



**TOBACCO  
TRANSFORMATION  
INDEX**

# **2022 Index**

# **Methodology**

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## Contents

<b>Introduction</b>	<b>1</b>
<b>Index Scope</b>	<b>4</b>
Index Company Scope	4
Index Country Scope	5
Index Product Scope	7
<b>Index Methodology</b>	<b>10</b>
Methodology Development Process	10
Design Principles	10
Methodology Overview	12
1 Strategy & Management (Category weight: 10%)	15
2 Product Sales (Category weight: 35%)	19
3 Capital Allocation & Expenditure (Category weight: 30%)	23
4 Product Offer (Category weight: 10%)	27
5 Marketing Policy & Compliance (Category weight: 10%)	31
6 Lobbying & Advocacy (Category weight: 5%)	35
<b>Approach to Scoring</b>	<b>37</b>
Weighting	37
Scoring	40
Additional Scoring Elements	42
<b>Data Collection and Analysis</b>	<b>52</b>
<b>Appendix</b>	<b>53</b>
Full List of 35 indicators	53
Comparison with Other Indexes and Frameworks	54
Acronyms	60
Definitions	61
References	64

## Introduction

The 2020 Tobacco Transformation Index™ (“Index”) represented the first comprehensive effort to evaluate tobacco companies’ commitments and actions related to tobacco harm reduction. The first Index reflected the culmination of a two-year development and research program, with the final stage being a comprehensive post publication review, capturing feedback from stakeholders across the investment and research communities.

The feedback was positive regarding the breadth and depth of the 2020 Index. Suggestions primarily focused on adjustments to bring incremental value to the Index. As such, the 2022 Tobacco Transformation Index has built on the solid foundation of the 2020 Index, repeating much of the methodology as outlined in this document, and consolidating the research and analysis. However, there are targeted modifications summarized in the table below, which were made within the framework of the Index to enhance the analysis.

### Changes implemented in the 2022 Tobacco Transformation Index

Category	Feedback to address	Impact on methodology
High-Risk Product (HRP) versus Reduced-Risk Product (RRP) classification	Stakeholders challenged the current classification (see <i>Relative Risk Assessment</i> ) of moist snuff and chewing tobacco as HRPs.	Research was commissioned to assess the latest findings on harm profiles for relevant product categories to inform classification. The revised Relative Risk Assessment can be found in this document (see <i>Approach to Scoring, Additional Scoring Elements</i> ).
Marketing Expenditure classification and weighting	In the 2020 Index, marketing expenditure was captured within the wider “Marketing” category. The other indicators in the category dealt with marketing policies, and it was observed that expenditure, as a financial indicator, would be better analyzed elsewhere.	For the 2022 Index, Marketing Expenditure was captured as an indicator within the “Capital Allocation” category (renamed “Capital Allocation & Expenditure” to encapsulate the new indicators). Given the importance of the “Capital Allocation & Expenditure” (previously “Capital Allocation”) category, its category weight was increased from 25% to 30%, while the “Marketing” category was reduced from 15% to 10%.
Product Offer	The indicator “Ratio of Product Portfolio (RRPs versus HRPs)” within the “Product Offer” category was challenged. While it was acknowledged that measuring breadth of portfolio is valid, it was considered inferior to actual sales metrics. As such, the weighting of the “Ratio of Product Portfolio” indicator was placed under review.	The “Product Offer” category weighting was kept relatively low at 10%, while its sub-categories were adjusted. Sub-category “Product Portfolio”, which contains the indicator “Ratio of Product Portfolio (RRPs versus HRPs)”, is reduced from 80% to 60%. Sub-category “Pricing” was increased from 20% to 40%.

<p><b>Scoring Normalization</b></p>	<p>Indicator, sub-category, category and overall Index scoring is normalized on a scale of 0 to 5. Consultation with the Technical Committee regarding technical consistency with stated Index goals lead to a review of the manner in which Index scoring is normalized.</p>	<p>The scoring normalization calculation approach was changed from linear to logarithmic in the 2022 Index. A logarithm scale is a non-linear scale, valuable for analyzing a large range of quantities compactly, including graphing a large variance in data. Logarithmic scales also respond to data skewed towards large values (i.e., when one or a few points are much larger than the bulk of the data). A logarithmic scale is useful in making patterns in data more interpretable and visible. The revised scoring normalization enhances Index ranking responsiveness, differentiation, and visibility associated with often skewed data and incremental changes in the metrics.</p>
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*Due to the changes referenced above, notably the change in scoring normalization, the 2022 Index results are not comparable with the published 2020 Index results. 2020 Index results have been restated for comparability with 2022 Index results.*

**The Tobacco Transformation Index remains an iterative process**

The 2022 Tobacco Transformation Index focuses on consolidating the in-depth research of the 2020 Index, while making improvements within the existing framework. From the outset, it was envisaged that the Index will adapt and develop over time, in part reflecting changes in the market environment. While significant additions were not made to the 2022 Index, stakeholder feedback did highlight areas that could be investigated with the potential to be added to future editions, such as:

- Factoring into company scoring external factors such as country-specific tobacco legislation.
- Reviewing how divestments should be accounted for in scoring, considering that products divested will remain available to consumers in the marketplace.
- Assessing actual marketing compliance as well as the policies companies have in place.

Each of these points have merit but are complex in nature and would require specific methodologies to tackle. In the long term, addressing such factors within the Index could add value. Before doing so, it is necessary to comprehensively test and assess the processes used. As such, it was deemed prudent to address these areas as parallel workstreams for the time being. Separate studies were published assessing company performance at the country level and evaluating marketing best practice. In addition, a framework criteria for assessing individual divestments on a case-by-case basis was considered.

*This document was updated in November 2022 to include detail on exchange rate (Value Sales of Tobacco Products) and Risk Spectrum Operator (Approach to Scoring – Relative Risk Assessment) calculations.*

## Index Scope

The 2022 Tobacco Transformation Index assesses the activities and performance of the world’s 15 largest tobacco companies (“Index Companies”) as they pertain to tobacco harm reduction. The Index methodology includes analyzing and comparing Index Companies’ respective product offerings, sales performance, and capital investments for both HRPs and RRP. The 2022 Index also compares Index Companies’ activities and performance across 36 countries, which reflect a combination of low-medium income countries (LMICs) and high-medium income countries (HMICs). The Index scope defines the specific Index Companies, countries, and tobacco products that are covered by the analysis.

### Index Company Scope

The 2022 Index evaluates 15 tobacco companies, of which four are classified as state-owned (including Eastern Co SAE, in which the government owns a 50.5% stake), eight are classified as publicly-traded, and three are privately held.

Selection of the 15 Index Companies was based on the evaluation of cigarette volume sales and total net revenue sales, in order to ensure that the most important and influential companies were captured. In 2021, the 15 companies selected accounted for approximately 90% of global tobacco product volume sales.<sup>1</sup> The geographic reach and relevance of product portfolios of Index Companies also acted as secondary selection criteria to guarantee extensive regional representation and a deliberately broad product scope. Considering their size, resources, and the above-mentioned criteria, each of the Index Companies has a globally and/or regionally influential role in shaping current practices within the tobacco industry.

Index Company	HQ	Ownership	Cigarette Volume Sales 2021 (mn sticks)
Altria Group Inc	USA	Publicly traded	97,304.6
British American Tobacco Plc (BAT)	UK	Publicly traded	677,906.4
China National Tobacco Corp (CNTC)	China	State-owned	2,414,903.7
Djarum PT	Indonesia	Privately held	37,308.1
Eastern Co SAE	Egypt	State-owned	67,422.5
Gudang Garam Tbk PT	Indonesia	Privately held	92,176.3
Imperial Brands Plc	UK	Publicly traded	184,529.3

<sup>1</sup> Estimate from Tobacco Transformation Index research.

## 2022 Tobacco Transformation Index Methodology

ITC Ltd	India	Publicly traded	61,364.8
Japan Tobacco Group (JT)	Japan	Publicly traded	465,046.1
KT&G Corp	South Korea	Publicly traded	73,860.7
Philip Morris International Inc (PMI)	Switzerland	Publicly traded	654,798.8
Swedish Match AB	Sweden	Publicly traded	No cigarette sales
Swisher	USA	Privately held	No cigarette sales
Tobacco Authority of Thailand (TOAT)	Thailand	State-owned	16,841.8
Vietnam National Tobacco Corp (Vinataba)	Vietnam	State-owned	46,434.4

**Source:** Data estimates from Euromonitor International's Passport, Tobacco database, updated May 2022.

Please note that 'Ownership' refers to the Index Company's majority ownership. Eastern Co SAE is 50.5% owned by the Egyptian Ministry of Investment. ITC Ltd is publicly traded but state enterprises own 24.2% of the company; Japan Tobacco Group is publicly traded but the Government of Japan owns 33.3% of the company.

