinion

Cemex Sustainability-Linked Financing Framework

Second-Party Opinion

Reviewed by:

MORNINGSTAR

SUSTAINALYTICS



Evaluation Summary

Sustainalytics is of the opinion that the Cemex Sustainability-Linked Financing Framework aligns with the Sustainability-Linked Bond Principles 2023 and the Sustainability-Linked Loan Principles 2023. This assessment is based on the following:

- Selection of Key Performance Indicators** The Cemex Sustainability-Linked Financing Framework includes three KPIs: i) scope 1 and scope 2 CO₂ emissions per tonne of cementitious product; ii) clinker factor to cementitious; and iii) alternative fuels rate. Sustainalytics considers KPI 1 to be very strong and KPIs 2 and 3 to be strong based on their materiality, relevance, scope of applicability and comparability to external benchmarks.
- Calibration of Sustainability Performance Targets** Sustainalytics considers the SPTs to be aligned with Cemex's sustainability strategy. Sustainalytics further considers SPT 1 to be highly ambitious, SPT 2 to be moderately ambitious and SPT 3 to be highly ambitious based on comparisons with past performance, peer performance and science-based trajectories.
- Bond and Loan Characteristics** All sustainability-linked bonds and notes issued under the Framework will be linked to KPI 1, and may also be linked to KPIs 2 and 3, depending on the specifics of each issuance. Failure to meet the SPT(s) associated with each issuance will trigger a premium payment, repayment amount, or adjustment to the coupon margin by an amount or percentage specified in the transactional documentation. All Sustainability-Linked Loans obtained under the Framework will be linked to all three KPIs with the performance against each SPT verified annually. Failure to achieve any SPTs will result in a premium payable by Cemex, while any SPT that is achieved will trigger a discount. Pricing adjustments will be based on the net of premiums and discounts from the respective SPTs and applied annually, on a non-cumulative basis. This is aligned with the Sustainability-Linked Bond Principles and Sustainability-Linked Loan Principles.
- Reporting** Cemex commits to reporting on its progress against the KPIs annually or as required pursuant to the provisions of the transactional documents. The reporting will usually be made available in its Integrated Report, which will be published on its website. Cemex commits to disclose relevant information that may materially affect the KPIs, such as any recalculations of the KPI baseline, restatement of the SPTs, and climate-related data as part of CDP reporting, as well as updates to the Company's sustainability strategy, targets, methodology or benchmark changes, and reporting. This is aligned with the Sustainability-Linked Bond Principles and Sustainability-Linked Loan Principles.
- Verification** Cemex commits to have external limited assurance conducted against each SPT for each KPI at least once a year, which is aligned with the Sustainability-Linked Bond Principles and Sustainability-Linked Loan Principles.

Evaluation Date	August 29, 2023
Issuer Location	Monterrey, Mexico

The SPTs contribute to the following SDGs:



Overview of KPIs and SPTs

KPI	Baseline	Strength of KPI	SPT	Ambitiousness of SPT
Scope 1 and scope 2 CO ₂ emissions per tonne of cementitious product (kgCO ₂ /t)	2020	Very Strong	Reduce scope 1 and scope 2 CO ₂ emissions to 564 kg by 2025, 513 kg by 2027, and below 454 kg by 2030 per tonne of cementitious product	Highly Ambitious
Clinker factor to cementitious (%)	2020	Strong	Reduce clinker factor to 68% by 2030	Moderately Ambitious
Alternative fuels rate (%)	2020	Strong	Achieve alternative fuels rate of 55% by 2030	Highly Ambitious

Climate Transition Finance Handbook

Sustainalytics has evaluated Cemex's transition governance, strategy, decarbonization targets, and intentions to report on transition progress and finds the Company to be aligned with the recommendations of the Climate Transition Finance Handbook 2023. As a cement producer, Cemex is involved in an energy-intensive sector and has established CO₂ emissions intensity reduction targets validated as being in line with the 1.5°C Scenario of the SBTi. Cemex has outlined an implementation plan and capital investment plans for its "Future in Action" programme, which is designed to reduce its carbon emissions.

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Scope of Work and Limitations

Cemex has engaged Sustainalytics to review the Cemex Sustainability-Linked Financing Framework dated August 2023 (the “Framework”) and provide an opinion on its alignment with the Sustainability-Linked Bond Principles (SLBP)¹ and Sustainability-Linked Loan Principles (SLLP). Sustainalytics has also reviewed Cemex’s alignment with the Climate Transition Finance Handbook (CTFH).²

Sustainalytics’ Second-Party Opinion reflects Sustainalytics’ independent³ opinion on the alignment of the Framework with the SLBP 2023 and SLLP 2023, and Cemex’s alignment with the CTFH 2023.

As part of this engagement, Sustainalytics exchanged information with various members of Cemex’s management team to understand the sustainability impact of their business processes and SPTs, as well as the reporting and verification processes of aspects of the Framework. Cemex’s representatives have confirmed that:

- (1) They understand it is the sole responsibility of issuer to ensure that the information provided is complete, accurate and up to date;
- (2) They have provided Sustainalytics with all relevant information; and
- (3) Any provided material information has been duly disclosed in a timely manner.

Sustainalytics also reviewed relevant public documents and non-public information. This document contains Sustainalytics’ opinion of the Framework and should be read in conjunction with the Framework. Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and Cemex. Sustainalytics’ Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics’ Second-Party Opinion addresses the anticipated SPTs of KPIs but does not measure KPI performance.⁴ The measurement and reporting of the KPIs is the responsibility of the issuer. No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that Cemex has made available to Sustainalytics for the purpose of this Second-Party Opinion.

The Second-Party Opinion is valid for issuances or other transactions aligned with the respective Framework for which the Second-Party Opinion was written and aligned with the methodology to calculate the KPI performance outlined in the Second-Party Opinion up to 24 months or until one of the following occurs:

- (1) A material change to the external benchmarks⁵ against which targets were set;
- (2) A material corporate action (such as material M&A or change in business activity) that has a bearing on the achievement of the SPTs or the materiality of the KPIs.

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¹ The Sustainability-Linked Bond Principles were launched by ICMA in June 2020. They are administered by ICMA and are available at: <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-linked-bond-principles-slbp/>

² The Climate Transition Finance Handbook is administered by ICMA and is available at: <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/climate-transition-finance-handbook/>

³ When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics’ hallmarks is integrity, another is transparency.

⁴ Sustainalytics has provided an opinion based on the understanding that the financial characteristics of instruments issued under this Framework will be tied to the achievement of SPTs corresponding to each of the KPIs included in the Framework.

⁵ Benchmarks refers to science-based benchmarks.

Introduction

Cemex, S.A.B. de C.V. ("Cemex" or the "Company") is an operating and holding company engaged in the production, distribution, marketing and sale of cement, ready-mix concrete, aggregates, clinker, other construction materials and urbanization solutions. Headquartered in Monterrey, Mexico, Cemex also provides related services to customers and communities, and maintains business relationships in more than 50 countries.

Cemex has developed the Framework, under which Cemex, S.A.B. de C.V. or any of its consolidated entities⁶ may offer, issue, obtain or enter into bonds, notes, certificados bursátiles,⁷ private placements, commercial papers, derivatives, working capital solutions, loans or other financing instruments⁸ ("Sustainability-Linked Instruments"), the terms and conditions of which would incorporate any one or more of the KPIs. Cemex engaged Sustainalytics to review the Framework and provide a Second-Party Opinion on the Framework's alignment with the Principles and the recommendations of the CTFH 2023. The Framework will be published in a separate document.⁹

The premium payment, repayment amount and margin adjustment under Cemex's Sustainability-Linked Instruments will be tied to the achievement of the SPTs for the selected KPIs related to net CO₂ emissions intensity, clinker factor to cementitious and alternative fuels rate, as specified in the relevant documentation of the given Sustainability-Linked Instrument.

