The Coca-Cola Company (KO:US)

Climate Transition Analysis





Overall Assessment

According to Planet Tracker's analysis, The Coca-Cola Company is on track for a +2°C scenario by 2030.

The company identifies and discloses its main CO₂e sources, reassuringly integrating its independent bottlers into its Climate Transition appraisal. Furthermore, by 2030 the adjusted extrapolated aggregate emissions would be 25% higher than the STBi¹ recommendation leading to only a 0.1°C deviation. Also, The CocaCola Company covers its main sources of emissions in its engagement and influence policy and most recently (2022) part of its management compensation started to be linked to environmental KPIs.

However, The Coca-Cola Company does not disclose quantified mitigation actions tied to invested capital, adding to the challenge of assessing its alignment with a 1.5°C scenario by 2030.

To date, the company does not have an approved net zero commitment and the achievement of its SBTs objectives seem to be heavily relying on its independent bottlers' ambitions and targets.



This report is the third of a series examining the climate transition plans of the Consumer Goods companies in the Climate Action 100+ list.

This project is separate to and not affiliated with Climate Action 100+.



Climate Alignment

- In 2030, 95.5% of the total GhG emissions of Coca-Cola's system will come from Scope 3 activities – with 27% coming from its Upstream activities and almost 69% from its Downstream activities.
- By 2030, the difference of 25% between the total GhG emissions recommended by SBTi (39,192 KTCO₂e) and the extrapolated trend derived by Planet Tracker (48,949) will mainly come from its Scope 3 Downstream emissions which if not mitigated will be 61% higher than recommended by SBTi.



Policy and Governance

- Coca-Cola's Engagement and Influence on its suppliers and customers cover its main sources of GhG emissions. Furthermore, in 2020 in the US it tried to influence the Chamber of Commerce, towards the inclusion of a US net-zero target and comprehensive federal regulation on climate.
- The company has an ESG and public policy committee overseeing its environmental policy among other things. Also, since 2022, part of its management remuneration is linked to environmental KPIs.



Risk Analysis

- The material financial impact derived from climate-related risks and opportunities is estimated to reach the equivalent of 47% of its five-year average annual operating profit over a period superior to five years – with 35% coming from potential carbon pricing mechanisms.
- The Coca-Cola Company identifies the risks and opportunities coming from its major sources of GhG emissions and its climaterelated physical impacts, but it does not presently disclose its investments linked to quantified mitigation actions to determine its alignment with a 1.5°C scenario by 2030.



Strategy Assessment

- The company does not disclose any mitigation investment that would assure third parties of its commitment to align with a 1.5°C scenario.
- The Coca-Cola Company lacks a net zero commitment. It presents a series of exposures and actions which cannot ensure its successful transition and a long-term climate-positive commitment.

¹ The Science Based Targets initiative (SBTi) drives ambitious climate action in the private sector by enabling organizations to set science-based emissions reduction targets.



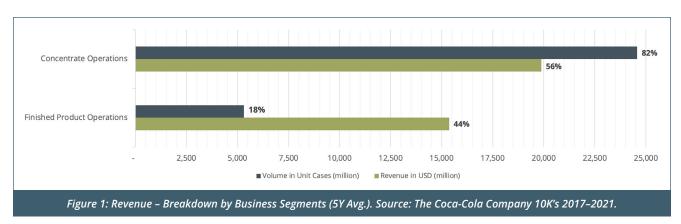


Company Overview

The Coca-Cola Company (NYSE: KO) is the world's largest non-alcoholic beverage company. Together with its bottling partners2, the Coca-Cola system is responsible for over 3% of all servings of beverages consumed worldwide every day3.

The company operates through two main business segments, "concentrate operations" and "finished

product operations". In a nutshell, it manufactures and sells beverage concentrates, often referred to as "beverage bases," and syrups, including fountain syrups (concentrate operations); and finished sparkling soft drinks and other beverages (finished product operations) - see Figure 14.



In the last five years (2017-2021), the company averaged a total revenue of USD 35.2 billion and a total operating profit of USD 9.1 billion, leading to an average gross profit margin of 26%. The highest gross profit margin was achieved in Coca-Cola's operations in Latin America (47%) and the lowest one in North America (18%) - see Figure 25. This is in line with the company's latest results where concentrate operations not only achieved a higher revenue than the finished product operations but a higher gross profit margin as

well. If we were to look at the investment capital and capital expenditure (Capex) of the company in the last five years, North America takes the lead with 41% and 28% respectively – see Figure 3⁵. This clarifies further the operating system of the company, as finished product operations are mainly developed in North America, while for the rest of the world The Coca-Cola Company operates mainly through its bottling partners via its concentrate operations.

⁵ "Unallocated" stands for the sum of "Global ventures" – an operating segment that includes the results of Costa Limited ("Costa"), Innocent and Doğadan businesses as well as fees earned pursuant to distribution coordination agreements between the Company and Monster Beverage Corporation ("Monster"), each of which is its own reporting unit; and "The Bottling Investments" - an operating segment that includes all of the Company consolidated bottling operations.

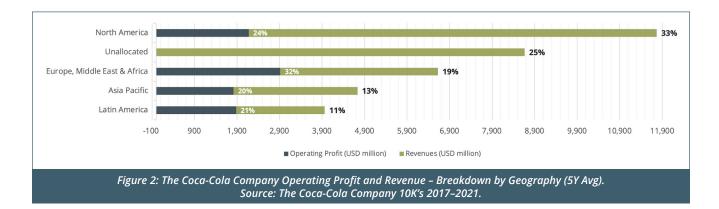


² Coca-Cola branded beverage products are sold in more than 200 countries and territories through a network of independent bottling partners, distributors, wholesalers and retailers as well as consolidated bottling and distribution centers owned by the company.

³ Beverages bearing trademarks owned by or licensed to The Coca-Cola Company account for 2.1 billion of the approximately 63 billion servings of all beverages consumed worldwide every day. Source: The Coca-Cola Company 10K – 2021.

^{4 &}quot;Unit case" refers to a unit of measurement equal to 192 U.S. fluid ounces of finished beverage (24 eight-ounce servings), with the exception of unit case equivalents for Costa non-ready-to-drink beverage products, which are primarily measured in number of transactions; and "unit case volume" means the number of unit cases (or unit case equivalents) of Company beverage products directly or indirectly sold by the Company and its bottling partners to customers or consumers.