Please note that despite not selling cigarettes both Swedish Match and Swisher are included in the Index because their stick equivalent sales of other HRPs, namely cigars, places them within the world's top 15 largest companies.

### Index Country Scope

The 2022 Index's geographic scope covers 36 countries, accounting for approximately 85% of the current global population of adult smokers.<sup>2</sup> While the Index assesses Index Companies' activities regarding harm reduction at the global level, additional research was conducted in the countries under scope to evaluate the consistency of activities across HMICs and LMICs.

The set of countries was determined using the following three criteria:

- Largest countries by cigarette volume sales (both retail and illicit volumes)
- Largest countries by smoking population
- Representation of world regions and LMICs

Besides assessing Index Companies on their activities in selected countries, each country is profiled in a series of individual Country Fact Sheets to provide key context, including local legislation as it affects Index Company actions.

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<sup>2</sup> Euromonitor International. (n.d.). Euromonitor's Passport Tobacco Database. <https://www.euromonitor.com>

## 2022 Tobacco Transformation Index Methodology

Index Country	Type	Index Region	Cigarette Volume Sales 2021 (mn sticks)	Retail Cigarette Volume Sales 2021 (mn sticks)	Illicit Cigarette Volume Sales 2021 (mn sticks)	Reported No. of Smokers 2021 ('000)
Argentina	HMIC	Americas	38,650.1	32,191.7	6,458.3	7,167.7
Australia	HMIC	Asia Pacific	11,261.5	9,620.0	1,641.5	2,016.6
Bangladesh	LMIC	Asia Pacific	76,300.4	73,674.6	2,625.8	n/a
Brazil	HMIC	Americas	107,068.2	54,808.2	52,260.0	17,956.6
Bulgaria	HMIC	Europe	11,814.7	11,207.8	606.9	2,149.9
Canada	HMIC	Americas	29,202.1	22,871.7	6,330.4	4,431.0
China	HMIC	Asia Pacific	2,494,625.0	2,418,670.0	75,955.0	286,727.1
Egypt	LMIC	Middle East & Africa	114,514.8	108,274.5	6,240.3	18,515.0
Ethiopia	LMIC	Middle East & Africa	13,542.7	7,736.4	5,806.3	n/a
France	HMIC	Europe	42,489.7	33,439.6	9,050.1	12,913.7
Germany	HMIC	Europe	78,498.8	71,807.6	6,691.3	14,865.3
India	LMIC	Asia Pacific	104,578.5	79,126.0	25,452.5	33,260.7
Indonesia	LMIC	Asia Pacific	312,023.1	285,189.1	26,834.0	70,347.1
Italy	HMIC	Europe	64,501.4	60,251.6	4,249.8	9,886.1
Japan	HMIC	Asia Pacific	94,337.0	94,300.0	37.0	12,039.3
Kenya	LMIC	Middle East & Africa	7,273.2	6,353.0	920.3	3,317.7
Mexico	HMIC	Americas	31,297.7	25,127.2	6,170.5	16,375.9
Myanmar	LMIC	Asia Pacific	7,416.4	6,162.1	1,254.2	n/a
Nigeria	LMIC	Middle East & Africa	19,505.3	17,531.4	1,973.9	10,723.7
Pakistan	LMIC	Asia Pacific	86,002.5	60,353.3	25,649.2	27,988.7
Philippines	LMIC	Asia Pacific	59,625.9	50,809.0	8,816.9	16,555.0
Poland	HMIC	Europe	48,970.0	45,565.2	3,404.8	9,776.1
Russia	HMIC	Europe	218,412.0	193,962.0	24,450.0	33,513.4

## 2022 Tobacco Transformation Index Methodology

Saudi Arabia	HMIC	Middle East & Africa	26,273.9	24,085.3	2,188.6	7,070.3
Singapore	HMIC	Asia Pacific	3,023.3	2,942.2	81.1	568.4
South Africa	HMIC	Middle East & Africa	22,218.3	16,621.0	5,597.4	6,957.2
South Korea	HMIC	Asia Pacific	65,536.3	64,885.4	650.9	8,585.6
Spain	HMIC	Europe	48,327.3	44,722.7	3,604.6	9,601.7
Sweden	HMIC	Europe	5,339.9	4,959.9	380.0	798.5
Switzerland	HMIC	Europe	9,588.8	9,132.9	456.0	1,712.5
Thailand	HMIC	Asia Pacific	41,122.4	38,097.5	3,025.0	12,186.6
Turkey	HMIC	Europe	127,793.9	125,110.2	2,683.7	16,654.2
United Kingdom	HMIC	Europe	32,745.2	28,560.1	4,185.1	7,063.0
Ukraine	LMIC	Europe	46,353.0	38,189.1	8,163.9	8,520.7
USA	HMIC	Americas	222,754.8	213,135.7	9,619.1	31,702.8
Vietnam	LMIC	Asia Pacific	98,194.6	81,833.4	16,361.2	15,702.6

**Notes:** (1) “Reported Number of Smokers” refers to the number of adult cigarette smokers aged 18 years and over – i.e. people who currently smoke cigarettes on a daily or non-daily basis.

(2) LMICs and HMICs are identified based on classifications from the World Bank. Different income groups are identified using gross national income (GNI) per capita, in US dollars, converted from local currency using the World Bank Atlas method. Estimates of GNI are obtained from economists in World Bank country units, and the size of the population is estimated by World Bank demographers from a variety of sources, including the UN’s biennial World Population Prospects. In particular, the World Bank currently divides economies into four income groupings: low, lower-middle, upper-middle, and high. For the scope of the Index, two main income groups have been identified: LMIC (Low-Middle Income Country): GNI per capita of USD4,095 or less (i.e. comprising the World Bank’s “Low income” and “Lower-middle income” categories); and HMIC (High-Middle Income Country): GNI per capita of USD4,096 or more (i.e. comprising the World Bank’s “Upper-middle income” and “High income” categories).<sup>3</sup>

**Sources:** Data estimates from Euromonitor International Passport’s Tobacco database, May 2022.

## Index Product Scope

The Index covers the most popular tobacco product types offered by the Index Companies under review. (See *Additional Scoring Elements* for further details regarding classification of products as HRP and RRP).

<sup>3</sup> World Bank. (2021). New World Bank country classifications by income level: 2021-2022, Accessed September 7, 2022, from <https://blogs.worldbank.org/opendata/new-world-bank-country-classifications-income-level-2021-2022>

**Methodology Review** - The risk assessment of nicotine and tobacco products was updated and re-evaluated as part of the 2022 Index. The update includes an assessment of the smokeless tobacco category, given stakeholder feedback.

Product	Type	Definitions
<b>High-Risk Products (HRPs)</b>		
<b>Cigarettes</b>	Combustible	The definition of cigarettes for the purposes of the Index is duty-paid, machine-manufactured white-stick products. This product category also includes hand-rolled kretek cigarettes present in Indonesia and other brands of cigarettes that do not use white paper. However, it excludes non-machine-manufactured products such as bidis/beedis (India) and papirosy (Russia), and other smoking products made with tobacco but that either do not resemble cigarettes as recognized in the USA or Europe, or those that are not machine-manufactured.
<b>Cigarillos</b>	Combustible	Cigarillos are defined as miniature cigars, with a ring gauge of <29. Ring gauge is usually listed under a brand as Length/Ring and is a number indicating the circumference of the cigar's cross section and is enumerated in sixty-fourths of an inch (64/64 = 1 inch). Length does not matter as much in determining cigarillo versus cigars as some cigarillos can be quite long. However, six inches is the maximum length a cigarillo tends to be.
<b>Cigars</b>	Combustible	Cigars are made of tobacco wrapped in leaf as opposed to paper. The product varies considerably in terms of price, quality, and size. Different terms are used to describe the various types of cigar depending on the country. Cigars generally consist of three sections: the filler, the binder, and the wrapper. Cigars are defined as having ring gauges of 30 or more.
<b>Fine Cut Tobacco</b>	Combustible	Fine Cut tobacco is usually sold in plastic or foil pouches, metal tins or plastic tubs. It can also be flavored.
<b>Pipe Tobacco</b>	Combustible	Western-style pipe tobacco includes cut tobacco sold in packaged format for smoking in pipes and available in pouches, tins, and cans.
<b>Shisha</b>	Combustible	Middle Eastern-style water pipe tobacco is also known as 'shisha', 'hookah', or 'nakhla'. Shisha tobacco is also referred to as molasses tobacco and is moist and sweetly flavored – often with fruit.
<b>Reduced-Risk Products (RRPs)</b>		
<b>Chewing Tobacco</b>	Smokeless	For the purposes of the Index, chewing tobacco consists primarily of US-style chewing tobacco. Leading brands of US-style chewing tobacco include <i>America's Best Chew</i> (previously <i>Red Man</i> ), <i>Stoker's</i> and <i>Levi Garrett</i> .
<b>Closed-system vaping products</b>	Vapor	This product category consists entirely of the sales of pre-filled pods or capsules for use with a non-cig-a-like closed system device, as well as single-use (disposable) cig-a-like products. Currently, these are universally