The KPIs and SPTs used by Cemex are defined in Tables 1 and 2 below.

Table 1: KPI Definitions

KPI	Definition
KPI 1: Scope 1 and scope 2 specific net CO ₂ emissions per tonne of cementitious product (kgCO ₂ /t)	KPI 1 is a measure of specific net CO₂ emissions (scope 1 and scope 2) expressed per tonne of cementitious product.¹⁰ Scope 1 specific net CO₂ emissions measure direct CO₂ emissions measured in kgCO₂/tonne of cementitious product, excluding on-site power production emissions from alternative fossil fuel sources.¹¹ Scope 2 specific net CO₂ emissions are a measure of indirect CO₂ emissions from purchased electricity, expressed in kgCO₂/tonne of cementitious product.
KPI 2: Clinker factor to cementitious (%)	KPI 2 measures the percentage of clinker in cementitious product. This KPI measures the amount of clinker used to produce cementitious products and is in line with the definition used by the Global Cement and Concrete Association (GCCA) Sustainability Guidelines.¹²
KPI 3: Alternative fuels rate (%)	KPI 3 measures the percentage of alternative fuel sources used in the production of cement. Cemex uses various alternative fuels, including biomass, biogenic and non-biogenic waste material, as defined by the GCCA Sustainability Guidelines for co-processing fuels and raw materials in cement manufacturing.¹³

⁶ For all instruments issued by Cemex's consolidated entities under the Framework, the Company has communicated to Sustainalytics that it will be responsible for ensuring continual alignment of the issuances or transactions with the criteria defined with the Framework.

⁷ Cemex has indicated to Sustainalytics that certificados bursátiles are debt instruments that represent individual participation by their holders in a collective credit against legal persons. For more information, refer to: <https://www.cnbv.gob.mx/SECTORES-SUPERVISADOS/BURS%C3%81TIL/Descripci%C3%B3n/Paginas/Instrumentos.aspx>

⁸ Cemex has communicated to Sustainalytics that only debt instruments will be issued under the Framework. Sustainalytics notes that the considerations for some financial instruments noted in the Framework, particularly derivatives, may be different and out of the scope of Sustainalytics' Second-Party Opinion. Sustainalytics has reviewed the criteria for only those financial instruments that are specified in the Framework. Cemex has confirmed to Sustainalytics that all instruments issued or obtained under the Framework will have maturity period of at least one year, where the SPTs will be linearly regressed down to the relevant maturity for short-term instruments.

⁹ The Cemex Sustainability-Linked Finance Framework will be available on Cemex's website at: <http://www.cemex.com/sustainable-finance>

¹⁰ Cementitious products refer to clinker volumes produced for cement making or direct clinker sales, including gypsum, limestone, cement kiln dust; all clinkers consumed for blending; and all cement substitutes produced. Cementitious products exclude clinker bought from third parties to produce cement.

¹¹ The exclusion of on-site power generation is aligned with how scope 1 specific net CO₂ emissions are defined by the Global Cement and Concrete Association's Sustainability Guidelines for monitoring and reporting of CO₂ emissions from cement manufacturing. For more information: https://gccassociation.org/wp-content/uploads/2019/10/GCCA_Guidelines_CO2Emissions_v04_AMEND.pdf

¹² GCCA, "Sustainability Guidelines for co-processing fuels and raw materials in cement manufacturing", (2019), at: https://gccassociation.org/wp-content/uploads/2019/10/GCCA_Guidelines_FuelsRawMaterials_v04_AMEND.pdf

¹³ Ibid.

Table 2: SPTs and Past Performance¹⁴

KPI 1	2020	2021	2022	SPT 2025	SPT 2027	SPT 2030
Scope 1 and scope 2 net specific CO ₂ emissions per tonne of cementitious product (kg CO ₂ /ton of cementitious product)	678	647	615	564	513	454

KPI 2	2020	2021	2022	SPT 2030
Clinker factor to cementitious (%)	77	75	74	68

KPI 3	2020	2021	2022	SPT 2030
Alternative fuels rate (%)	25	29	35	55

¹⁴ As communicated by Cemex to Sustainalytics.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Alignment of the Cemex Sustainability-Linked Financing Framework with the Sustainability-Linked Bond Principles and Sustainability-Linked Loan Principles

Sustainalytics is of the opinion that the Cemex Sustainability-Linked Financing Framework is credible and impactful and aligns with the five core components of the Sustainability-Linked Bond Principles 2023 and the Sustainability-Linked Loan Principles 2023. For detailed information, please refer to Appendix 1: Sustainability-Linked Bonds External Review Form. Sustainalytics highlights the following elements of the Framework.



Selection of Key Performance Indicators

Relevance and Materiality of KPIs

In its assessment of materiality and relevance, Sustainalytics considers: i) whether an indicator speaks to a material impact of the issuer's business on environmental or social issues; and ii) to what extent the KPI is applicable.

Sustainalytics considers all three KPIs to be material and relevant, given that:

- Cement manufacturing is one of the most carbon-intensive industries, accounting for approximately 7% of total CO₂ emissions released globally.¹⁵ These emissions primarily result from energy use, which accounts for 40% of the GHG emissions of the cement industry; the remaining 60% of the industry's GHG emissions are related to chemical reactions during the calcination process.¹⁶
- The Sustainability Accounting Standards Board (SASB) identifies GHG emissions as a relevant sustainability issue for the construction materials industry, particularly cement production. According to SASB, energy efficiency, use of alternative and renewable fuels, carbon sequestration and clinker substitution are strategies for reducing GHG emissions in the production of construction materials.¹⁷ The three KPIs defined by Cemex in the Framework therefore align with SASB's recommended performance metrics in the construction materials subindustry.
- Sustainalytics' ESG Risk Rating Industry Report for the Construction Materials industry identifies Carbon - Own Operations¹⁸ as a material ESG issue for companies in the construction materials industry.

In assessing scope of applicability, Sustainalytics analyzes the scope of impact of each KPI on the Company's overall operations.

- To assess KPI 1, Sustainalytics notes that of Cemex's total annual CO₂ emissions, approximately 63% are directly related to the Company's production processes (scope 1) and 5% are indirect emissions resulting from electricity consumption (scope 2). Given this, Sustainalytics considers KPI 1 to have a high scope of applicability.
- For KPI 2, in the case of Cemex, the direct emissions from cement production covered by this KPI comprise 62% of its total GHG emissions (scope 1, 2 and 3),¹⁹ resulting in a high degree of applicability for KPI 2.

¹⁵ International Energy Agency, "Energy Technology Perspectives 2020", at: https://iea.blob.core.windows.net/assets/7f8aed40-89af-4348-be19-c8a67df0b9ea/Energy_Technology_Perspectives_2020_PDF.pdf

¹⁶ Global Efficiency Intelligence, "Global Cement Industry's GHG Emissions", (2021) at: <https://www.globalefficiencyintel.com/new-blog/2021/global-cement-industry-ghg-emissions>

¹⁷ SASB, "Materiality Finder – SCIS Industry – Construction Materials", at: [https://sasb.org/standards/materiality-finder/find/?company\[0\]=MXP225612300](https://sasb.org/standards/materiality-finder/find/?company[0]=MXP225612300)

¹⁸ Sustainalytics' Carbon – Own Operations MEI refers to a company's management of risks related to its own operational energy use and scope 1 and scope 2 GHG emissions. It also includes parts of scope 3 GHG emissions.

¹⁹ As communicated by Cemex to Sustainalytics.