Moreover, in 2021, Coca-Cola's five largest independent bottling partners accounted for 41% of its total worldwide unit case volume. Hence, due to their high financial materiality, when assessing Coca-Cola's targets and ambitions regarding climate, the whole Coca-Cola system should be considered.

On another note, based on its business activities the main natural commodities the company is exposed to are "sugar", "corn" and "oranges" - see Table 1.

Table 1: % of Revenue Dependent on Natural Commodities. Source: Coca-Cola Company Forests and Water CDP Reports 2019–2021.			
	2018	2019	2020
Sugar	21% to 40%	21% to 40%	21% to 40%
Orange	21% to 40%	21% to 40%	21% to 40%
Timber			6% to 10%
Coffee			6% to 10%
Soy			<1%
Corn	21% to 40%	21% to 40%	21% to 40%





However, the company does not disclose procurement volume data per region or country of origin of these key commodities. It only does so for the lower range of its revenue dependency - see Table 2.

It is also worth noting that in January 2020, the Company acquired the remaining 57.5% stake in Fairlife LLC, now owning 100%. Fairlife offers a broad portfolio of products in the value-added dairy category across

North America. Thus, dairy-dependent revenue in 2021 was close to 3%6.

In summary, considering the geographic source of the revenue and the location of its invested capital it could be concluded that The Coca-Cola Company has a high exposure to North America - especially to the **United States of America.**

Table 2: Natural Commodities Sourcing Origin and Volume. Source: The Coca-Cola Company Forests CDP Report 2021.			
	Soy	Coffee	Timber
Argentina	23%		
Brazil	32%	54%	
United States of America	45%		
Vietnam		22%	
Colombia		16%	
Guatemala		2.2%	
Honduras		1.3%	
Indonesia		1.3%	
Rest of the World		2.4%	
Known Origin			72%
Unknown Origin			28%

⁶ The percentage is derived by dividing Fairlife revenue in 2021 by The Coca-Cola Company's revenue in 2021. Source: https://www.foodnavigator-usa. com/Article/2022/02/11/coca-cola-owned-fairlife-hits-1bn-in-retail-sales-driving-new-growth-to-fluid-milk-category.



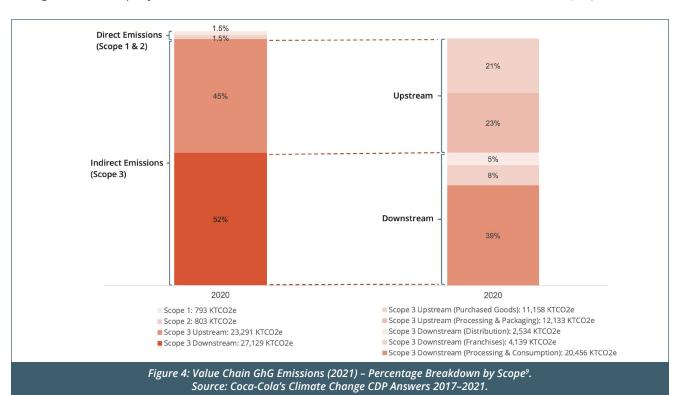


Climate Alignment

EMISSIONS INVENTORY

When it comes to greenhouse gas (GhG) emissions, from 2016 to 2020, the Coca-Cola System averaged a total of 55,722 KTCO₂e. Its emissions went from 56,891 KTCO₂e in 2016 to **52,016 KTCO**₂e in 2020, an annual average decrease of 2.2%. Yet, this downward trend should be taken in context, as the company's revenue also decreased from 2016 to 2020 at a rate of 5,8% per year. Still, deeper research shows that the volume of units sold between 2016 and 2020 only decreased at an average rate of 0.3% per year.

Furthermore, of the total emissions disclosed in 2020, 3% came from **Scope 1 and 2**, with approximately 1.5% each. The vast majority, 97%, came from Scope 3, with 45% coming from its **Upstream** activities and **52%** from its Downstream activities. Moreover, the top three sources were "Processing and Consumption" (32%)7, "Processing and Packaging" (23%) and "Purchased Goods" (21%)8 see Figure 4. Given that these three categories represent 83% of Coca-Cola's total emissions in 2020, going forward, these should be at the center of the company's ambitions.



⁷ Total "Processing and Consumption" emissions include the emissions coming from the "Processing of sold products" and the "Use of sold products". These emissions are a result of using "Cold drink equipment" such as coolers, vending machines, and fountain dispensers. This value represents all emissions associated with Bottler-owned equipment, including electricity consumption and refrigerant losses, as well as emissions associated with electricity consumption for equipment owned by The Coca-Cola Company.

⁹ Total Downstream "Distribution" includes the company's "Business Travel" emissions; Since "Franchises" operate as an extension of the company these emissions include total manufacturing (i.e., Scope 1 and 2 of the Coca-Cola System) emissions minus The Coca-Cola Company Scope 1 and 2 emissions.



^{8 &}quot;Purchased Goods" as disclosed by The Coca-Cola Company, covers its own and its Bottling partners' emissions from their key packaging and ingredient materials. (a) Key packaging refers to PET bottles, closures, labels, aluminium and steel cans and can-ends, as well as glass bottles and crowns. These emissions also account for "Disposal" or "End-of-life" impact, using a 50:50 allocation methodology between the usage of recycled material and rates of recovery. (b) Key ingredient materials refer to sweeteners (including sugar), Carbon dioxide for carbonation, and other key agricultural ingredients. For both emissions sources, (a) and (b), Upstream transportation and distribution, known as "Inbound Transport" is included in the emissions factors to calculate these. For better comparability across companies, PT disaggregates this section between "Purchased Goods" covering the emissions coming from its agricultural sourcing of key ingredients, and "Processing and Packaging" covering the emissions from key packaging, carbon dioxide, and "Capital Goods". The emissions value for "Capital Goods" are an estimate of emissions from the production of the manufacturing and operations equipment, as well as the production of cold drinks and immediate consumption equipment. These emissions include not only the cold drinks and immediate consumption equipment owned by The Coca-Cola Company, but also by its independent bottling partners.