Product	Type	Definitions
		proprietary in nature (pods are useable exclusively with a single specific hardware device).
<b>E-liquids</b>	Vapor	E-liquids include nicotine and non-nicotine bottled e-liquids which are decanted by the consumer into a tank for heating and inhalation. E-liquids can have different nicotine levels and flavors.
<b>Heated Tobacco</b>	Vapor	Heat-not-burn devices include products, generally manufactured by major tobacco companies, which allow the consumer to heat rather than combust a tobacco product. Heated tobacco is the consumable element of heat-not-burn devices, which comes in the form of pods or in specially designated cigarette sticks.
<b>Moist Snuff</b>	Smokeless	Moist Snuff is either loose or pre-portioned in miniature sized 'teabag' pouches that are placed on the gum and sucked on. Moist Snuff is sometimes referred to as "dip". Moist snuff is distinguished from Snus by its processing: Moist snuff is fermented; compared to snus which is pasteurized (heat-treated). Leading brands of moist snuff in the USA include <i>Copenhagen</i> , <i>Grizzly</i> and <i>Skoal</i> .
<b>Non-Tobacco Nicotine Pouches</b>	Smokeless	Non-tobacco nicotine pouches are manufactured in a similar way to snus using ingredients such as filler, flavors, stabilizers, and nicotine but do not contain tobacco.
<b>NRT Products</b>	Smokeless	Nicotine-based products such as gum, lozenges, patches, and inhalators used to aid smoking cessation. It also includes nicotine-based products sold as capsules, micro-tabs, or sprays.
<b>Snus</b>	Smokeless	Snus is either loose or pre-portioned in miniature sized 'teabag' pouches that are placed on the gum and sucked on. Snus is distinguished from Moist snuff by its processing: Snus is pasteurized (heat-treated); compared to moist snuff which is fermented. Leading brands of snus in Sweden include <i>General</i> , <i>Knox</i> and <i>Göteborgs Rapé</i> .

*Note: The table of definitions covers products offered by the 15 Index Companies. It does not cover products which are not offered by the 15 Index Companies, but which may be prevalent in certain geographies, such as Asian-style chewing tobacco (e.g. Gutkha), Bidis, Cheroots and Papirosy.*

## Index Methodology

### Methodology Development Process

The Tobacco Transformation Index Methodology was developed in a structured and iterative manner, involving interactions with numerous stakeholders. This process remains the foundation for the 2022 Index.

In establishing the methodology, inputs were collected regarding: the feasibility and application of the Index, specific topics to be addressed, and the measures necessary to ensure its research process and outputs will be perceived as objective, credible, and effective.

Key milestones in the methodology development process were:

- **Stakeholder Consultation and Research** – Perspectives and opinions from stakeholders and experts representing diverse disciplines, geographies, and backgrounds were sought, through multi-stakeholder sessions. Beyond the formal dialogue events, additional stakeholders and experts were consulted via extended email exchanges, direct meetings, and phone conversations to gather additional insights and perspectives.
- **Industry Consultation** – Acknowledging the importance of industry participation to increase access to information as well as test the feasibility of the indicators, consultations were undertaken with tobacco companies on a voluntary basis, and this process was repeated in the 2022 Index. Index Companies were given the opportunity to review the proposed indicators, methodology (including weighting and per stick equivalent calculation) and the preliminary data used for scoring and ranking their performance. The timing, nature, and content of interactions with Index Companies is disclosed at Index publication in the [“Industry Engagement Summary”](#) document.
- **Public Review Period** – In order to enhance the methodology and support ongoing dialogue with stakeholders, the preliminary methodology was opened to public comment for the 2022 Index. Several valuable inputs were received.
- **Technical Committee** – Index Technical Committee provided advice and insight to guide the development of a robust Tobacco Transformation Index methodology in the areas of metrics and assessment criteria, determination of weightings at the individual indicator, sub-category, and category levels, and technical consistency with stated goals.

### Design Principles

The following key principles were used to guide the development of the 2022 Index methodology:

- **Focus and Scope** – The Index focuses on measuring and evaluating Index Company activities and performance as they relate to tobacco harm reduction. Although other environmental, social and governance (ESG) issues are important and may impact an Index Company’s overall performance,

they were considered beyond the scope of this tool. Similarly, the Index evaluates Index Company activity in the tobacco and nicotine industry only. It was acknowledged that shifting focus and investment to other industries may create certain societal benefits and/or reduce the harm that a company is directly responsible for. The Index focuses on what Index Companies are (or are not) doing to support a transition toward reduced harm from tobacco, including supporting existing users to either quit or transition to RRP.

- **Materiality** – Topics and indicators were selected and prioritized based on their materiality, or significance, to the goal of tobacco harm reduction and, in turn, the long-term impact and viability of the company. This approach acknowledged both financial and non-financial concepts of materiality, and recognized that the negative health impacts of tobacco products are a key concern of stakeholders and that a given company’s long-term financial performance will depend partly on its ability to minimize or eliminate such impacts.
- **Ability to Control/Influence** – Indicators focus on matters that company management has reasonable ability to control or influence. An important principle is that Index Companies are neither rewarded nor penalized for simply following applicable law.
- **Utility** – Indicators provide information and insight that is useful for investors and other stakeholders to engage with companies to drive change. The Index alone cannot bring about the desired scale or pace of change in the tobacco industry, nor can it dictate to companies all the actions necessary to effect such change. Rather, the Index provides relevant data and insight to stakeholders who can more directly influence companies.
- **Improvement** – The Index recognizes the importance of continuous improvement and the acceleration of change over time. Therefore, where applicable, performance is assessed based on both point-in-time and rate-of-change indicators.
- **Feasibility** – Categories and indicators must be reasonably evaluated based on information obtainable from public reporting, relevant research databases, primary research, and/or verifiable data provided directly by Index Companies.
- **Transparency** – In many areas, the Index recognizes the value of transparency, with indicators evaluating the presence and/or quality of disclosure itself, not just the performance or practices being disclosed. Where such disclosure is insufficient or absent, it likely affects the scoring for both transparency and the underlying issue being evaluated.
- **Alignment** – To the extent possible, the Index’s indicators were aligned with issues, concepts, and/or measurements prioritized by other relevant frameworks, such as the Global Reporting Initiative (GRI) or the Sustainability Accounting Standards Board (SASB) Tobacco Standard. However, it should also be made clear how and where the Index differs, and why its approach is necessary and/or creates unique value relative to these other frameworks.

## Methodology Overview

The 2022 Tobacco Transformation Index evaluates Index Companies' activities and performance, against six measurement categories and 35 indicators, relevant to tobacco harm reduction.

The Index is a relative ranking, meaning Index Companies are compared to each other rather than against an ideal state. The focus of the Index is on differentiating between Index Companies to increase competition and accelerate transformation, in the same way that other indexes have operated.

### Measurement Categories

The 2022 Index consists of six measurement categories, each covering a distinct area of corporate activity and/or performance related to tobacco harm reduction. Each category is further broken down into subcategories which are measured based on quantifiable indicators.

### Indicators

The methodology includes 35 indicators that characterize an Index Company's activities and performance in multiple areas. Each indicator has been included based on its relevance, feasibility, and materiality. For purposes of assessing Index Companies, each indicator is resolved to a numeric value based on analysis of relevant quantitative and/or qualitative metrics.

### Strategic Pillars

The three strategic pillars of Commitment, Performance and Transparency are a crucial part of the scoring framework underpinning the development of the Index methodology.

Each indicator is linked to one of three strategic pillars in order to provide a fully rounded view of each Index Company's approach to transformation. The three pillars are defined as follows:

- **Commitment:** Addresses the extent to which the Index Company has incorporated the goal of tobacco harm reduction into its vision and strategy, its internal policies and codes of conduct, and its public stance and subsequent action.
- **Performance:** Addresses the Index Company's quantifiable progress in phasing out HRPs, along with performance and investments associated with RRP. Associated indicators represent the tangible results of the Index Company's strategy.
- **Transparency:** Addresses the Index Company's disclosure of information necessary for stakeholders to effectively monitor and evaluate its commitment and performance.