- For KPI 3, Sustainalytics notes that globally, 40% of the cement industry's GHG emissions are thermal energy-related emissions that arise from the combustion of fuels used to provide heat for the manufacturing process;²⁰ while most of GHG emissions result from the calcination chemical reaction. The use of low-carbon or carbon-neutral alternative fuels for these processes therefore has the potential to reduce GHG emissions for the industry.²¹ Cemex has communicated to Sustainalytics that fuel emissions account for 37% of its scope 1 emissions and considering that most of the remaining scope 1 emissions are resulting from the calcination process Sustainalytics therefore considers KPI 3 to have a moderate degree of applicability.

KPI Characteristics

In its assessment of the KPI's characteristics, Sustainalytics considers: i) whether it uses a clear and consistent methodology; ii) whether it follows an externally recognized definition; iii) whether the KPI is a direct measure of the issuer's performance on the material environmental or social issue; and iv) if applicable, whether the methodology can be benchmarked against an external contextual benchmark.

KPI 1: Scope 1 and scope 2 specific net CO₂ emissions per tonne of cementitious product (kgCO₂/t)

Sustainalytics considers Cemex's definition and methodology for calculating KPI 1 to be clear and consistent with the Company's historical disclosures on scope 1 and scope 2 emissions. KPI 1 follows the GCCA Sustainability Framework Guidelines, which provide technical guidelines for global cement manufacturers on accounting for carbon emissions and the classification of clean energy sources and alternative fuels.²² Furthermore, Sustainalytics notes that KPI 1 supports benchmarking against external emissions reduction trajectories such as those developed by the Science-Based Targets Initiative (SBTi)²³ and that the Company's 2030 gross emissions intensity target is SBTi-validated against a 1.5°C scenario.

KPI 2: Clinker factor to cementitious (%)

Sustainalytics considers Cemex's definition and methodology for calculating KPI 2 to be clear, consistent and based on GCCA guidelines.²⁴ While Sustainalytics views positively the impact of achieving KPI 2 on scope 1 emissions, it notes that KPI 2 is an indirect measure of performance on the material environmental issue of GHG emissions and energy efficiency.

KPI 2 can be benchmarked against to the International Energy Agency's (IEA) Net Zero by 2050 scenario which estimates performance levels needed for the cement industry to reach net zero by 2050, consistent with a 1.5°C trajectory.²⁵ It can also be benchmarked against the 2°C scenario presented in the IEA and World Business Council for Sustainable Development (WBCSD) Cement Sustainability Initiative's jointly published Technology Roadmap for a Low-Carbon Transition in the Cement Industry.²⁶

KPI 3: Alternative fuels rate (%)

Sustainalytics considers the Company's definition and methodology for calculating its progress on KPI 3 to be clear, consistent and based on GCCA guidelines. Furthermore, it considers the KPI to be an indirect measure of the Company's performance on the material issue of reducing GHG emissions by replacing fossil fuels with low-carbon alternative fuel sources. Finally, Sustainalytics considers that the Company's overall decarbonization efforts can be benchmarked against the 2°C scenario presented in the IEA and WBCSD Cement Sustainability Initiative's Technology Roadmap for Cement.²⁷

Overall Assessment

Sustainalytics considers KPI 1 to be very strong, given that it: i) speaks to relevant and material environmental issues for cement manufacturers; ii) follows a recognized clear and consistent methodology; iii) lends itself to benchmarking against external contextual benchmarks; and iv) has a high scope of applicability.

²⁰ As communicated by Cemex to Sustainalytics.

²¹ Portland Cement Association, "Roadmap to Carbon Neutrality", (2021) at: https://www.cement.org/docs/default-source/membership-2020/pca_roadmap-to-carbon-neutrality_jan-2022.pdf?sfvrsn=9b26febf_2

²² GCCA, "Charter and guidelines", at: <https://gccassociation.org/sustainability-innovation/sustainability-charter-and-guidelines/>

²³ Science Based Targets initiative, Corporate Manual, (2021) at: <https://sciencebasedtargets.org/resources/files/SBTi-Corporate-Manual.pdf>

²⁴ GCCA, "Charter and guidelines", at: <https://gccassociation.org/sustainability-innovation/sustainability-charter-and-guidelines/>

²⁵ IEA, "CO₂ emitted and captured in the cement sector and clinker-to-cement ratio in the Net Zero Scenario, 2015-2030", at: <https://www.iea.org/data-and-statistics/charts/co2-emitted-and-captured-in-the-cement-sector-and-clinker-to-cement-ratio-in-the-net-zero-scenario-2015-2030>

²⁶ IEA, "Technology Roadmap - Low-Carbon Transition in the Cement Industry", at: <https://iea.blob.core.windows.net/assets/cbaa3da1-fd61-4c2a-8719-31538f59b54f/TechnologyRoadmapLowCarbonTransitionintheCementIndustry.pdf>

²⁷ Ibid.

Sustainalytics considers KPI 2 to be strong given that it: i) relates to a relevant and material environmental issue faced by the cement industry; ii) follows a recognized clear and consistent methodology; iii) lends itself to benchmarking against external contextual benchmarks; and iv) has a high scope of applicability.

Sustainalytics considers KPI 3 to be strong, given that it: i) relates to a relevant and material environmental issue faced by the cement industry; ii) follows a recognized clear and consistent methodology; iii) can be measured against an external science-based benchmark; and iv) has a moderate degree of applicability.

KPI(s)	Strength of KPI(s)			
KPI 1: Scope 1 and scope 2 net specific CO₂ emissions per tonne of cementitious product	Not Aligned	Adequate	Strong	Very strong
KPI 2: Clinker factor to cementitious (%)	Not Aligned	Adequate	Strong	Very strong
KPI 3: Alternative fuels rate (%)	Not Aligned	Adequate	Strong	Very strong



Calibration of Sustainability Performance Targets



Alignment with Cemex's Sustainability Strategy

Cemex has set the following SPTs for its KPIs:

- SPT 1: Reduce scope 1 and scope 2 net specific CO₂ emissions to 564 kg by 2025, 513 kg by 2027, and below 454 kg by 2030 per tonne of cementitious product
- SPT 2: Reduce clinker factor to 68% by 2030
- SPT 3: Achieve alternative fuels rate of 55% by 2030

Sustainalytics considers the SPTs to be aligned with Cemex's sustainability strategy. Please refer to Section 2 for an analysis of the credibility of Cemex's sustainability strategy.

- **SPT 1:** Cemex has established climate action goals and ambitions under its Future in Action programme which lays out the roadmap for the Company to achieve carbon neutrality by 2050, including medium-term goals for reducing scope 1, scope 2 and scope 3 GHG emissions by 2030. The programme outlines various initiatives to meet the Company's decarbonization goals by concentrating on six pillars: i) sustainable products and solutions; ii) decarbonizing operations; iii) promoting circular economy for greater resource efficiency; iv) preserving water resources and biodiversity; v) leveraging partnerships for implementation of innovative technology such as for carbon capture, use and storage (CCUS); and vi) supporting green initiatives and economy.²⁸
- **SPTs 2 and 3:** The Company's decarbonization efforts under the Future in Action programme focus on maximising technical levers particularly through an accelerated use of alternative fuels with high biomass content and reduced clinker factor through use of clinker substitutes such as supplementary cementitious materials. Other levers being leveraged by Cemex include improving heat and energy consumption, the use of decarbonated raw materials with low or no embedded CO₂ and use of clean electricity.²⁹

Strategy for Achieving the SPTs

Cemex intends to achieve the SPTs through the following strategy:

- SPT 1: Cemex identifies carbon reduction as a key element in its climate action plan and intends to use the following levers to achieve its goal of reducing scope 1 and 2 net CO₂ emissions: i) accelerate the use of alternative fuels with high biomass content; ii) optimize clinker factor; iii) increase the use of decarbonated raw materials in clinker; iv) improve specific heat and energy consumption; v) increase the consumption of clean electricity; and vi) reduce emissions from transport.