EXTERNALITIES TRENDS AND TARGETS

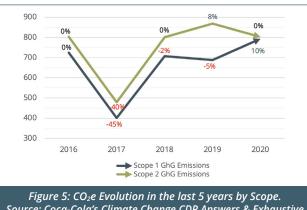
From 2016 to 2020 the Coca-Cola system had an absolute decrease in GhG emissions of 8.6%. This was mainly driven by an absolute decrease of 18% in Scope 3 Upstream emissions, while Scope 2 and Scope 3 Downstream emissions remain mostly the same with a 0% change and 1% increase respectively. At the same time, Scope 1 emissions had an absolute increase of 10% - see Figure 510.

However, as previously mentioned the company's revenue and units of product sold decreased as well in the last five years. Hence, for a more accurate assessment of its emissions trends, an intensity ratio is considered.

Due to the product homogeneity instead of the widely used CO₂e intensity ratio defined as "emissions" divided by "revenue", a more precise denominator, "units of product sold", is employed.

Taking into account the historical trends from a CO²e intensity (Emissions/Units Sold) perspective, the ratio for Scope 1, 2 and 3 Downstream emissions went from a low of 0.97 in 2016 to a high of 0.99 in 2020, or a 0.5% yearly increase. Meanwhile, the intensity ratio for Scope 3 Upstream emissions went from a high of 0.97 in 2016 to a low of 0.74 in 2020, or a 6.5% yearly decrease - see Figure 611.

As this ratio defines the amount of GhG emissions relative to the system's activity level measured by units of product sold, it could be concluded that the Scope 3 Upstream emissions reduction is not a direct result of the decrease in activity. By contrast, since the ratio increased instead of dismissing when it comes to the evolution of Scope 1, 2 and 3 Downstream emissions over the last five years, it can be deduced that these emissions grew at a higher rate than the units of product sold did.



Source: Coca-Cola's Climate Change CDP Answers & Exhaustive 2017–2021 Extra-Financial Data; Planet Tracker Calculations.

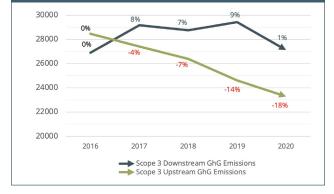




Figure 6: CO₂e Emissions Intensity Ratios - Breakdown by Scope and Year. Source: Planet Tracker Calculations.

¹¹ The 'upstream' ratio has been calculated by dividing the KTCO₂e produced in a year "t", by the firm's Units Sold in the year "t+1", thus covering the periods 2016-2020 and 2017-2021. The upstream approach differs from the downstream one as downstream emissions are assumed to arise in the same year as the sale, whereas the Scope 3 (Upstream) emissions are assumed to arise the previous year (matching inputs into the business).



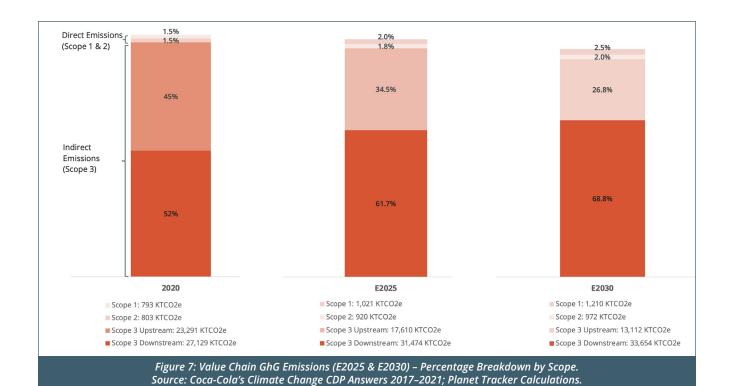
¹⁰ In the 2018 CDP Climate Response, the significant reduction in Scope 1 and 2 emissions is in large part due to divestment and re-franchising activities.

In order to extrapolate Coca-Cola's historical trend of emissions into the future we would need to consider not only the historical annual change in intensity ratios but also the increase in the volume of units sold. Due to the maturity of the business, we assume that the expected growth of units sold aligns in the long term with the population growth. Thus, as the global population is set to have an absolute growth of 5.0% by 2025 and 9.7% by 2030 (vs 2020)11, we assume the same growth in units sold when projecting Scope 1, 2 and 3 Downstream emissions. Since Scope 3 Upstream emissions lag revenues and units sold by one year, an absolute growth of 6% by 2026 and 10.6% by 203112 is considered for their projection.

Based on these assumptions, to project Coca-Cola's emissions up to 2030 we apply a simple extrapolation model of compounding forward the annual rate of change in the emissions intensity ratio of the last five years, to the expected units sold in the future. In other words, a 2.6% yearly increase rate is applied to Scope 1 emissions relative to the expected number

of units sold, a 0.2% yearly increase rate to Scope 2 emissions, and a 0.5% yearly increase rate to Scope 3 Downstream emissions. Meanwhile, a 6.5% yearly decrease rate¹³ is applied to Scope 3 Upstream emissions relative to the expected number of units

As a result, by 2030, the intensity ratio of Scope 1, 2 and 3 Downstream emissions will be over 1.04. Multiplying it by the expected units sold, 34.33 billion, this ratio will lead to a total of 35,837 KTCO2e from Scope 1, 2, and 3 Downstream activities by 2030. Meanwhile, the intensity ratio of Scope 3 Upstream emissions will be 0.38, which multiplied by the expected number of units sold, 34.61 billion by 2031, will lead to a total Scope 3 Upstream emissions of 13,112 KTCO₂e by 2030. Thus, by 2030 the adjusted extrapolated emissions will total 48,949 KTCO₂e, with 2.5% belonging to Scope 1 activities, 2.0% to Scope 2, and 95.5% to Scope 3 - with 27% coming from its Scope 3 Upstream activities and almost 69% from its Scope 3 Downstream activities - see Figure 7.



¹² Source: https://www.worldometers.info/world-population/world-population-projections

¹³ Caution is suggested when referring to these increase/decrease rates as the acquisition of new businesses lines such as Fairlife could have an impact on them.



When it comes to the Coca-Cola Company's Science Based approved targets (SBTs), the firm published its ambitions in 2019 to reduce its absolute Scope 1, 2 and 3 GhG emissions by 25% by 2030, from a 2015 base year. These targets would align the company with a 2°C scenario by 2030. However, the company's top bottling independent partners have their own SBTs - which are more ambitious than the ones set by The Coca-Cola Company - see Table 3.