## Scoring

Indicators are distilled and translated into a single score for each category and sub-category, and the overall Index, using a transparent and balanced system of weights, metrics, and scoring.

- **Weight:** Each technical category, sub-category, and indicator is assigned a relative weight which represents its significance with regard to tobacco harm reduction.
- **Metrics:** Each Commitment and Transparency indicator has metrics against which the Index Company's performance is scored. The metrics identify the necessary requirements the Index Companies need to satisfy to achieve a full score for each indicator. Where the Index Company is asked to fulfill more than one requirement to get a full score, the metrics description includes an 'AND' in capital letters to separate those requirements. Performance indicators are normalized and scored on a relative basis.
- **Score:** The Index Company is assigned a score for each indicator based on its performance against the specified metrics, normalization process, and any other adjustments, which is then calibrated according to the relative weight assigned.

Additional details are provided under *Approach to Scoring*.

### Summary Table: 2022 Index Weights

Category	2022 Index Category Weight	Sub-Category	Sub-category Weight 2020	Sub-category Weight 2022
1 Strategy & Management	10%	Vision & Management Systems	80%	80%
		Stakeholder Engagement	20%	20%
2 Product Sales	35%	Volume Sales of Tobacco Products	80%	80%
		Value Sales of Tobacco Products	20%	20%
3 Capital Allocation & Expenditure (previously "Capital Allocation")	30%	Capital Allocation	100%	80%
		Marketing Expenditure	N/A	20%
4 Product Offer	10%	Product Portfolio	80%	60%
		Pricing	20%	40%
5	10%	Marketing Policy	55%	65%
		Marketing Compliance	30%	35%

	<b>Marketing Policy &amp; Compliance (previously “Marketing”)</b>		Marketing Expenditure	15%	N/A
<b>6</b>	<b>Lobbying &amp; Advocacy</b>	5%	Lobbying & Advocacy	100%	100%

See Appendix for full list of 35 indicators used in the Index

### Category allocation and weighting changes: 2022 Index versus 2020 Index

- Product Offer – The “Product Portfolio” sub-category weighting was reduced from 80% to 60%, while conversely the “Pricing” sub-category was increased from 20% to 40%. This modification reduced the influence of the “Ratio of Product Portfolio (RRPs versus HRP)” indicator, which could reward the position of Index Companies with wide product portfolios, but limited sales volumes.
- Marketing Policy & Compliance (previously “Marketing”) – The “Marketing” category was renamed “Marketing Policy & Compliance”. “Marketing Expenditure” was reclassified within “Capital Allocation & Expenditure” (previously called “Capital Allocation”). The remaining sub-category weightings, within the “Marketing Policy & Compliance” category, were therefore recalculated to account for the whole of the “Marketing Policy & Compliance” category. “Marketing Policy” was increased from 55% to 65% and “Marketing Compliance” was increased from 30% to 35%. The overall “Marketing Policy & Compliance” category weighting was reduced from 15% to 10%.
- Capital Allocation & Expenditure (previously “Capital Allocation”) – The overall category weighting was increased from 25% to 30%.

The sections below provide details on each category, sub-category and the individual indicators within them. Some indicators are qualitative in nature, and are comprised of multiple qualitative metrics, which are also listed in the tables below. The majority of indicators are quantitative in nature, and do not require additional metrics.

Each section also identifies comparable indicators and/or measurement areas in other relevant reporting frameworks, such as the Sustainability Accounting Standards Board (SASB) Tobacco Standard, the Global Reporting Initiative (GRI), and the SAM Corporate Sustainability Assessment, as used by the Dow Jones Sustainability Indices (DJSI).

Additional details can be found in the *Appendix* under *Comparison with Other Indexes and Frameworks*.

## 1 Strategy & Management (Category weight: 10%)

Tobacco harm reduction is more likely to be prioritized if a company has made a well-defined commitment that is integrated with its core business strategy, with clear accountability rooted at the top of the organization. Effective strategy and management are further demonstrated by companies that set clear goals, track performance, and disclose pertinent details to all stakeholders. Robust stakeholder engagement and public reporting of its results also enhance accountability and effectiveness.

The wording of some of the below qualitative metrics that form part of the 35 indicators was amended slightly since the 2020 Index was published.

The aim is to make the language more precise and reduce ambiguity.

For example:

- The word “annually” is used instead of “regularly”
- The phrase “provides an explanation” is used instead of “provides a detailed explanation”
- The phrase “company publicly discloses” is used instead of “company discloses”.

### 1A Vision & Management Systems (Sub-category weight: 80%)

Assesses whether the Index Company has made a specific commitment to tobacco harm reduction and how this is embedded within its business strategy and management systems.

<b>1A.1</b>	<b>Harm Reduction Strategy</b>
<b>Description</b>	Commitment to phase out HRPs and responsibly develop and offer RRP
<b>Rationale</b>	A clear commitment and comprehensive strategy signal that tobacco harm reduction is a strategic priority for the company.
<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company acknowledges its role in, <b>AND</b><sup>4</sup> states a formal commitment to reducing, tobacco-related death and disease</li> <li>– Company has a policy or mission statement to phase out HRPs <b>AND</b> offer RRP</li> <li>– Company links its overall competitive strategy/future outlook to tobacco harm reduction by providing an explanation of its business risks and opportunities</li> <li>– Company has an objective related to tobacco harm reduction <b>AND</b> the objective is time bound and measurable</li> </ul>
<b>Pillar</b>	Commitment
<b>Weight</b>	25%

<sup>4</sup> Please note that when the metric includes an ‘AND’ in capital letters the company needs to satisfy two different requirements to receive the full score. In cases where only one part of the metric is satisfied, a partial score is received.

1A.2	Disclosure of Harm Reduction Targets & Performance
<b>Description</b>	Public reporting on specific targets and performance in achieving tobacco harm reduction
<b>Rationale</b>	Transparent reporting of harm reduction targets and performance enables company accountability and enhances visibility for all stakeholders.
<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company provides quantitative evidence of harm reduction performance at least annually <b>AND</b> provides quantitative evidence of performance against objectives</li> <li>– Company provides an explanation of strengths <b>AND</b> weaknesses, and implications/outcomes of its performance in achieving its harm reduction objectives</li> <li>– Company hires independent auditors to verify its performance in relation to tobacco harm reduction</li> </ul>
<b>Pillar</b>	Transparency
<b>Weight</b>	25%

1A.3	Governance & Management Systems
<b>Description</b>	Accountability structure and governance mechanisms within the company for achieving tobacco harm reduction objectives
<b>Rationale</b>	Senior-level accountability and integration of tobacco harm reduction into a company's management system increases the likelihood that related strategy(ies) will be prioritized and effectively implemented.
<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company's tobacco harm reduction policy and strategy are prioritized at board and/or senior level <b>AND</b> responsibility has been specifically assigned to senior leaders or committee(s)</li> <li>– Company's strategic and day-to-day responsibilities and decision-making processes for tobacco harm reduction have been clearly defined within multiple levels of management, corporate functions, and/or geographies</li> </ul>
<b>Pillar</b>	Commitment
<b>Weight</b>	25%

1A.4	Performance Management & Incentives
<b>Description</b>	Performance incentives for achieving tobacco harm reduction objectives
<b>Rationale</b>	Monetary or other incentives encourage senior decision-makers to appropriately prioritize and ensure the company's harm reduction objectives are met.
<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Incentives/remuneration to senior leaders and/or board members are linked to implementation of tobacco harm reduction policies <b>AND</b> there are no incentives/remuneration linked to HRP sales</li> <li>– Company publicly discloses numeric details of any incentives/remuneration to senior leaders and/or board members specifically linked to tobacco harm reduction</li> </ul>
<b>Pillar</b>	Commitment
<b>Weight</b>	25%

### Comparison to Other Reporting Frameworks

- **SASB Tobacco Standard** – Under Public Health, indicator code FB-TB-260a.2 stipulates that disclosures should include “discussion of the process to assess risks and opportunities associated with ‘tobacco harm reduction’ products.”<sup>5</sup>
- **Global Reporting Initiative** – GRI 102-16 requires “a description of the organization’s values, principles, standards, and norms of behavior.”<sup>6</sup> GRI 102-26 specifies the importance of reporting senior executive engagement, and GRI 102-35 extends this to remuneration requiring reporting on “how performance criteria in the remuneration policies relate to the highest governance body’s and senior executives’ objectives for economic, environmental, and social topics.”<sup>7</sup>

### 1B Stakeholder Engagement (Sub-category weight: 20%)

**Assesses how the wider viewpoints and interests of stakeholders are incorporated when developing and implementing harm reduction strategies to achieve transformation, and how these activities are disclosed.**

1B.1	Stakeholder Engagement
<b>Description</b>	Clear systems for selecting stakeholders and incorporating insight focused on harm reduction
<b>Rationale</b>	Robust stakeholder engagement enhances accountability and ensures the company is fully aware of the potential impact of its policies and plans.