²⁸ Cemex, "Future in Action", at: <https://www.cemex.com/en/sustainability/future-in-action>

²⁹ Cemex, "Integrated Report", (2022), at: <https://www.cemex.com/documents/d/cemex/integratedreport2022>

- SPT 2: Cemex's plan to reduce clinker factor is based on, but not limited to, the following four strategies: i) use of supplementary cementitious materials such as fly ash and ground limestone, with reduced CO₂ emissions; ii) use of technologies such as micronization, calcined clays and separated grinding; iii) use of chemical admixtures that enable low clinker ratios; and iv) development of cement and concrete standards that promote carbon neutrality in the cement industry.
- SPT 3: Cemex plans to achieve SPT 3 by leveraging investment opportunities for new sources of alternative fuels derived from waste. It intends to secure supplies through a proprietary waste management company, Regenera. Cemex plans to reach a 55% alternative fuels rate by 2030, with all regions contributing to this goal, and expects Mexico to lead as the major contributor up to 2030, with all facilities in Mexico expected to more than double their substitution rates.

Ambitiousness, Baseline and Benchmarks

To determine the ambitiousness of the SPTs, Sustainalytics considers: i) whether the SPTs go beyond a business-as-usual trajectory, ii) how the SPTs compare with targets set by peers; and iii) how the SPTs compare against science-based trajectories.³⁰

Cemex has set 2020 as the baseline year for all SPTs, for consistency with its SBTi-validated targets.

SPT 1: Sustainalytics was able to use the following benchmarks to assess ambitiousness: past performance, peer performance and alignment with the SBTi pathways.

With regard to past performance, Cemex reduced its net specific CO₂ emissions per tonne of cementitious product by approximately 9.2% between 2020 and 2022, or an average of 4.6% per annum. Achieving SPT 1 will require an average annual linear reduction of 2.8% between 2022 and 2025, and 3.3% over both 2022-2027 and 2022-2030. These trajectories imply that historical reductions are above the target reduction rates.

Sustainalytics compared Cemex's SPT 1 with nine peers and found its target to be the most ambitious in its peer group. Some of its peers have not yet set any targets for reducing scope 1 and scope 2 CO₂ emissions per tonne of cementitious product. Sustainalytics therefore considers SPT 1 to be above peer performance.

For comparison with science-based decarbonization trajectories, Sustainalytics notes that SPT 1 is considered to be aligned with SBTi's 1.5°C scenario.³¹

SPT 2: Sustainalytics was able to use the following benchmarks to assess ambitiousness: past performance, peer performance and science-based references.

Cemex's past performance on clinker factor reduction is broadly aligned with its trajectory to meet SPT 2. Between 2020 and 2022, Cemex reduced its clinker factor by approximately 1.4% each year, while the achievement of its 2030 target from the 2022 value will require reductions of 0.92% each year.

Sustainalytics compared Cemex's SPT 2 with nine peers, four of which provided disclosures on their clinker factor, with three of those having set reduction targets. Sustainalytics' analysis finds that Cemex's SPT 2 is aligned with those set by its peers.

To determine SPT 2's alignment with science-based trajectories, Sustainalytics relied on the following: i) the IEA's Net Zero by 2050 analysis for the cement industry, which estimates that the global clinker factor must be reduced to 71% in 2022 and 65% by 2030 to align with a 1.5°C trajectory;³² and ii) the IEA and WBCSD Cement Sustainability Initiative's jointly published Technology Roadmap for Cement, which requires the global clinker factor to reach 64% by 2030 to align with a 2°C trajectory.³³ Sustainalytics notes that SPT 2 targets a clinker factor of 68% by 2030, which falls short of being consistent with both of the above-mentioned trajectories and therefore assesses it as not being aligned with science-based trajectories.

SPT 3: Sustainalytics was able to use the following benchmarks to assess ambitiousness: past performance, peer performance and science-based references.

³⁰ We refer here to contextual benchmarks that indicate the alignment of targets with ecosystem boundaries.

³¹ Sustainalytics notes that CEMEX's 2030 gross scope 1 and 2 emissions intensity target is SBTi-validated against a 1.5°C scenario.

Sustainalytics believes that meeting the noted gross emissions intensity target positions enables the Company's net emissions intensity target to align with a 1.5°C trajectory.

³² IEA, "CO₂ emitted and captured in the cement sector and clinker-to-cement ratio in the Net Zero Scenario, 2015-2030", at: <https://www.iea.org/data-and-statistics/charts/co2-emitted-and-captured-in-the-cement-sector-and-clinker-to-cement-ratio-in-the-net-zero-scenario-2015-2030>

³³ IEA & WBCSD, "Technology Roadmap - Low-Carbon Transition in the Cement Industry", at: <https://iea.blob.core.windows.net/assets/cbaa3da1-fd61-4c2a-8719-31538f59b54f/TechnologyRoadmapLowCarbonTransitionintheCementIndustry.pdf>

In terms of past performance, Cemex has increased its alternative fuels rate from 25% in 2020 to 35% as of year-end 2022. To achieve its 2030 target of 55%, Cemex will need to improve its performance on this SPT by achieving an annual average increase of 7.1% in its rate of alternative fuel use versus 2022. The expected increase necessary for achieving the 2030 target is below Cemex's past performance, with an average annual increase of 19% between 2020 and 2022. Sustainalytics acknowledges, however, that as the share of alternative fuels increases, the effort required to maintain a linear incremental rate of improvement also increases. Given this, and considering the Company's investment and efforts in increasing its alternative fuels rate, Sustainalytics believes the trajectory can be considered as being effectively aligned with past performance.

In terms of peer group analysis, of the nine peers, most companies have not set targets for alternative fuel use. Two competitors have set targets, but these are more conservative than those set by Cemex.

With regard to science, the IEA's Net Zero by 2050 scenario estimates that the share of fossil fuels will need to be restricted to 79% (in other words, a 21% alternative fuels rate will be required) to align with a 1.5°C climate scenario. Sustainalytics notes that Cemex's SPT 3 of achieving a 55% alternative fuels rate by 2030 is significantly above the alternative fuel share required for alignment with a 1.5°C trajectory. Sustainalytics also notes that SPT 3 is significantly above the IEA and WBCSD Cement Sustainability Initiative's key indicator level of a 17.5% thermal substitution rate for cement manufacturers by 2030 in order to align with a 2°C climate scenario.³⁴

Overall Assessment

Sustainalytics considers the SPTs to align with Cemex's sustainability strategy and SPT 1 to be Highly Ambitious given that it: i) is aligned with past performance; ii) exceeds the targets set out by Cemex's peers; and iii) is aligned with SBTi's 1.5°C scenario.

Sustainalytics considers Cemex's SPT 2 to be Moderately Ambitious, given that it: i) is aligned with past performance; ii) is aligned with the targets set by Cemex's peers; and iii) is not aligned with science-based trajectories.

Sustainalytics considers SPT 3 to be Highly Ambitious given that it: i) exceeds the targets of Cemex's peers; and ii) is comparable to science-based trajectories for a 1.5°C scenario.

SPT(s)	Ambitiousness of SPT(s)			
SPT 1: Reduce scope 1 and scope 2 CO ₂ emissions to 564 kg by 2025, 513 kg by 2027, and below 454 kg by 2030 per tonne of cementitious product (scope 1 and scope 2 CO ₂ emissions per tonne of cementitious product)	Not Aligned	Moderately Ambitious	Ambitious	Highly Ambitious
SPT 2: Reduce clinker factor to 68% by 2030 (clinker factor to cementitious)	Not Aligned	Moderately Ambitious	Ambitious	Highly Ambitious
SPT 3: Achieve alternative fuels rate of 55% by 2030 (alternative fuels rate)	Not Aligned	Moderately Ambitious	Ambitious	Highly Ambitious

Financial Characteristics



Cemex has disclosed that the selected KPIs and SPTs, the frequency of observation dates and the financial characteristics may vary for each Sustainability-Linked Instrument under the Framework and will be specified in the relevant documentation for each instrument. If the observation dates for any instrument differ from those mentioned in the Framework, Cemex will aim to set intermediate SPTs no later than 2030, calculated pro rata on a reasonable and practical basis to the extent possible. If for any reason the performance level against each selected SPT cannot be calculated, observed or delivered within the time limit prescribed in the respective documentation, or if verification assurance is not delivered in a satisfactory manner, the step-up in the coupon rate or margin would be applicable.