Also, it is worth noting that at that date of this publication the SBTi is no longer accepting new submissions of 2°C targets. Thus, if The Coca-Cola Company will seek to revalidates its targets it will need to set a 1.5°C ambition¹⁴.

Consequently, if we are to apply the SBTs with the most recent baseline that would align the Coca-Cola system with a 1.5°C scenario, we must consider the same targets approved by the SBTi for the Coca-Cola European Partners¹⁵. In other words, The Coca-Cola Company would have to reduce its Scope 1 and 2 emissions by 47% by 2030 from a 2019 base year and its Scope 3 by 29% by 2030 from a 2019 base year, to align with a 1.5°C scenario by 2030.

If these new targets are considered, The Coca-Cola Company would be required to reduce absolute Scope 1, 2 and 3 emissions by 10% by 2025 and by 25% by 2030, from a 2020 baseline¹⁶. Looking at the company's adjusted extrapolated trends, by 2025 the absolute decrease in Scope 1, 2 and 3 GhG emissions will be only 2%, while by 2030 it will reach 6%. This extrapolated trajectory is mainly driven by the Scope 3 Downstream emissions which will be 27% higher than advised by SBTs by 2025 and 61% higher by 2030. Meanwhile, Scope 3 Upstream emissions will be 15% lower than recommended SBTs by 2025, and 25% lower by 2030 - see Figure 8.

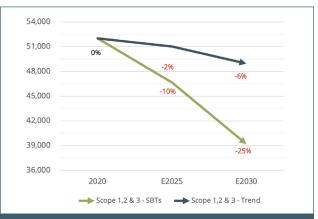


Figure 8: Future GhG Emissions – SBT vs Extrapolated Trends. Source: Coca-Cola's Climate Change CDP Answers 2017-2021; Planet Tracker Calculations.

Consequently, the difference of 25% between the total GhG emissions recommended by SBTi (39,192 KTCO2e) and the extrapolated trend derived by Planet Tracker (48,949) would only account for a 0.1°C deviation in Coca-Cola's system 1.5°C theoretical target. Thus, according to the adjusted historical trend of GhG emissions, The Coca-Cola Company aligns with a 1.5°C scenario by 2030. However, more evidence of mitigation actions for Coca-Cola's Scope 3 Downstream emissions would increase our confidence in the long-term achievement of 1.5°C SBTs.

¹⁶ It is unclear to us if the 2020 emissions include those of the recently acquired Fairlife (2020).



¹⁴ According to the SBTi "to ensure targets remain aligned with the most recent climate science, companies will be required to review, and if necessary revalidate, their targets every five years from the date of the original target approval, beginning in 2025. This will become mandatory in 2025."

¹⁵ We use the case of The Coca-Cola European Partners for the 1.5C targets setting as they are net-zero committed and have the most recent baseline year (2019). The only other net-zero committed Coca-Cola bottler is Coca-Cola HBC AG with 2017 as baseline year.



Table 3: The Coca-Cola System approved SBTs. Source: https://sciencebasedtargets.org/companies-taking-action.					
Company/Location	Target Summary	Date published / updated	Base Year	Target Year	Ambition (from base to target year)
Coca-Cola European Partners – United Kingdom (UK), Europe.	Near-term: 1.5°C by 2030 Net-zero: Committed 1.5°C campaign member ¹⁷	2020	2019	2030	30% absolute reduction - S1, 2 and 3; 47% absolute reduction - S1 and 2; 29% absolute reduction - S3.
Coca-Cola FEMSA – Mexico, Latin America.	Near-term: well-below 2°C by 2030	2020	2015	2030	50% absolute reduction - S1 and 2; 20% absolute reduction - S3 Upstream.
Coca-Cola HBC AG – Switzerland, Europe.	Near-term: 1.5°C by 2030 Net-zero: Committed 1.5°C campaign member	2021	2017	2030	55% absolute reduction - S1 and 2; 21% absolute reduction - S3.
Swire Coca-Cola Limited – Hong Kong, China, Asia.	Near-term: 1.5°C by 2030 1.5°C campaign member	2020	2018	2030	30% absolute reduction - S1, 2 and 3; 70% absolute reduction - S1 and 2.
The Coca-Cola Company – United States of America (USA), North America.	Near-term: 2°C by 2030	2019	2015	2030	25% absolute reduction - S1, 2 and 3;

¹⁷ According to the SBTi, at the time of this publication 1,631 companies committed to the <u>"Business Ambition for 1.5°C"</u> campaign.





Policy and Governance

ENGAGEMENT AND INFLUENCE

Suppliers' Engagement

The Coca-Cola Company engages with its suppliers via two main strategies, namely (a) "Information collection" and (b) "Compliance and onboarding".

The first strategy covers 10% of suppliers and 70% of total procurement spend (direct and indirect). The collection of supplier CO2 data is focused primarily on suppliers of packaging (aluminium, PET plastic, and glass) and key agricultural commodities (sugar) as these categories have the largest impact on the company's GhG emissions footprint. According to the Coca-Cola System, these represent 70% of supplierrelated Scope 3 emissions. In broader terms, between 45% and 55% of the company's carbon footprint across its value chain comes from its ingredients and packaging. Hence, collecting climate change and carbon-related information from the suppliers of these commodities is paramount.

As an example of this engagement, in 2020, Coca-Cola requested 149 key suppliers to provide CDP Climate answers and 100 of them submitted their questionnaires. Furthermore, fifteen suppliers indicated they have set SBTs of their own.

The second engagement strategy covers 100% of its suppliers and 100% of its procurement spend (direct and indirect). As well as engaging their suppliers on innovations to increase the use of recycled content in packaging, which produces less GhG emissions in comparison to virgin materials, they ask their suppliers of key agricultural ingredients to demonstrate they are meeting the company's Sustainable Agriculture Guiding Principles (SAGP), aiming that way to cover 100% of their supplier related Scope 3 emissions.

Customers' Engagement

When it comes to Customers Engagement Coca-Cola focuses on collaboration and innovation.