<sup>5</sup> SASB. (2018). Tobacco Sustainability Accounting Standard.

<sup>6</sup> Global Sustainability Standards Board (GSSB). (n.d.). *GRI Standards*.

<sup>7</sup> Ibid.

<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company states recognition of the benefits of stakeholder dialogue to inform its tobacco harm reduction strategy and activities</li> <li>– Company defines systems for identifying, consulting, and incorporating feedback from stakeholders in relation to tobacco harm reduction <b>AND</b> engages with stakeholders such as public health experts, NGOs, academics, consumer groups and/or other external stakeholders at least annually</li> </ul>
<b>Pillar</b>	Commitment
<b>Weight</b>	50%

<b>1B.2</b>	<b>Disclosure of Stakeholder Engagement</b>
<b>Description</b>	Disclosure of stakeholder engagement activities related to tobacco harm reduction
<b>Rationale</b>	Disclosure further enhances accountability and enables stakeholders to evaluate the robustness and influence of engagement activities.
<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company publicly discloses stakeholder engagement specifically related to tobacco harm reduction <b>AND</b> provides details such as principles of engagement, key topics, and outcomes</li> </ul>
<b>Pillar</b>	Transparency
<b>Weight</b>	50%

### Comparison to Other Reporting Frameworks

- **Global Reporting Initiative** – GRI Disclosures 102-40, 102-42, 102-43, and 102-44 require reporting on stakeholder engagement, including documenting all engagements, how the participants were identified, how they were approached, and the topics discussed.<sup>8</sup>

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<sup>8</sup> Ibid.

## 2 Product Sales (Category weight: 35%)

Product sales are the heart of the Index, as the level of harm is directly related to the type and volume of products that a company sells. The Index therefore seeks evidence that Index Companies are phasing out, as rapidly as possible and across all markets, sales of cigarettes and other HRPs, and displacing them through sales of appropriate RRP. Reducing dependence on revenues from HRPs also demonstrates progress in tobacco harm reduction.

### 2A Volume Sales of Tobacco Products (Sub-category weight: 80%)

**Assesses volume sales of HRPs in proportion to sales of RRP, including rates of change. Also assesses consistency of performance across LMICs and HMICs, if applicable.**

2A.1	Volume Sales of HRPs
<b>Description</b>	Volume sales of HRPs (last financial year: 2021)
<b>Rationale</b>	Lower volume sales of HRPs (relative to other Index Companies) reflect less contribution to ongoing tobacco-related harm.
<b>Pillar</b>	Performance
<b>Weight</b>	5%
<b>Addl. Scoring Elements<sup>9</sup></b>	Relative Risk Assessment, Per Stick Equivalent Conversion

2A.2	Volume Sales of HRPs – Rate of Change
<b>Description</b>	Evolution in volume sales of HRPs (last three financial years: 2019, 2020, 2021) <sup>10</sup>
<b>Rationale</b>	Declining volume sales of HRPs (relative to other Index Companies) reflect a decreasing contribution to ongoing tobacco-related harm.
<b>Pillar</b>	Performance
<b>Weight</b>	5%
<b>Addl. Scoring Elements</b>	Relative Risk Assessment, Per Stick Equivalent Conversion, LMIC versus HMIC Multiplier

<sup>9</sup> See *Approach to Scoring* for details on additional scoring elements denoted here.

<sup>10</sup> Rate of change is always calculated using the absolute difference between values in 2019 and 2021.

2A.3	Ratio of Volume Sales (RRPs versus HRPs)
<b>Description</b>	Ratio of volume sales of RRP to HRP (last financial year: 2021)
<b>Rationale</b>	A higher ratio of volume sales of RRP to HRP (relative to other Index Companies) reflects a greater degree of transformation, as well as potential progress in transitioning consumers away from HRP.
<b>Pillar</b>	Performance
<b>Weight</b>	45%
<b>Addl. Scoring Elements</b>	Relative Risk Assessment, Per Stick Equivalent Conversion, LMIC versus HMIC Multiplier

2A.4	Ratio of Volume Sales (RRPs versus HRPs) – Rate of Change
<b>Description</b>	Evolution of the ratio of volume sales of RRP to HRP (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	A higher rate of change away from HRP (relative to other Index Companies) reflects greater progress toward transformation, as well as potential progress in transitioning consumers away from HRP.
<b>Pillar</b>	Performance
<b>Weight</b>	45%
<b>Addl. Scoring Elements</b>	Relative Risk Assessment, Per Stick Equivalent Conversion, LMIC versus HMIC Multiplier

### Comparison to Other Reporting Frameworks

- SASB Tobacco Standard** – Under Activity Metrics, indicator code BF-TB-000.A stipulates reporting of volume sales of combustible and non-combustible products. Combustible products are defined to include cigarettes, cigars, and other smoked tobacco products. Non-combustible products are defined to include traditional smokeless tobacco, non-tobacco nicotine products, heated tobacco products, and nicotine replacement therapy products.<sup>11</sup>

<sup>11</sup> SASB. (2018). Tobacco Sustainability Accounting Standard.

**2B Value Sales of Tobacco Products (Sub-category weight: 20%)**

Assesses value sales of HRPs in proportion to sales of RRP, including rates of change. Also assesses consistency of performance across HMICs and LMICs, if applicable.

2B.1	Value Sales of HRPs
<b>Description</b>	Net value sales <sup>12</sup> of HRPs (last financial year: 2021)
<b>Rationale</b>	Lower value sales of HRPs (relative to other Index Companies) reflect less dependence on revenues from HRPs.
<b>Pillar</b>	Performance
<b>Weight</b>	5%
<b>Addl. Scoring Elements</b>	Relative Risk Assessment, LMIC versus HMIC Multiplier

2B.2	Value Sales of HRPs – Rate of Change
<b>Description</b>	Evolution in net value sales of HRPs (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	Declining value sales of HRPs (relative to other Index Companies) reflect decreasing dependence on revenues from HRPs, as well as potential progress in transitioning consumers away from HRPs.
<b>Pillar</b>	Performance
<b>Weight</b>	5%
<b>Addl. Scoring Elements</b>	Relative Risk Assessment, LMIC versus HMIC Multiplier

2B.3	Ratio of Value Sales (RRPs versus HRPs)
<b>Description</b>	Ratio of net value sales of RRP to HRPs (last financial year: 2021)
<b>Rationale</b>	A higher ratio of value sales of RRP versus HRPs (relative to other Index Companies) reflects a greater degree of transformation, as well as potential progress in transitioning consumers from HRPs to RRP.
<b>Pillar</b>	Performance

<sup>12</sup> Net value sales refer to gross sales minus applicable sales returns, trade allowances, and discounts. Gross sales do not include cost of goods sold, operating expenses, excise tax expenses, or other charges. Sales data published in different currencies are converted into USD using Euromonitor International's 2021 annual exchange rates. Annual exchange rates are calculated as the average of the monthly exchange rates across a calendar year, sourced from central banks and official national statistics agencies.

<b>Weight</b>	45%
<b>Addl. Scoring Elements</b>	Relative Risk Assessment, LMIC versus HMIC Multiplier

<b>2B.4</b>	<b>Ratio of Value Sales (RRPs versus HRPs) – Rate of Change</b>
<b>Description</b>	Evolution of the ratio of net sales of RRP to HRP (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	A higher rate of change away from HRPs (relative to other Index Companies) reflects greater progress toward transformation, as well as potential progress in transitioning consumers from HRPs to RRP.
<b>Pillar</b>	Performance
<b>Weight</b>	45%
<b>Addl. Scoring Elements</b>	Relative Risk Assessment, LMIC versus HMIC Multiplier

### Comparison to Other Reporting Frameworks

- **SASB Tobacco Standard** – Under Public Health, indicator code BF-TB-260a.1 stipulates separate reporting of: (1) gross revenue and (2) revenue net of excise taxes from (a) non-tobacco nicotine products and (b) heated tobacco products.<sup>13</sup> Combustible products are defined to include cigarettes, cigars, and other smoked tobacco products. Non-combustible products are defined to include traditional smokeless tobacco, non-tobacco nicotine products, heated tobacco products, and nicotine replacement therapy products.
- **Global Reporting Initiative** – GRI 201-1 requires the reporting of financial information.<sup>14</sup>
- **SAM Corporate Sustainability Assessment** – Requires companies to report revenues.<sup>15</sup>

<sup>13</sup> SASB. (2018). Tobacco Sustainability Accounting Standard.

<sup>14</sup> Global Sustainability Standards Board (GSSB). (n.d.). *GRI Standards*.