All sustainability-linked bonds and notes issued under the Framework will be linked to KPI 1, and may also be linked to KPIs 2 and 3, depending on the specifics of each issuance. Failure to meet the SPT(s) associated with

³⁴ IEA & WBCSD, "Technology Roadmap - Low-Carbon Transition in the Cement Industry", at: <https://iea.blob.core.windows.net/assets/cbaa3da1-fd61-4c2a-8719-31538f59b54f/TechnologyRoadmapLowCarbonTransitionintheCementIndustry.pdf>

each issuance will trigger a premium payment, repayment amount or adjustment to the coupon margin by an amount or percentage specified in the transactional documentation.

All Sustainability-Linked Loans obtained under the Framework will be linked to all three KPIs, with the performance against each SPT verified annually. Failure to achieve any SPTs will result in a premium payable by Cemex, while any SPT that is achieved will trigger a discount. Pricing adjustments will be based on the net of premiums and discounts from the respective SPTs and will be applied annually, on a non-cumulative basis.



Reporting

Cemex commits to report on its performance on the KPIs and SPTs annually or as required pursuant to the documents governing the corresponding Sustainability-Linked Instrument. The reporting will usually be made available on its website as part of its Integrated Report. Cemex further commits to disclose relevant information enabling investors to monitor the level of ambition of the SPTs, such as any recalculations of the KPI baseline, restatement of the SPTs, or climate-related data as part of CDP reporting, as well as updates to the Company's sustainability strategy, targets, methodology or benchmark changes, and reporting. This approach is aligned with the SLBP and SLLP.



Verification

Cemex commits to having an external verifier provide limited assurance on the KPI performance at the SPT deadline, which is aligned with the SLBP and SLLP on verification. Verification would consist of an assurance statement by an auditor on the KPI information included in Cemex's Integrated Report and a verification assurance certificate following the observation date, confirming whether the performance on the KPI meets the relevant SPT, as outlined in the documents governing the corresponding Sustainability-Linked Instrument.

Alignment against the Climate Transition Finance Handbook 2023

Sustainalytics has assessed Cemex's alignment with the recommendations of the Climate Transition Finance Handbook (CTFH) and considers the Company's transition strategy to be adequate overall. Sustainalytics highlights the following key elements of the assessment:

Key Elements	ICMA Recommendation	Sustainalytics' Assessment	
Issuer's climate transition strategy and governance	- Transition strategy to address climate-related risks and contribute to alignment with the goals of the Paris Agreement - Relevant interim targets on the trajectory towards long-term goal - Governance of transition strategy	- Cemex's climate change strategy is overseen by the Sustainability, Climate Action, Social Impact and Diversity Committee (formerly named the Sustainability Committee), which was established in 2014 and is comprised of members of the Board of Directors. The members of the committee are elected at Cemex's general ordinary shareholders' meeting and are responsible for defining, endorsing, and evaluating the emissions reduction targets and sustainability priorities. Cemex's Vice President of Sustainability is responsible for executing the sustainability strategy. Additionally, the Vice President of Sustainability and the Corporate Sustainability Department coordinate with regional and country representatives to ensure consistent operations and progress towards Cemex's sustainability goals.³⁵ - Cemex has developed a CO₂ Reduction Roadmap describing the deployment of technological innovations as well as operational decisions that will support its decarbonization objectives.³⁶ - See the detailed assessment of the decarbonization pathway and implementation plan in Section 2.	Aligned
Business model environmental materiality	Transition trajectory should be relevant to the environmentally material parts of the issuer's business model	Cemex's transition strategy directly addresses the environmental impact of the core part of its business.	Aligned
Climate transition strategy to be 'science-based' including targets and pathways	Transition strategy should reference science-based targets and transition pathways	- Cemex has established medium-term (2030) emissions intensity targets aligned with SBTi's 1.5°C pathway and aims to achieve net zero by 2050 across its value chain, from a 2020 base year.³⁷ - See the detailed assessment of emissions targets in Section 2.	Aligned
Implementation transparency	- Disclosure of capex and opex plans - Intended climate-related outcomes and impacts from these expenditures.	- Cemex intends to report on the progress of decarbonization and overall transition strategy through its annual Integrated Report and sustainability website. Reporting will be aligned with the following carbon disclosure platforms: i) CDP (Climate Change Response submission); ii) Transition Pathway Initiative (TPI); and iii) Task Force on Climate-Related Financial Disclosures. Details and additional information of the Company's annual CDP Climate Change Response submissions are accessible on CDP's website. - Additionally, Cemex expects to invest approximately USD 150 million annually to support its transition programme.³⁸	Aligned

³⁵ Cemex, "Committees", at: <https://www.cemex.com/investors/corporate-governance/committees#navigate>

³⁶ Cemex, "Integrated Report", (2022), at: <https://www.cemex.com/documents/d/cemex/integratedreport2022>

³⁷ Cemex, "Cemex 2050 net-zero roadmap validated by SBTi", (2022), at: <https://www.cemex.com/-/cemex-2050-net-zero-roadmap-validated-by-sbti>

³⁸ Cemex, "Growth Strategy", at: <https://www.cemex.com/documents/d/cemex/2022-cemex-day-growth-strategy>

Section 2: Assessment of Cemex's Sustainability Strategy

Credibility of Cemex Sustainability Strategy

Sustainalytics recognizes that proceeds from the Sustainability-Linked Instruments issued or obtained under the Framework would be for general corporate purposes, and/or any other purpose specified in the relevant documentation of the Sustainability-Linked Instrument, which may include, without being limited to, the payment of debt that supports the Company's transition to low-carbon operations. Within this context, Sustainalytics has assessed Cemex's climate transition strategy below:

Climate Transition Governance

The governance of Cemex's climate change strategy is overseen by its Sustainability, Climate Action, Social Impact and Diversity Committee, whose members are elected at Cemex's general ordinary shareholders' meeting and are responsible for defining, endorsing and evaluating the emissions reduction targets and sustainability priorities, among other matters. Cemex's Vice President of Sustainability is responsible for executing the sustainability strategy. Additionally, the Vice President of Sustainability and the Corporate Sustainability Department coordinate with regional and country representatives to ensure consistent operations and progress towards Cemex's sustainability goals.