The Coca-Cola Company works closely with its major retail customers and bottlers on innovations to reduce GhG emissions from their cold drink equipment. through the placement of HFC-free and more energyefficient equipment. Success is measured by the percentage of their newly purchased cold drink equipment that is HFC-free. In 2020, 571,753 pieces of HFC-free cold drink equipment were placed in retail customer outlets, which constituted 83% of all coolers introduced in that year.

Influence on Policymakers

When it comes to trade associations that are likely to take a position on climate change legislation, the Coca-Cola Company is associated with the "Consumer Goods Forum" (CGF). In the past (2010) the company secured an HFC-free commitment on behalf of the full CGF membership and helped coordinate three Refrigeration Summits for CGF Members to advance the progress on these commitments. Moreover, Coca-Cola's Chairman and CFO is the Co-Chair of the CGF's Board of Directors.

Although the company does not disclose an audit of its industry associations, according to "lobbymap. org" The Coca-Cola Company is a member of several influential associations that frequently obstruct climate policy. These include the National Association of Manufacturers and the US Chamber of Commerce. However, Coca-Cola is also a member of the Business Roundtable, and through them, it tried to influence the Chamber of Commerce in 2020, towards the inclusion of a US net-zero target and comprehensive federal regulation on climate.





MANAGEMENT ALIGNMENT

Board Structure and Alignment

At the Coca-Cola Company, the Chairman of the Board and the Chief Executive Officer (CEO) positions are held by the same individual. The Chairman/CEO works directly with the Executive Leadership Team, including the Senior Vice President and Global Chief of Communications, Sustainability and Strategic Partnerships, to regularly assess and monitor progress on the company's sustainability goals.

The Senior Vice President and Global Chief of Communications, Sustainability and Strategic Partnerships is the corporate executive team member responsible for climate-related issues and reports directly to the Chairman/CEO and Board of Directors. The responsibility for climate-related issues lies with this position at the executive team level because this role leads the company's sustainability strategy and has the authority, and influence to effectively act on climate-related issues. For a clearer breakdown please refer to Figure 10.

The company also has an **ESG and public policy** committee established by the Board of Directors. This committee must consist of no fewer than 3 members of the Board and assists them in overseeing the company's environmental, social, legislative, regulatory and public policy - see Table 4.

Table 4: ESG and Public Policy Committee. Source: Coca-Cola board Committee Charter (2022).			
Committee Position Member of Board			
Alexis M. Herman	Chair	Yes	
Marc Bolland	Member	Yes	
Chris Davis	Member	No	
Caroline Tsay	Member	Yes	

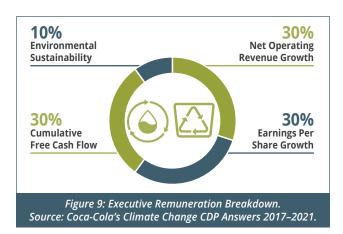
In a nutshell, the responsibilities of the ESG and public policy committee include: (1) reviewing environmental and social trends that could impact the company's

business operation, performance or reputation, (2) reviewing the company's sustainability program and goals, and further reporting the progress towards achieving these goals, and (3) reviewing any other shareowner proposals that fall under its purview.

Management Compensation

In 2022 the committee approved enhancements to Coca-Cola's executive compensation programs.

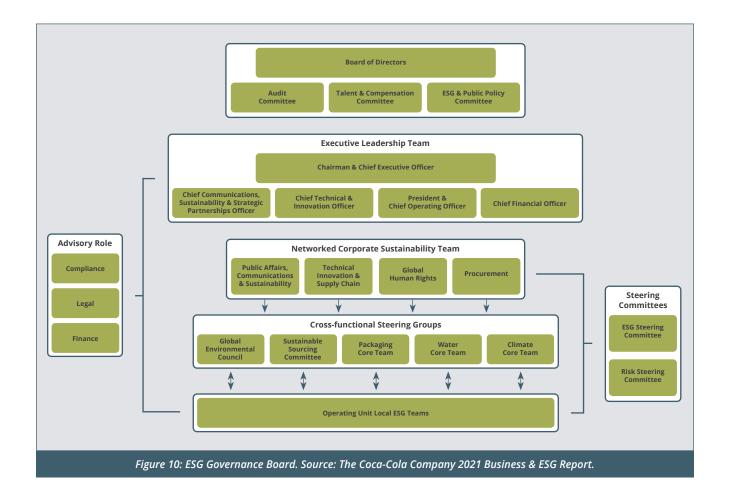
This updated compensation includes a monetary reward entitled to the corporate executive team linked to emissions reduction targets. Focusing on the long-term, this new 2022-2024 PSU award includes an additional environmental sustainability performance measure that comprises 10% of the total remuneration. Moreover, this 10% will be equally weighted and tied to the achievement of predetermined goals related to the company's World Without Waste packaging strategy and its 2030 Water Security strategy - see Figure 9.



In summary, Coca-Cola's Engagement and Influence regarding its suppliers and customers support its Climate Transition ambitions. What is more, the company seems keen to positively influence key trading associations that frequently obstruct climate policy into changing their stance. Also, since 2022, part of its management remuneration is linked to environmental KPIs which is another step in the right direction of aligning with a 1.5°C scenario by 2030.











Risk Analysis

FINANCIAL IMPACT

The Coca-Cola Company assessed its exposure to a series of climate-related risks and opportunities, and assigned them a probability denomination that ranges from "rare" to "almost certain". Accordingly, the company assigned a probabilistic range for each denomination as it follows: (1) Rare: <10%, (2) Unlikely: 10% to 40%, (3) Possible: 41% to 70%, (4) Likely: 71% to 90%, and (5) Almost Certain: >90%. For comparison purposes, we assigned numeric values to Coca-Cola's probability denominations as named by the CDP, but also took into account the company's disclosed ranges see Table 5.

Table 5: Coca-Cola's Probability Denominations – Numeric Equivalent.			
Probability Denomination	Numeric Probability		
Unlikely	25%		
About as likely as not	50%		
More likely than not	66%		
Likely	75%		
Very likely	90%		
Virtually certain	99%		

Furthermore, these risks and opportunities are categorised into two main drivers of change, namely, **External Policy and Physical Impact.**

External Policy Drivers

With sales in more than 200 countries and territories, the Coca-Cola system operates in 46 national and 32 subnational jurisdictions regulated by some type of carbon pricing or carbon trading scheme. To put things in perspective the introduction of a carbon tax in one of these subnational jurisdictions (California) in 2020 impacted the company's bottling facilities in the country with a net impact of USD 8.5 million in 2020.