<sup>15</sup> S&P Dow Jones. (2019). Dow Jones Sustainability Diversified Indices – Index Methodology, Accessed August 10, 2020, from [https://www.spglobal.com/spdji/en/documents/methodologies/methodology-dj-sustainability-diversified-indices.pdf?force\\_download=true](https://www.spglobal.com/spdji/en/documents/methodologies/methodology-dj-sustainability-diversified-indices.pdf?force_download=true)

S&P Global. (2020). *SAM Corporate Sustainability Assessment (CSA) Weights Overview 2020*.

### 3 Capital Allocation & Expenditure (Category weight: 30%)

*Previously “Capital Allocation”, 25% weighting*

How a company allocates capital and directs expenditure – to research and development (R&D), infrastructure, marketing, and mergers and acquisitions (M&A) – demonstrates how it plans to operate in the future. In particular, the degree to which it invests in RRPVs versus HRPVs signals the extent to which it anticipates a future shaped by tobacco harm reduction, even though the outcomes and effectiveness of these investments are uncertain. Company investments outside the tobacco industry are considered out of scope of the Index.

**Methodology Change** – For the 2022 Index “Marketing Expenditure” was moved from the “Marketing” category to “Capital Allocation & Expenditure” (previously “Capital Allocation”). As “Marketing Expenditure” represents a financial cost and investment, it was deemed to fit better in this category than within “Marketing”, where indicators are primarily concerned with policies. The category title was subsequently changed to “Capital Allocation & Expenditure”, given the inclusion of marketing indicators. Marketing expenditure is considered a driver of consumer demand for RRPVs, and as such its weighting in relation to the overall Index total increased from 2.25% to 6.00%. The overall category weight of “Capital Allocation & Expenditure” was increased from 25% to 30%.

#### 3A Capital Allocation (Sub-category weight: 80%)

Assesses Index Companies’ performance in allocating resources away from HRPVs and toward RRPVs.

3A.1	M&A Expenditure on HRPVs
<b>Description</b>	M&A expenditure on HRPVs over the last three years as a share of net sales (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	A higher level of M&A expenditure on HRPVs (relative to other Index Companies) implies the company is investing in developing the market for HRPVs, undermining tobacco harm reduction.
<b>Pillar</b>	Performance
<b>Weight</b>	6%

<b>3A.2</b>	<b>Ratio of M&amp;A Expenditure (RRPs versus HRPs)</b>
<b>Description</b>	Ratio of M&A expenditure on RRP to HRPs over the last three years (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	A higher ratio of M&A expenditure on RRP versus HRPs (relative to other Index Companies) indicates a potential structural shift supporting tobacco harm reduction.
<b>Pillar</b>	Performance
<b>Weight</b>	10%

<b>3A.3</b>	<b>R&amp;D Expenditure on HRPs</b>
<b>Description</b>	R&D expenditure on HRPs as a share of net sales (excluding expenditure related to legal compliance requirements; last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	A higher level of R&D expenditure on HRPs (relative to other Index Companies) implies the company is investing in developing the market for HRPs, undermining harm reduction.
<b>Pillar</b>	Performance
<b>Weight</b>	10%

<b>3A.4</b>	<b>Ratio of R&amp;D Expenditure (RRPs versus HRPs)</b>
<b>Description</b>	Ratio of R&D expenditure on RRP to HRPs over the last three years (excluding expenditure related to legal compliance requirements; last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	A higher ratio of R&D expenditure on RRP versus HRPs indicates a potential structural shift supporting tobacco harm reduction.
<b>Pillar</b>	Performance
<b>Weight</b>	32%

<b>3A.5</b>	<b>Capital Expenditure on HRPs</b>
<b>Description</b>	Capital expenditure on HRPs as a share of net sales (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	A higher level of capital expenditure on HRPs (compared to other Index Companies) implies the company is investing in developing the market for HRPs, undermining harm reduction.
<b>Pillar</b>	Performance
<b>Weight</b>	10%

<b>3A.6</b>	<b>Ratio of Capital Expenditure (RRPs versus HRPs)</b>
<b>Description</b>	Ratio of capital expenditure on RRPs to HRPs over the last three years (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	A higher ratio of capital expenditure on RRPs versus HRPs (compared to other Index Companies) indicates a potential structural shift supporting tobacco harm reduction.
<b>Pillar</b>	Performance
<b>Weight</b>	32%

### **3B Marketing Expenditure (Sub-category weight: 20%)**

Assesses the marketing spend on HRPs, both in absolute terms and in proportion to expenditures on marketing of RRPs.

<b>3B.1</b>	<b>Marketing Expenditure on HRPs</b>
<b>Description</b>	Marketing spend (including discounting) on HRPs as a share of net sales (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	A higher level of marketing expenditure on HRPs (compared to other Index Companies) reflects greater focus on encouraging consumption of HRPs, undermining harm reduction.
<b>Pillar</b>	Performance
<b>Weight</b>	20%

3B.2	Ratio of Marketing Expenditure (RRPs versus HRPs)
<b>Description</b>	Ratio of marketing spend (including discounting) on RRPs to HRPs (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	A higher ratio of marketing spend on RRPs versus HRPs (compared to other Index Companies) reflects greater focus on tobacco harm reduction.
<b>Pillar</b>	Performance
<b>Weight</b>	80%

## 4 Product Offer (Category weight: 10%)

The types of products companies offer and the prices at which they sell them are two key factors that shape the landscape consumers face as they consider tobacco products with varying degrees of risk. Reducing HRPs on offer and refraining from pricing strategies that encourage sales of these products are critical to support tobacco harm reduction. The responsible introduction of affordable RRPs could help adult smokers transition away from HRPs and potentially quit altogether. These efforts should be applied across LMICs and HMICs where an Index Company operates, within local regulatory guidelines.

**Methodology Change** – For the 2022 Index, within the “Product Offer” category, the weighting of the “Product Portfolio” sub-category was reduced from 80% to 60%, while the weighting of the “Pricing” sub-category was increased from 20% to 40%. While it was acknowledged that measuring breadth of portfolio is valid, it was considered inferior to actual sales. As such, the weighting of the “Ratio of Product Portfolio” indicator was modified.

### 4A Product Portfolio (Sub-category weight: 60%)

Assesses the provision of RRPs, which may enable consumers to migrate away from HRPs. Index Companies are evaluated at the country level, including a comparison of Index Company product portfolios in LMICs and HMICs.

4A.1	Ratio of Number of Countries (RRPs versus HRPs)
<b>Description</b>	Ratio of number of countries where RRPs are offered to the number of countries where HRPs are offered (last financial year: 2021)
<b>Rationale</b>	A higher ratio of countries where RRPs are offered (relative to other Index Companies) reflects greater progress in making RRPs available across all markets where the company operates.
<b>Pillar</b>	Performance
<b>Weight</b>	25%
<b>Addl. Scoring Elements</b>	LMIC versus HMIC Multiplier

<b>4A.2</b>	<b>Ratio of Number of Countries (RRPs versus HRPs) – Rate of Change</b>
<b>Description</b>	Evolution of ratio of number of countries where RRPs are offered to the number of countries where HRPs are offered (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	Increasing the ratio of countries where RRPs are offered (relative to other Index Companies) reflects greater progress in making RRPs available across all markets where the company operates.
<b>Pillar</b>	Performance
<b>Weight</b>	25%
<b>Addl. Scoring Elements</b>	LMIC versus HMIC Multiplier

<b>4A.3</b>	<b>Ratio of Product Portfolio (RRPs versus HRPs)</b>
<b>Description</b>	Ratio of number of RRP categories to HRP categories in global product portfolio (last financial year: 2021)
<b>Rationale</b>	A larger portfolio of RRPs compared to HRPs (relative to other Index Companies) reflects greater progress toward transformation and increases the available options for consumers to migrate away from HRPs.
<b>Pillar</b>	Performance
<b>Weight</b>	25%
<b>Addl. Scoring Elements</b>	Relative Risk Assessment, LMIC versus HMIC Multiplier

<b>4A.4</b>	<b>Ratio of Product Portfolio (RRPs versus HRPs) – Rate of Change</b>
<b>Description</b>	Evolution of ratio of number of RRP categories to HRP categories in global product portfolio (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	Increasing the ratio of RRPs compared to HRPs (relative to other Index Companies) reflects greater progress toward transformation.
<b>Pillar</b>	Performance
<b>Weight</b>	25%
<b>Addl. Scoring Elements</b>	Relative Risk Assessment, LMIC versus HMIC Multiplier

## Comparison to Other Reporting Frameworks

- SASB Tobacco Standard** – Under Public Health, indicator FB-TB-260a.2 stipulates that the entity should discuss “scope, success, and growth plans related to its current ‘tobacco harm reduction’ product portfolio and, where relevant, its plans to introduce future products and product categories.”<sup>16</sup>