Emission Reduction Targets

In 2021, Cemex launched the Future in Action programme, the aim of which is to reach net zero by 2050.³⁹ The following year, Cemex increased the ambition of its medium-term goals by updating its 2030 emissions reduction target from more than 40% to 47% per tonne of cementitious product (scope 1 and scope 2 emissions from cement operations) compared to 1990 levels. Cemex's updated decarbonization targets for 2030 and 2050 are validated by the SBTi as being in line with the 1.5°C scenario.^{40,41}

Decarbonization Pathway and Implementation Plan

Cemex's Future in Action programme focuses on six pillars to achieve its net zero by 2050 target:⁴²

1. Sustainable products and solutions
2. Decarbonizing operations
3. Circular economy
4. Water and biodiversity
5. Innovation and partnerships
6. Promoting a green economy

The initiatives included under these six pillars address the Company's targets for the medium and long term. To decarbonize its operations, Cemex is focusing on increasing the proportion of its lower-carbon Vertua cement and concrete products in its overall portfolio; expanding its use of clean electricity; increasing the percentage of alternative fuels with a high percentage of biomass in its manufacturing process; reducing the clinker factor in its facilities through clinker substitutes such as supplementary cementitious materials; and reducing transport emissions by scaling up lower-carbon or zero-emission vehicles. In 2022, Cemex launched Regenera, a business unit dedicated to increasing the Company's capacity for incorporating waste products into its production and operations, thereby promoting circularity and cutting its products' life cycle emissions by reducing the need for virgin materials and fossil fuels.⁴³

To achieve net zero emissions by 2050, Cemex aims to develop and scale new CO₂ reduction and mitigation technologies across its value chain. To this end, the Company has begun piloting industrial-scale CCUS projects, experimenting with solar-powered clinker production and exploring alternative aggregates, binders and admixtures to incorporate into its products. Cemex's long-term agenda also involves advocating for the adoption of policies that promote clean electricity, lower-carbon products, carbon pricing mechanisms and more thorough waste management directives among its various stakeholders. The Company is also actively involved in national, regional and global industry associations that promote the transition to a green economy, including the GCCA, Cembureau, Federación Interamericana del Cemento, the Portland Cement Association and Mexico's National Cement Chamber.⁴⁴

³⁹ Cemex, "Cemex commits to lead the industry in climate action", (2021) at: <https://www.cemex.com/w/cemex-commits-to-lead-the-industry-in-climate-action>

⁴⁰ Cemex, "Integrated Report", (2022), at: <https://www.cemex.com/documents/d/cemex/integratedreport2022>

⁴¹ Cemex, "Future in Action", at: <https://www.cemex.com/en/sustainability/future-in-action>

⁴² Ibid.

⁴³ Cemex, "Integrated Report", (2022), at: <https://www.cemex.com/documents/d/cemex/integratedreport2022>

⁴⁴ Ibid.

Sustainalytics recognizes that the Company has prioritized the development of credible options for decarbonization and reported on steps taken to begin implementing its policy commitments. Sustainalytics encourages Cemex to continue refining its plan in the face of ongoing technological innovation and to continue reporting on its timelines to deploy the best available technologies.

Cemex's Environmental and Social Risk Management

Overall, Sustainalytics notes that the ESG risk management of Cemex is considered adequate. Sustainalytics also recognizes that while Cemex's defined targets are impactful, achieving the SPTs bears environmental and social risks. Sustainalytics' ESG Risk Rating methodology identifies Carbon – Own Operations, Business Ethics and Resource Use as material ESG issues for Cemex.

In the following section, Sustainalytics comments on Cemex's ability to mitigate such potential risks.

- Carbon – Own Operations:** Considering the high CO₂ emissions in cement production, Cemex is highly exposed to risks related to GHG emissions and energy consumption. Sustainalytics notes positively that the targets of the Framework aim to directly address these risks through reductions in scope 1 and scope 2 emissions, clinker factor optimization and the use of alternative fuels for cement production. In addition, Cemex commits to double the consumption of clean electricity in operations from 33% in 2022 to 65% in 2030, as well as decarbonize its fleet through the addition of low- and zero-emission vehicles.⁴⁵ Cemex's GHG reduction commitment is further strengthened by the 2022 SBTi validation of its 2030 goals as aligned with a 1.5°C scenario,⁴⁶ and the presence of an environmental management system that is overseen by Cemex's Sustainability, Climate Action, Social Impact and Diversity Committee that includes targets, various environmental initiatives, and regular internal and external environmental audits.⁴⁷
- Business Ethics:** Price-fixing and collusion risks tend to be material in the construction materials market.⁴⁸ Incidents of bribery and corruption can arise when companies pursue contracts related to public infrastructure projects. As such, failure to implement robust compliance programmes could lead to regulatory and reputational risks. To mitigate those risks, Cemex has developed a Global Compliance Programme with oversight from the Board of Directors, including formal policies on anti-trust compliance, anti-corruption and anti-money laundering as well as disciplinary actions for violations of its code of ethics.⁴⁹ The Company also has a strong whistleblower policy with a 24/7 reporting platform that allows employees, other stakeholders and the general public to anonymously report violations or concerns.⁵⁰
- Resource Use:** Cemex's operations require water for cooling cement kilns, producing concrete, and mineral processing and dust suppression in its aggregates production.⁵¹ As of 2020, 16% of Cemex's sites (over 1,500) were in water-stressed areas; this percentage is expected to grow to 43% by 2040.⁵² Excessive water use in highly water-stressed regions can raise operational costs, promote business disruption, and provoke community opposition, mainly when competing with local communities for water resources. Cemex's Water Policy commits to maximizing water efficiency in operations, responsibly managing water resources and establishing constructive relationships with local stakeholders to identify joint solutions for shared water problems.⁵³ The Company further mitigates the identified risks through monitoring and reporting water-related indicators in line with the GCCA Guidelines, setting up water recycling systems and implementing water optimization plans. The Company reported a total water withdrawal of 58.7 million m³ in 2022.⁵⁴ As of the same year, 82% of its sites were equipped with water recycling systems, and the Company had implemented its five-step water action plans at 20% of its water-stressed sites.⁵⁵

Overall, Sustainalytics considers that Cemex has adequate management programmes and policies to mitigate risks that could arise in achieving the SPTs. As a commitment to transparency under the Framework, Sustainalytics encourages Cemex to implement comprehensive due diligence assessment on business ethics and water risks and provide robust reporting on the impacts of issuances.

⁴⁵ Cemex, "Integrated Report", (2022), at: <https://www.cemex.com/documents/d/cemex/integratedreport2022>

⁴⁶ Cemex, "Cemex decarbonization goals validated by the SBTi for alignment with 1.5°C scenario", (2022), at: <https://www.cemex.com/w/cemex-decarbonization-goals-validated-by-the-sbti-for-alignment-with-1-5-c-scenario>

⁴⁷ Cemex, 2022 CDP Climate Change Questionnaire, at: <https://www.cemex.com/documents/d/cemex/2022-investor-cdp>

⁴⁸ This assessment has been derived from Sustainalytics' ESG Risk Rating.

⁴⁹ Cemex, 2022 Integrated Report, at: <https://www.cemex.com/documents/d/cemex/integratedreport2022>

⁵⁰ Cemex, Global Anti-Corruption Policy, (2020), at: <https://www.cemex.com/documents/d/cemex/global-anti-corruption-policy>

⁵¹ This assessment has been derived from Sustainalytics' ESG Risk Rating.

⁵² Cemex, "Integrated Report 2020", at: <https://www.cemex.com/documents/20143/52528892/IntegratedReport2020.pdf>

⁵³ Cemex Water Policy, (2020), at: <https://www.cemex.com/documents/d/cemex/2020-cemex-water-policy>

⁵⁴ Cemex, 2022 Integrated Report, at: <https://www.cemex.com/documents/d/cemex/integratedreport2022>

⁵⁵ Ibid.