Furthermore, various regional or national schemes such as the EU ETS and other fuel taxes have an impact on the company's suppliers and bottling partners. Hence, as more carbon pricing policies are being introduced and the existing schemes continue to increase their cost per ton of carbon, these costs will either impact Coca-Cola's system as direct costs or indirect costs through increased prices of its key sourced commodities (i.e., energy, metal, plastic, glass and others). As a result, the current impact of carbon pricing policies on The Coca-Cola Company is expected to grow with the increase of carbon prices and the expected expansion of policies to more jurisdictions.

According to the company, in 2020 the existing carbon pricing policies cost the Coca-Cola system approximately USD 0.3 per package sold, on average (in the select markets where a carbon price is in place). Consequently, at Coca-Cola's request, an external consultant estimated combined direct and **indirect** costs to the Coca-Cola system of USD 132.5 million in 2020. Comparatively, this would be the equivalent of 1.5% of the Coca-Cola Company's five-year average annual Operating Profit.

Nevertheless, in order to assess the potential financial impact figure coming from Carbon Pricing Mechanisms (CPMs) by 2030, Coca-Cola entertains two scenarios. One, if its average existing carbon prices were levied globally, their costs would increase to USD 1.3 per package sold, or a total cost of USD 2.1 billion by 2030 (assuming 1.6 billion packages sold). Second, the Intergovernmental Panel on Climate Change (IPCC) estimates that to meet the goal of limiting global warming to 1.5°C, the 2030 carbon price would need to increase at a level between USD 90 and USD 220 per tCO₂e. This scenario would increase Coca-Cola's cost to USD 3.0 per package sold, totaling nearly USD 4.8 billion in 2030 (per 1.6 billion packages sold).





Furthermore, The Coca-Cola Company estimates this maximum potential impact to be realised over a period longer than five years, with an approximate probability of 66%. Hence, the expected financial impact coming from CPMs applied to its Scope 1, 2 and 3 emissions would be around USD 3.2 billion, or 35% of its fiveyear average annual Operating Profit. However,

the company does not clarify whether the "1.6 billion packages sold" used in their risk calculations represent the expected sales in 2030 or the current sales. This disclosure is important as without taking into account the potential growth of packages sold, the company would be underestimating the potential CPMs cost.

Physical Impact Drivers¹⁸

When it comes to Physical Impact the Coca-Cola **Company focuses on Chronic Physical Impact which** is divided into two categories. The first one assesses the impact of the high variability in weather patterns on the company's direct operations, while the second assesses the same impact on its upstream activities.

In the last three years (2018 to 2020) among several potential exposures to its direct operations, "water scarcity disrupting sourcing and/or production" was found (by the company) to represent the highest risk. Accordingly, it was estimated that 39% of the global system-wide production volume was generated in high water-stressed regions. Moreover, of the company-owned facilities, 21% of total water withdrawn was made in areas of high or extremely high water stress. Consequently, between 2018 and 2020 an average maximum potential financial impact of USD 1.05 billion was derived. As stated by The Coca-Cola Company this risk is expected to be realised in the next two to four years with a probability of 66%.

Hence, the expected financial impact stands at USD 691 million. This amount is derived from the value of current business revenue that is dependent on the ten production facilities in India, owned by The Coca-Cola Company, located in areas under high or extremely high baseline water stress. Hence, to measure its impact on the Operating Profit the fall-through methodology is employed. Since the expected reduction in revenue is USD 691 million, and the annual five-year average gross profit stands at 26%, the expected impact on Operating Profit equals USD 179 million or 2% fiveyear average annual Operating Profit. However, this risk might be underestimated as it only considers the ten facilities under high water stress, owned by the company in India. In other words, it does not take into account the five facilities at high water risk owned by The Coca-Cola Company in the United States, nor the four facilities in South Africa or the two facilities in Nepal - see Table 6.

Table 6: Water Stress Risk Mapping. Source: The Coca-Cola Company Water CDP Report 2021.			
Country	Number of facilities	% of total facilities	% of affected revenue
India	9	1-25%	1-10%
United States of America	5	1-25%	1-10%
South Africa 4		1-25%	<1%
Nepal	2	<1%	<1%

¹⁸ These physical impacts are assessed under the current climate change conditions of 1.1C, being this the best estimate of global warming since 1850-1900, as stated in IPCC (2020): Summary for Policymakers / Climate Change 2021: The Physical Science Basis.





When it comes to the Chronic Physical Impact on Coca-Cola's upstream activities, in 2020, the company focused on the climate change exposure of orange crops. According to the company's climate-related risk assessment, there could be a potential price increase of between 20% and 50% as a result of decreasing orange yields caused by increasing extreme temperatures in countries at risk. Consequently, as a major ingredient in its production, The Coca-Cola Company estimates that such an increase in prices will have a maximum financial impact on operating costs of USD 193 million. Moreover, the company estimates that this risk will be realised within two years with a probability of 66%, leading to an expected financial impact of USD 127 million or 1.4% of its five-year average annual Operating Profit. Also, in 2019 and 2018, the Coca-Cola company estimated the amount of revenue dependent on corn (specifically corn-derived sweetener) sourced from the United States areas with high water stress risk.

As a result, USD 4.6 billion in annual revenue were identified, on average, to be linked to corn-derived sweetener sourced from water-stressed areas inside the United States. Thus, utilizing the fallthrough methodology, USD 1.2 billion of the company's Operating Profit is at risk due to the Chronic Physical Impact affecting corn plantations in the United States. Moreover, Coca-Cola assigns to this risk a probability of 66% and a timeframe of over five years. Consequently, the expected financial impact will amount to USD 783 million or 8.6% of its five-year average annual **Operating Profit.**

In summary, via its assessment of **Chronic Physical** Impact affecting its upstream activities, the company covers two of its key ingredients, namely oranges and corn. This uncovers a total expected financial impact of 10% of its five-year average annual Operating Profit. However, by not assessing potential impact on sugar (the other top three key commodity), the company might be underestimating this risk. Additionally, if we add to it the Chronic Physical Impact on the company's direct operations and the impact of potential CPMs, a total risk equivalent to 47% of the company's five-year average annual Operating Profit is derived. Thus, with such a material expected financial impact linked to Climate Change and Transition, risk management and mitigation is essential.