### 4B Pricing (Sub-category weight: 40%)

**Assesses the affordability of RRPs to HRPs by Index Company. Affordability is assessed across geographies, including a comparison of LMIC and HMIC countries.**

4B.1	Ratio of Average Lowest Price (RRPs versus HRPs)
<b>Description</b>	Average of ratio between lowest retail price of RRPs and that of HRPs across all countries of operation under review (last financial year: 2021)
<b>Rationale</b>	A lower ratio of average lowest price between RRPs and HRPs (relative to other Index Companies) decreases the potential for price to be a barrier to consumers transitioning to RRPs.
<b>Pillar</b>	Performance
<b>Weight</b>	50%
<b>Addl. Scoring Elements</b>	Per Stick Equivalent Conversion

4B.2	Ratio of Average Lowest Price (RRPs versus HRPs) – Rate of Change
<b>Description</b>	Evolution of average ratio between lowest retail price of RRPs to HRPs across all countries of operation under review (last three financial years: 2019, 2020, 2021)
<b>Rationale</b>	A declining ratio of average lowest price between RRPs and HRPs (relative to other Index Companies) reflects greater progress in improving accessibility of RRPs, in order to support consumers in transitioning away from HRPs.
<b>Pillar</b>	Performance
<b>Weight</b>	50%
<b>Addl. Scoring Elements</b>	Per Stick Equivalent Conversion

<sup>16</sup> SASB. (2018). Tobacco Sustainability Accounting Standard.

## Comparison to Other Reporting Frameworks

- **World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC)** – The FCTC Indicator Compendium encourages parties (countries) to track “retail price of a pack of the most widely sold brand of tobacco product”.<sup>17</sup> This is related to Article 6, which covers price and tax measures to reduce demand for tobacco.

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<sup>17</sup> FCTC. (2003). WHO Framework Convention on Tobacco Control. Switzerland: WHO Document Production Services, Accessed January 27, 2022 from [https://www.who.int/fctc/reporting/who\\_fctc\\_indicator\\_compendium\\_first\\_edition.pdf?ua=1](https://www.who.int/fctc/reporting/who_fctc_indicator_compendium_first_edition.pdf?ua=1)

## 5 Marketing Policy & Compliance (Category weight: 10%)

*Previously “Marketing”, 15% weighting.*

Tobacco harm reduction requires companies to develop and implement responsible marketing practices which include a focus on preventing any tobacco product uptake by non-smokers, clear health risk communication, and avoidance of misleading advertising. The disclosure of any breaches of such a policy reinforces transparency.

**Methodology Change** – For the 2022 Index, the “Marketing Expenditure” sub-category was moved to the “Capital Allocation & Expenditure” (previously “Capital Allocation”) category. This enables the “Marketing” category to be focused on policy and compliance procedures. The “Marketing Policy” sub-category weight was increased from 55% to 65%, while the “Marketing Compliance” sub-category weight was increased from 30% to 35%. The overall “Marketing” category weight was reduced from 15% to 10%.

### 5A Marketing Policy (Sub-category weight: 65%)

Assesses how the Index Company’s marketing policy supports a transition away from HRPs, while also mitigating potential unintended consequences of RRP.

5A.1	Marketing Policy
<b>Description</b>	Existence, content, and robustness of internal marketing policy
<b>Rationale</b>	A robust internal marketing policy with a focus on health-risk communication, non-misleading advertising, and preventing new user adoption helps address regulatory gaps and ensure the company responsibly contributes to tobacco harm reduction.
<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company has a marketing policy including well-defined principles <b>AND</b> specific practical guidance and procedures</li> <li>– Marketing policy includes specific provisions concerning health warnings <b>AND</b> advertising</li> <li>– Company provides guidance and procedure for specific marketing channels such as in-store, television, radio, print media, billboards, and social media</li> <li>– Marketing policy effectively covers all product types, including RRP</li> <li>– Company outlines clear procedures for monitoring and responding to complaints and/or reported violations of marketing policy</li> </ul>

	– Company trains customers/retailers/other trade partners on marketing policy <b>AND</b> provides evidence such as the number of sessions and/or number of representatives trained
<b>Pillar</b>	Commitment
<b>Weight</b>	25%

<b>5A.2</b>	<b>Disclosure of Marketing Policy Violations</b>
<b>Description</b>	Publication of reported violations and established breaches of the company’s marketing policy
<b>Rationale</b>	Disclosure of reported violations of the company’s marketing policy and any actions taken in response enhances accountability.
<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company publicly discloses numbers <b>AND</b> details of reported violations and established breaches of the company’s marketing policy</li> <li>– Company publicly discloses outcomes of investigations and/or remediation of marketing violations</li> <li>– Company audits compliance with external auditor at least once per financial year <b>AND</b> a statement is published communicating the level of compliance</li> </ul>
<b>Pillar</b>	Transparency
<b>Weight</b>	25%

<b>5A.3</b>	<b>Youth Access Prevention Policy</b>
<b>Description</b>	Existence, content, and robustness of youth access prevention policy
<b>Rationale</b>	Effective youth access prevention policies help reduce the risk of new adoption of any tobacco or nicotine products by young people.
<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company addresses youth access prevention with principles <b>AND</b> practical guidance and procedure</li> <li>– Policy covers all product types or provides extra guidance for RRP’s</li> <li>– Company outlines clear procedures for monitoring and responding to complaints and/or reported violations of youth access prevention policy</li> <li>– Company trains customers/retailers/other trade partners on youth access prevention policy <b>AND</b> provides evidence of this such as the number of sessions and/or number of representatives trained</li> </ul>
<b>Pillar</b>	Commitment
<b>Weight</b>	25%

5A.4	Disclosure of Youth Access Prevention Policy Violations
<b>Description</b>	Publication of reported violations and established breaches of the youth access prevention policy
<b>Rationale</b>	Disclosure of reported violations of the company's youth access prevention policy and any actions taken in response enhances accountability.
<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company publicly discloses numbers <b>AND</b> details of reported violations and established breaches of the company's youth access prevention measures</li> <li>– Company audits compliance with external auditor at least once per financial year <b>AND</b> a statement is published for the level of compliance.</li> </ul>
<b>Pillar</b>	Transparency
<b>Weight</b>	25%

### Comparison to Other Reporting Frameworks

- **SASB Tobacco Standard** – Under codes FB-TB-270a.1 and FB-TB-270a.2, SASB requires analysis of advertising, promotion, and packaging against international standards, principally the World Health Organization FCTC (Articles 11 and 13).<sup>18</sup> Article 11 puts restrictions on packaging and labeling, while Article 13 stipulates bans on advertising, promotion, and sponsorship to which tobacco companies must adhere, as implemented by national governments.
- **Global Reporting Initiative** – GRI 417: Marketing and Labeling requires reporting of approaches to marketing and disclosures of non-compliance with regulations or voluntary policies. In relation to this, GRI 419 also highlights the need to report non-compliance.<sup>19</sup>

### 5B Marketing Compliance (Sub-category weight: 35%)

**Assesses Index Company's disclosure of violation cases of any applicable law for tobacco control associated with marketing, labeling, and advertising.**

5B.1	Disclosure of Violations
<b>Description</b>	Disclosure of cases of violation of any applicable law for tobacco control associated with marketing, labeling, and advertising
<b>Rationale</b>	Public disclosure of marketing regulatory violations demonstrates accountability and may help prevent future violations.

<sup>18</sup> SASB. (2018). Tobacco Sustainability Accounting Standard.

<sup>19</sup> Global Sustainability Standards Board (GSSB). (n.d.). *GRI Standards*.

<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company publicly discloses numbers <b>AND</b> details of reported breaches of marketing laws</li> <li>– Company publicly discloses remediation of reported violation of marketing laws</li> </ul>
<b>Pillar</b>	Transparency
<b>Weight</b>	100%
<b>Addl. Scoring Elements</b>	None

### Comparison to Other Reporting Frameworks

- **SASB Tobacco Standard** –Under Marketing Practices, indicator FB-TB-270a.1 requires disclosure of “total amount of monetary losses as a result of legal proceedings associated with marketing, labeling, and/or advertising practices.”<sup>20</sup>

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<sup>20</sup> SASB. (2018). Tobacco Sustainability Accounting Standard.

## 6 Lobbying & Advocacy (Category weight: 5%)

Public policy engagement is important in shaping an environment that supports effective tobacco harm reduction. However, given the tobacco industry's significant trust deficit, it is essential for companies to disclose their lobbying and advocacy activities, and ensure transparency of all engagement with state actors. This category identifies and assesses disclosures and transparency relevant to harm reduction, whether or not currently required under legal frameworks.