Section 3: Impact of the SPTs Selected

The chemical and thermal combustion processes involved in the production of cement are the source of approximately 7% of global CO₂ emissions, as of 2019.⁵⁶ Global cement production is set to grow by a further 20% from 2020 levels by 2050.⁵⁷ The IEA estimates that the direct CO₂ intensity of cement production needs to fall by 4% every year for the sector to reach net zero by 2050 and align with the 1.5°C target. However, the CO₂ intensity of cement production has remained largely flat in the last five years, and in fact is estimated to have increased by 1% in 2022.⁵⁸

Decarbonizing the cement sector while producing enough cement to meet demand poses significant challenges due to process emissions. Strategies to cut carbon emissions include improving energy efficiency, switching to lower-carbon fuels, reduction in clinker content in cement or cement content in concrete, and emerging technologies such as bioenergy with carbon capture, electrification and novel binders.⁵⁹ In September 2020, the GCCA (with 40 member companies including Cemex representing approximately 80% of global cement production outside of China) announced a commitment to achieve carbon-neutral concrete production by 2050.⁶⁰ In October 2021, the GCCA published its 2050 Net Zero Roadmap, which sets out a roadmap and implementation plan to achieve this goal. The roadmap targets a 20% reduction in CO₂ emissions per tonne of cement over the next decade from a 2020 baseline. Key priorities outlined in the roadmap include reducing fossil fuels and increasing the use of alternative fuels, improving the efficiency of concrete production, improving the efficiency of concrete project design, and investing in technological innovations.⁶¹

Despite these efforts, more ambitious targets are necessary in reducing GHG emissions for the cement industry by identifying the best path forward, pursuing the right technological innovations and rethinking strategies.⁶² Sustainalytics notes that mitigating these emissions may pose significant challenges with the growing demand for cement and notes that the Framework – primarily focused on CO₂ reduction, reduced clinker factor and increased alternative fuels rate, can significantly reduce its operational carbon footprint and support the overall decarbonization of the cement industry.

⁵⁶ International Energy Agency, "Energy Technology Perspectives 2020", at: https://iea.blob.core.windows.net/assets/7f8aed40-89af-4348-be19-c8a67df0b9ea/Energy_Technology_Perspectives_2020_PDF.pdf

⁵⁷ Ibid.

⁵⁸ International Energy Agency, "Cement", at: <https://www.iea.org/energy-system/industry/cement#tracking>

⁵⁹ Science-Based targets Initiative, "Cement Science Based Target Setting Guidance", (2022), at: <https://sciencebasedtargets.org/resources/files/SBTi-Cement-Guidance.pdf>

⁶⁰ GCCA, "Global Cement and Concrete Industry Announces Roadmap to achieve Groundbreaking 'Net Zero' CO₂ Emissions By 2050", at: <https://gccassociation.org/news/global-cement-and-concrete-industry-announces-roadmap-to-achieve-groundbreaking-net-zero-co2-emissions-by-2050/>

⁶¹ GCCA, "Concrete Future – GCCA 2050 Cement and Concrete Industry Roadmap for Net Zero Concrete", (2021), at: <https://gccassociation.org/concretefuture/wp-content/uploads/2021/10/GCCA-Concrete-Future-Roadmap-Overview.pdf>

⁶² McKinsey

Alignment with/Contribution to SDGs

The Sustainable Development Goals were adopted by the United Nations General Assembly in September 2015 and form part of an agenda for achieving sustainable development by the year 2030. The Sustainability-Linked Instruments issued under the Framework are expected to help advance the following SDG goals and targets:

KPI	SDG	SDG Target(s)
Scope 1 and scope 2 CO ₂ emissions per tonne of cementitious product	7.Affordable and clean energy	7.3 By 2030, double the global rate of improvement in energy efficiency
	9. Industry, innovation and infrastructure	9.4. By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.
Clinker factor to cementitious	9. Industry, innovation and infrastructure	9.4. By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.
Alternative fuels rate	7.Affordable and clean energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
	12. Responsible Consumption and Production	12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

Conclusion

Cemex has developed the Cemex Sustainability-Linked Financing Framework under which it may issue Sustainability-Linked Instruments. Under such Sustainability-Linked Instruments, Cemex intends to tie the financial characteristics of the instruments to the achievement or failure to achieve one or more of the following SPTs:

- (1) SPT 1: Scope 1 and scope 2 CO₂ emissions per tonne of cementitious product: Reduce scope 1 and scope 2 CO₂ emissions to 564 kg by 2025, 513 kg by 2027, and below 454 kg by 2030 per tonne of cementitious product.
- (2) SPT 2: Clinker factor to cementitious: Reduce clinker factor to 68% by 2030
- (3) SPT 3: Alternative fuels rate: Achieve alternative fuels rate of 55% by 2030

Sustainalytics considers KPI 1 to be very strong, given that it speaks to relevant and material environmental issues; follows a recognized clear and consistent methodology; lends itself to benchmarking against external contextual benchmarks; and has a high scope of applicability. Furthermore, KPI 1 is a direct measure of performance against a material environmental issue. KPIs 2 and 3 are considered strong as they are both indirect measures of Cemex's performance on a sustainability issue but relate to a relevant and material environmental issue faced by the cement industry; follows a recognized clear and consistent methodology; and can be measured against an external science-based benchmark.

Sustainalytics considers SPT 1 to be highly ambitious based on alignment with historical performance, targets that exceed peer group performance, and alignment with science-based trajectory in line with a 1.5°C scenario. Sustainalytics considers SPT 2 to be moderately ambitious, as it is aligned with past performance and targets set by Cemex's peers, and SPT 3 to be highly ambitious, as it compares favourably against peers and is comparable to science-based trajectories for a 1.5°C scenario.

Furthermore, Sustainalytics believes that the Cemex is aligned with the recommendations of the Climate Transition Finance Handbook 2023 and has adequate ESG risk management policies and procedures in place.

Based on the above, Sustainalytics considers the Cemex Sustainability- Linked Financing Framework to be aligned with the five core components of the Sustainability-Linked Bond Principles 2023 and Sustainability-Linked Loan Principles 2023.

Appendix 1: Sustainability-Linked Bonds – External Review Form

Section 1. Basic Information

Issuer name: Cemex, S.A.B. de CV

Sustainability-Linked Bond ISIN: The Framework allows for the issuance of multiple bonds

Independent External Review provider's name for second party opinion pre-issuance (sections 2 & 3): Sustainalytics

Completion date of this form: Aug 29, 2023

Section 2. Pre-Issuance Review

SCOPE OF REVIEW

The review:

- ☒ assessed the 5 core components of the SLBP (**complete review**) and confirmed the alignment with the SLBP.
- ☐ assessed only some of them (**partial review**) and confirmed the alignment with the SLBP; please indicate which elements:
 - ☐ Selection of Key Performance Indicators (KPIs)
 - ☐ Bond characteristics
 - ☐ Calibration of Sustainability Performance Targets (SPTs)
 - ☐ Reporting
 - ☐ Verification

ROLE(S) OF INDEPENDENT REVIEW PROVIDER

- ☒ Second Party Opinion
- ☐ Certification
- ☐ Verification
- ☐ Scoring/Rating
- ☐ Other (*please specify*):

Does the review include a sustainability quality score?

- ☐ Of the issuer
- ☐ Of the selected KPIs/SPTs
- ☐ Of the framework
- ☐ Other (*please specify*):
- ☒ No scoring

ISSUER'S OVERARCHING OBJECTIVES

Does the review include:

- ☒ An assessment of the issuer's overarching sustainability objectives and strategy, and the policies and/or processes towards their delivery?
- ☒ An identification and assessment of environmental, social and governance related risks of adverse impact through the Issuer's [actions] and explanations on how they are managed and mitigated by the issuer?
- ☒ A reference to the issuer's relevant regulations, standards, or frameworks for sustainability-related disclosure and reporting?

CLIMATE TRANSITION STRATEGY**Does the review assess:**

- ☒ The issuer's climate transition strategy & governance?
- ☒ The alignment of both the long-term and short/medium-term targets with the relevant regional, sector, or international climate scenario?
- ☒ The credibility of the issuer's climate transition strategy to reach its targets?
- ☒ The level/type of independent governance and oversight of the issuer's climate transition strategy (e.g. by independent members of the board, dedicated board sub-committees with relevant expertise, or via the submission of an issuer's climate transition strategy to shareholders' approval).
- ☒ If appropriate, the materiality of the planned transition trajectory in the context of the issuers overall business (including the relevant historical datapoints)?
- ☒ The alignment of the issuer's proposed strategy and targets with appropriate science-based targets and transition pathways that are deemed necessary to limit climate change to targeted levels?
- ☒ The comprehensiveness of the issuer's disclosure to help investors assess its performance holistically?