RISK MANAGEMENT

As previously presented, The Coca-Cola Company has two main areas of material risk. The first one is the exposure to the potential CPMs. The second one is the dual exposure to high variability in climate and weather patterns, on one hand affecting the company's direct operations and on the other hand its upstream activities.

As the company puts it, one of the top priority climaterelated risks is the general "GhG regulation increasing the cost of goods sold and disrupting production". To tackle this risk The Coca-Cola Company identified as a key initiative the mitigation of its emissions coming from manufacturing processes - which in 2020 represented between 10% and 15% of its system **global emissions**. The company proposed to reduce these emissions by increasing its use of renewable energy. Accordingly, it is estimated that the total investments required will be approximately USD 165 million of capital outlay and between USD 70 to 140 million incremental annual operating costs across their system (including bottlers). This mitigation initiative assumes a mix of installed generation and purchase agreements. However, the company fails to disclose the amount of CO2e this action will mitigate and within what timeframe.

Another key area linked to the potential impact of CPMs is refrigeration. According to The Coca-Cola Company, refrigeration is the single biggest estimated source of its system's carbon emissions footprint. In more detail, of its total Scope 1, 2, and 3 emissions, the GhG emissions from cooling equipment consistently account for about one-third of the total. Historically, the company worked to improve the environmental performance of its refrigeration equipment by mainly phasing out hydrofluorocarbon (HFC) refrigerants across its global value chain. In 2020, The Coca-Cola Company and its bottlers introduced 571,753 units of HFC-free refrigeration equipment, adding up to a total of more than 5 million HFC-free coolers and

vending machines that they have introduced into the marketplace since the program began in 2000. Since 2000, the cooling equipment's energy efficiency improved by 40 % and this led to the elimination of 75% of direct GhG emissions. In addition, the Coca-Cola system counts with more than 5.6 million intelligent energy management devices in use on their refrigeration equipment, leading to emissions reductions of approximately 3,100 KTCO₂e per year. Furthermore, the aggregate sum of project budgets invested to develop more sustainable and energyefficient coolers exceeded USD 100 million in the last ten years (2010-2020).

In a nutshell, Coca-Cola's mitigation initiatives to reduce the potential impact of CPMs cover over 50% of its systems' GhG emissions.

To mitigate the financial impact coming from the high variability in weather patterns in its direct operations The Coca-Cola Company has invested over USD 41.5 million in the last 10 years in waterrelated projects in India. Focusing on its Indian facilities in locations under extremely high or high water stress, Coca-Cola's projects include the construction of check dams, installation of surface water tanks and reverse osmosis systems, in addition to rainwater harvesting systems. Previously, in 2019, The Coca-Cola company conducted 326 projects worldwide to restore watersheds and help replenish the equivalent amount of water it withdraws from these watersheds into its products. As a result, it replenished 161% of the volume of water used in its beverages through ecosystem restoration and watershed remediation projects. The cumulative volume of water replenished since the restoration program was announced (more than a decade ago) is over 1.5 trillion liters of water, and the cumulative cost of these projects exceeds USD 300 million. Overall, in our view, this would indicate an adequate management of the current water stress risks.





When it comes to the mitigation of the financial impact of Chronic Physical risks affecting its upstream activities, The Coca-Cola Company focuses on sourcing its key ingredients sustainably. Consequently, in 2021, the company updated its previous sustainable agriculture framework and published its Principles for Sustainable Agriculture (PSA).

The PSA aims to strengthen their progress toward the sustainable sourcing of 12 global priority ingredients (cane sugar, mango, grape, orange, apple, corn, lemon, beet sugar, tea, pulp & paper, coffee and soybean), which represent about 80% of its total annual agricultural ingredient purchases. Consequently, in 2021, 58% of these priority ingredient volumes were sourced sustainably from suppliers using third-party validation programs already approved under the PSA. Previously, in 2020 and 2019, under the company's Sustainable Agriculture Guiding Principles (SAGP), 56% and 54% of its key ingredients respectively were sustainably sourced at a system level. Moreover, 44% of the volume of oranges and 67% of the volume of corn were sustainably sourced in 2020 and 2019.

In summary, The Coca-Cola Company identifies within its risks and opportunities assessment some of its major GhG sources and climate-related physical impacts. Overall, these risks represent 47% of its five-year average annual Operating Profit. The highest impact is expected to come in the next five years and over from **potential CPMs** which will represent 35% of the company's five-year average annual Operating Profit.

However, The Coca-Cola Company fails to disclose quantified potential emissions reductions tied to invested capital. Hence, without a direct link between investment and mitigation initiatives, we cannot determine if the company's risk management sets it on the right path to align with a 1.5°C scenario by 2030.





Strategy Assessment

CAPITAL ALIGNMENT

Coca-Cola Company's latest approved SBTs (in 2019) are aligned with a 2°C scenario. However, the company's largest independent bottling partners have higher ambitions and count with targets of their own, the majority aiming for a 1.5°C scenario refer to Table 3. Thus, when it comes to the alignment with the Paris Agreement of the Coca-Cola System, the independent bottlers seem to be leading the climate transition while The Coca-Cola Company is following.

Based on these more ambitious targets, to align the Coca-Cola Company with a 1.5°C scenario, we must consider the same targets approved for the Coca-Cola European Partners¹⁹. In other words, the Coca-Cola Company would have to reduce its Scope 1 and 2 emissions by 47% by 2030 from a 2019 base year and its Scope 3 by 29% by 2030 from a 2019 base year as well.

Nevertheless, The Coca-Cola Company does not have a net-zero commitment, nor a roadmap or investment disclosures that support its ambitions. One plausible reason for this approach could be the company's caution against legal liability²⁰. Still, Planet Tracker was able to derive the **potential required** investment for The Coca-Cola Company to achieve its Scope 1 and 2 mitigation targets aligned with SBTs for a 1.5°C scenario. From 2018 to 2020 the company implemented a series of mitigation initiatives in areas such as (a) energy efficiency in production processes, (b) low carbon energy installation, generation and consumption, (c) energy efficiency in

buildings, (d) transportation, and (e) waste reduction and material circularity. Based on these initiatives, considering the total CO₂e emissions mitigated and the total investment required, an average investment of **USD 57 per TCO**₂**e** was derived – see Table 7.