Overall comment on this section:

Sustainalytics has evaluated Cemex's transition governance, strategy, decarbonization targets, and intentions to report on transition progress and finds the Company to be aligned with the recommendations of the Climate Transition Finance Handbook 2023. As a cement producer, Cemex is involved in an energy intensive sector and has established CO₂ emissions intensity reduction targets validated to be in line with the 1.5°C Scenario of the SBTi. Cemex has outlined an implementation plan and capital investment plans for its "Future in Action" programme designed to reduce its carbon emissions.

Section 3. Detailed pre-issuance review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

SELECTION OF KEY PERFORMANCE INDICATORS (KPIs)**Definition, Scope, and parameters**

- ☒ Clear definition of each selected KPIs
- ☒ Clear calculation methodology
- ☐ Other (please specify):

Relevance, robustness, and reliability of the selected KPIs

- ☒ Credentials that the selected KPIs are relevant, core and material to the issuer's sustainability and business strategy
- ☒ Evidence that the KPIs are externally verifiable, if that is not already the case
- ☒ Credentials that the KPIs are measurable or quantifiable on a consistent methodological basis
- ☒ Evidence that the KPIs can be benchmarked
- ☐ Current verification or assurance status
- ☐ Other (please specify):

Overall comment on this section:

Sustainalytics overall considers KPI 1: scope 1 and scope 2 net specific CO2 emissions per tonne of cementitious product, to be very strong given that it: i) speaks to relevant and material environmental issues for cement manufacturers; ii) follows a recognized clear and consistent methodology; iii) lends itself to benchmarking against external contextual benchmarks, and iv) has a high scope of applicability.

Sustainalytics considers KPI 2: clinker factor to cementitious to be strong given that it i) relates to a relevant and material environmental issue faced by the cement industry, and ii) follows a recognized clear and consistent methodology; iii) lends itself to benchmarking against external contextual benchmarks, and iv) has a high scope of applicability.

Sustainalytics considers KPI 3: alternative fuels rate, to be strong given that it: i) relates to a relevant and material environmental issue faced by the cement industry, ii) follows a recognized clear and consistent methodology; iii) can be measured against an external science-based benchmark; and iv) has a moderate degree of applicability.

CALIBRATION OF SUSTAINABILITY PERFORMANCE TARGETS (SPTs)

Rationale and level of ambition

- | | |
|--|---|
| ☒ Evidence that the SPTs represent a material improvement compared to issuer's own performance over baseline | ☒ Credentials on the relevance and reliability of selected benchmarks and baselines |
| ☒ Evidence that SPTs are consistent with the issuer's sustainability and business strategy | ☒ Other (<i>please specify</i>): Ambitiousness based on peer assessment |

Does the review assess if the specificities of the sector and/or local context have been identified and addressed?

- | | |
|---|-----------------------------|
| ☒ Yes | ☐ No |
| ☐ Not applicable | |

Relevance and reliability of selected benchmarks and baselines

- | | |
|--|---|
| ☒ Issuer's past performance | ☒ Issuer's peer performance |
| ☒ Science-based trajectories (<i>please specify the references</i>): | ☐ Other (<i>please specify</i>): |

Does the review assess the credibility of the issuer's strategy and action plan to achieve the SPTs?

- | | |
|---|-----------------------------|
| ☒ Yes | ☐ No |
|---|-----------------------------|

Does the review identify the key factors that may affect the achievement of the SPTs?

- | | |
|------------------------------|--|
| ☐ Yes | ☒ No |
|------------------------------|--|

Does the review opine on:

- | | |
|---|--|
| ☒ the timelines for the target achievement | ☒ the target observation date(s) |
| ☐ the trigger event(s) | ☐ Other (<i>please specify</i>): |
| ☒ potential recalculations or adjustments description | |

Overall comment on this section:

Sustainalytics considers the SPTs to align with Cemex's sustainability strategy and SPT 1 to be Highly Ambitious given that it i) is aligned with past performance, ii) exceeds the targets set out by Cemex's peers; and iii) is considered to be aligned with SBTi's 1.5°C scenario.

Sustainalytics considers Cemex's SPT 2 to be Moderately Ambitious given that it i) is aligned with past performance; ii) is aligned with the targets set by Cemex's peers; and iii) is not aligned with science-based trajectories.

Sustainalytics considers SPT 3 to be Highly Ambitious given that it: i) exceeds the targets of Cemex's peers; and ii) is comparable with science-based trajectories for a 1.5°C scenario.

BOND CHARACTERISTICS

Does the review assess whether the bond's financial and/or structural characteristics are commensurate and meaningful?

☐ Yes ☒ No

Does the review opine on the fallback mechanisms in case the SPTs cannot be calculated or observed in a satisfactory manner?

☐ Yes ☒ No

Overall comment on this section:

All sustainability-linked bonds and notes issued under the Framework will be linked to KPI 1, while KPIs 2 and 3 may also be linked based on the specifics of each respective issuance. Failure to meet the SPT(s) associated with each issuance will trigger a premium payment, repayment amount, or an adjustment to the coupon margin by an amount or percentage specified in the transactional documentation. All Sustainability-Linked Loans obtained under the Framework will be linked to all three KPIs with the performance against each SPT verified annually. Failure to achieve any SPTs will result in a premium payable by Cemex, while any SPT that is achieved will trigger a discount being applied. Pricing adjustments will be based on the net of premiums and discounts from the respective SPTs and applied annually, on a non-cumulative basis. This is aligned with the Sustainability-Linked Bond Principles and Sustainability-Linked Loan Principles.

REPORTING

Does the review assess the commitments of the issuer to report:

Content:

☒ The performance of the selected KPIs ☒ Verification
☒ The level of ambition of the SPTs ☒ Assurance report
☐ Other (please specify):

Frequency:

☐ Annual ☐ Semi-annual
☒ Other (please specify): Annual for sustainability-linked loans, or as required for sustainability-linked bonds and notes

Means of Disclosure

- | | |
|---|---|
| ☐ Information published in financial report, or annual report and accounts | ☐ Information published in sustainability report or sustainability suite of reporting |
| ☐ Information published in ad hoc documents | ☒ Other (<i>please specify</i>): Information published in an integrated financial and sustainability report |

Overall comment on this section:

Cemex commits to report on its performance annually or as required pursuant to the transactional documents. The reporting would usually be made available on its website as part of its Integrated Report. Cemex further commits to disclose relevant information enabling investors to monitor the level of ambition of the SPTs such as any recalculations of the KPI baseline, restatement of the SPTs, climate-related data as part of CDP reporting as well as updates to the Company's sustainability strategy, targets, methodology or benchmark changes and reporting. This approach is aligned with the SLBP and SLLP.

Section 4. Post-issuance**CHANGE TO PERIMETER REVIEW (*if applicable*)****Material change:**

- | | |
|---|---|
| ☐ Perimeter | ☐ KPI methodology |
| ☐ SPTs calibration | ☐ Other (<i>please specify</i>): |

VERIFICATION**Level of verification:**

- | | |
|---|---|
| ☐ Limited assurance | ☐ Reasonable assurance |
| ☐ Other (<i>please specify</i>): | |

Frequency:

- | | |
|---|--------------------------------------|
| ☐ Annual | ☐ Semi-annual |
| ☐ Other (<i>please specify</i>): | |

Section 5. Additional Information

Useful links (*e.g. to the external review provider's methodology or credentials, to the full review, to issuer's documentation, etc.*)

Analysis of the contribution to the UN Sustainable Development Goals:

Additional assessment in relation with the issuer/bond framework:

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