Hence, to arrive at a total Scope 1 and 2 of 825 KTCO₂e as recommended by the SBTi from an expected extrapolated sum of 2,182 KTCO₂e, a mitigation of 1,358 KTCO₂e is required. Accordingly, based on the average required investment of USD 57 per TCO₂e mitigated, The Coca-Cola Company should invest around USD 78 million in its Scope 1 and 2 mitigation initiatives. It is worth remembering however that by 2030 Scope 1 and 2 would only represent a total of 4.5% of the company's total emissions. Therefore, The Coca-Cola Company should focus on mitigating its Scope 3 emissions. Accordingly, the company often mentions the initiatives planned to tackle these emissions, such as sourcing its key ingredients sustainably (Upstream initiatives) or improving the environmental performance of refrigeration equipment (Downstream initiatives). However, there is no investment disclosure regarding the implementation of these initiatives.

In conclusion, The Coca-Cola Company does not disclose the investment needed to achieve its SBTs. And although its required investment in Scope 1 and 2 can be deduced, the lack of Scope 3 investment disclosures makes it inconclusive whether the company's capital alignment puts it on the right path to align with a 1.5°C scenario by 2030.

Table 7: Scope 1 & 2 mitigation initiatives implemented. Source: Coca-Cola Company Climate CDP Reports 2019–2021.				
2018 2019 2020				
Investment required (USD)	827,800	821,884	1,996,218	
CO₂e savings (metric tonnes)	43,590	16,601	19,280	
USD investment per tonne of CO₂e mitigated	19	50	104	

¹⁹ We use the case of The Coca-Cola European Partners for the 1.5C targets setting as they are net-zero committed and have the most recent baseline year (2019). The only other net-zero committed Coca-Cola bottler is Coca-Cola HBC AG with 2017 as baseline year.

²⁰ See our blog on Coca-Cola's Plastic Targets – https://planet-tracker.org/recycling-targets-soda-pressing





TRANSITION APPRAISAL

Once a forward-looking picture of The Coca-Cola Company GhG emissions was created, we compared those with SBTs that would align the Coca-Cola system with a 1.5°C scenario. Consequently, a 25% negative difference between the extrapolated trends and the SBTs was observed - see Table 8. To assess the company's ability to close the gap we analysed its Policy, Risk Management and Capital Alignment.

When it comes to Engagement and Influence regarding its suppliers and customers, The Coca-Cola Company mentions in its CDP responses a series of initiatives covering the (1) GhG emissions of suppliers of packaging and key agricultural commodities, as well as (2) GhG emissions from their customers' cold drink equipment. Similarly, when performing its risk analysis, The Coca-Cola Company mentions mitigation initiatives for its (1) emissions coming from the manufacturing

process and (2) emissions from the downstream cooling equipment. However, the company fails to disclose concrete mitigation actions linked to a numerical value of emissions reduction. It also fails to disclose a set timeframe per mitigation action, investment allocated to it or percentage of shareholders implicated.

As a result, without the proper mechanisms and tracking systems set in place, we cannot determine if The Coca-Cola Company is closing the gap between the extrapolated historical trends and its ideal SBTs, or is slipping further away. Also, without knowing how the company achieved the current reduction in emissions, nor the investment allocated to maintain those emissions under control, we cannot confirm the company's alignment with 1.5°C.

Table 8: Coca-Cola Temperature Alignment – Estimate of Climate Sensitivity. Source: Planet Tracker Calculations.			
Variables	Coca-Cola's Trend	Mitigation Investment	
Suggested KTCO₂e budget (SBT)	39,192	39,192	
Expected KTCO₂e emissions (2030)	48,949	???	
Target overshoot (undershoot)	25%	???	
SBT temperature (°C)	1.5	1.5	
Global KTCO₂e remaining budget (2030)²¹	30,000,000	30,000,000	
Coca-Cola's Over/(Undershoot) in KTCO₂e	7,468,228	???	
Baseline Temperature (°C)	1.1	1.1	
Warming Ratio ²²	1.33333E-08	1.33333E-08	
Coca-Cola's Temperature Alignment (°C) ²³	1.6	???	

By not having a Net-zero approved commitment and updated SBTs, investors should be aware that The Coca-Cola Company is relying on its independent bottling partners for the achievement of its Paris Aligned Climate Transition. Furthermore, no quantified mitigation action nor assigned investments are disclosed regarding its Climate ambitions which might detract from the good work the company has been doing so far.

We conclude that Coca-Cola is on track to align with a +2°C scenario by 2030²⁴

²⁴ Based on the analysis of Coca-Cola's financial and sustainability published material that we could access until 03 October 2022.



²¹ As stated by IPCC (p. 95) – 'Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development'.

²² The warming ratio is defined as the difference between the SBT recommended temperature (1.5°C) and the actual temperature baseline (1.1°C) divided by the global remaining KTCO₂e budget until 2030.

²³ The temperature alignment number is the sum between the SBT recommended temperature (1.5°C) and the product of the warming ratio and the company's over/(undershoot) in KTCO₂e.



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ABOUT PLANET TRACKER

Planet Tracker is a non-profit financial think tank producing analytics and reports to align capital markets with planetary boundaries. Our mission is to create significant and irreversible transformation of global financial activities by 2030. By informing, enabling and mobilising the transformative power of capital markets we aim to deliver a financial system that is fully aligned with a net-zero, nature-positive economy. Planet Tracker proactively engages with financial institutions to drive change in their investment strategies. We ensure they know exactly what risk is built into their investments and identify opportunities from funding the systems transformations we advocate.

PLANET TRACKER'S CLIMATE TRANSITION ANALYSIS - FOOD SYSTEM COMPANIES

As part of its Food & Land Use programme, Planet Tracker is examining the transition plans of the food system (Consumer Goods) companies covered by the Climate Action 100+ list (https://www.climateaction100.org/whos-involved/companies). Our goal is to provide investors with the key information and analysis they need to be able to hold food system companies to account for the quality of their climate transition plans and their execution against those plans, and to encourage them to use this information to engage effectively with these companies with the ultimate aim of driving the sustainable transformation of the global food system.

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