### 6A Lobbying & Advocacy (Sub-category weight: 100%)

Assesses an Index Company's disclosure of positions related to tobacco harm reduction, as well as lobbying and advocacy memberships, financial contributions, and related activities.

6A.1	Disclosure of Policy Positions
<b>Description</b>	Disclosure of policy positions related to tobacco harm reduction
<b>Rationale</b>	Disclosure of policy positions enhances accountability and increases stakeholders' understanding of the company's approach to tobacco harm reduction.
<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company has a policy on lobbying/engaging on public policy issues <b>AND</b> it applies to lobbyists and third parties paid by the company</li> <li>– Company commits to proactively engage with governments, political parties, policymakers, and policymaking bodies in support of harm reduction <b>AND</b> commits to not engage on policy that undermines harm reduction</li> <li>– Company publicly discloses policy positions related to tobacco harm reduction and any potential conflicts of interest</li> </ul>
<b>Pillar</b>	Performance
<b>Weight</b>	50%

6A.2	Disclosure of Lobbying & Advocacy Activities
<b>Description</b>	Disclosure of lobbying and advocacy memberships, financial contributions, and related activities
<b>Rationale</b>	Transparency in political engagement allows scrutiny of whether the company's public stances and engagement activities align, and how the company seeks to influence policies related to tobacco harm reduction.

<b>Metrics</b>	<ul style="list-style-type: none"> <li>– Company publicly discloses involvement with lobbyists (individuals or groups) and other organizations that lobby on behalf of company and does it in all jurisdictions</li> <li>– Company publicly discloses subject matter of lobbying activities <b>AND</b> outcomes being sought in all jurisdictions.</li> </ul>
<b>Pillar</b>	Transparency
<b>Weight</b>	50%

### Comparison to Other Reporting Frameworks

- **Global Reporting Initiative** – GRI 102-13 requires the provision of “a list of the main memberships of industry or other associations, and national or international advocacy organizations.”<sup>21</sup> GRI 415 requires the reporting of participation in public policy development and lobbying, and the associated stances taken.<sup>22</sup>
- **SAM Corporate Sustainability Assessment** – Analyzes Policy Influence in terms of how much a company does and how transparent it is in disclosing activities. It specifically evaluates the amount of money companies allocate to organizations whose primary role is to influence public policy.<sup>23</sup>
- **WHO Framework Convention on Tobacco Control** – Addresses topic from the viewpoint of regulators, stating in Article 5.3 that “Parties shall act to protect these policies from commercial and other vested interests of the tobacco industry in accordance with national law.”<sup>24</sup> “Parties” in this context refers to countries.

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<sup>21</sup> Sustainability Standards Board (GSSB). (n.d.). *GRI Standards*.

<sup>22</sup> Global Sustainability Standards Board (GSSB). (n.d.). *GRI Standards*.

<sup>23</sup> S&P Dow Jones. (2019). Dow Jones Sustainability Diversified Indices – Index Methodology, Accessed August 10, 2020, from <https://www.spglobal.com/spdji/en/documents/methodologies/methodology-dj-sustainability-diversified-indices.pdf>  
S&P Global. (2020). SAM Corporate Sustainability Assessment (CSA) Weights Overview 2020.

<sup>24</sup> FCTC. (2003). *WHO Framework Convention on Tobacco Control*. Switzerland: WHO Document Production Services.

## Approach to Scoring

This section describes the process in identifying the main elements of the scoring, weighting, and aggregation system used in the calculation of each Index Company's score.

### Weighting

The ambitious objective of the Tobacco Transformation Index requires evaluation of multiple, diverse aspects of companies' behavior and actions related to tobacco harm reduction. In light of this complexity, a wide and comprehensive evaluation of different methodologies was undertaken in order to identify the most appropriate approach. The conclusion of this investigation was that the Index criteria should be formulated via a composite approach, with two methodologies working in tandem:

- Stakeholder Consultation and Research
- Analytical Hierarchical Process (AHP)

As is detailed below, the AHP uses factors of importance which have been applied based on insight gained from the stakeholder consultation process and research.

### Stakeholder Consultation and Research

In 2019, the Foundation commissioned a wide ranging global Stakeholder Consultation process to underpin Index design (see [Stakeholder Consultation Report, March 2020](#)) as well as specific research on Index design. This continues to provide valuable insight for our work.

Investor stakeholders attending webinars were encouraged not only to offer insight on categories of information considered relevant for the Index but also to assign a relative weight to these categories. In some areas, consensus was achieved while in other cases it was more elusive. One area of particular interest was the development of an Index scoring mechanism to achieve technical consistency with stated goals. The Analytical Hierarchical Process (described below) was determined to be the best choice.

During the course of the 2022 Index, Index methodology stakeholder consultation and research focused on webinar engagement with investors, researchers and experts, with a focus on exploring factors of company action and performance considered to be relevant to tobacco harm reduction.

### Analytical Hierarchical Process (AHP)

AHP is a structured technique for multiple criteria decision making based on pairwise comparisons of alternative elements.<sup>25</sup> AHP allows for the evaluation of different Index Company actions by pairing every individual Index Company action against all other actions, which fall within the same hierarchy (category, sub-category, indicator), and assigning weights to reflect their relative importance. The level of importance is expressed on a scale of 1 to 9. This scale was chosen because comparisons are being made within a limited range where perception is sensitive enough to make a distinction.

Scale	Relative Importance
1	Equally important
2	Equally to moderately important
3	Moderately important
4	Moderately to strongly important
5	Strongly important
6	Strongly to very strongly important
7	Very strongly important
8	Very to extremely strongly important
9	Extremely important

The comparisons are made by identifying which of the two indicators is more important in terms of contribution to tobacco harm reduction. The pair-wise comparisons result in a matrix which allows independent judgments to be made for each pair of indicators. Each cell indicates how much more important the indicator in the row is compared to the indicator in the column. The final step is the synthesis of the pair-wise comparison matrix to obtain the relative weight through normalization.

The comprehensive pairing analysis ensures that no Index Company action is assessed in isolation, but through its relationship with others, which reduces subjectivity. To this end, AHP

<sup>25</sup> Centre For Environmental Science & Engineering (CESE), Indian Institute of Technology. (2006). *Development of Composite Sustainability Performance Index for Steel Industry*.

Lui, K. (2007). Evaluating Environmental Sustainability: An Integration of Multiple-Criteria Decision-Making and Fuzzy Logic. *Environmental Management*. 2017 June. Volume 39 (5): 721-36. doi: 10.1007/s00267-005-0395-8

Ocampo, L., Clark, E. and Promentilla, M. (2016). Computing Sustainable Manufacturing Index with Fuzzy Analytic Hierarchy Process. *International Journal of Sustainable Engineering*. 2016 February. Volume 9: 305-314. doi: 10.1080/19397038.2016.114482

Saaty, T. (1980). *The Analytic Hierarchy Process*. USA: McGraw-Hill.

further applies a consistency ratio (CR) to check the consistency of each judgment and capture outliers caused through exaggeration or error during the process of pair-wise comparison.<sup>26</sup>

The figure below illustrates how at category level all categories are scored against each other. In this example, Product Sales achieves a score of 3.00 against Product Offer, illustrating that the former is perceived as being moderately more important than the latter. It is the interrelationship of all the ratios in the table that creates the weighting for each category, which reflects the multiple criteria analysis of the method. This process is repeated at all levels – category, sub-category, and indicator.

### Application at Category Level

	SM	PSa	CAE	PO	MPC	LA
Strategy & Management (SM)	1.00	0.33	0.50	0.50	1.00	1.00
Product Sales (PSa)	3.00	1.00	3.00	3.00	3.00	5.00
Capital Allocation & Expenditure (CAE)	2.00	0.33	1.00	2.00	2.00	4.00
Product Offer (PO)	1.00	0.33	0.50	1.00	0.5	2.00
Marketing Policy & Compliance (MPC)	0.50	0.33	0.50	2.00	1.00	2.00
Lobbying & Advocacy (LA)	0.33	0.20	0.25	0.50	0.50	1.00

The structured approach of the methodology establishes a robust base, but the key to the weighting framework of the AHP is the relative factor of importance scores attached to each technical category, sub-category or indicator. The factors of importance have been applied based on insight gained from the stakeholder consultation process, illustrating the symbiotic relationship between stakeholder consultation and AHP. The main principles leveraged to identify a relative factor of importance are outlined below.

- **Long-term perspective** – Sustained action is necessary to change deep-rooted corporate, societal and consumer behavior. The Capital Allocation & Expenditure category covers this directly

<sup>26</sup> The pair-wise comparisons result in a (N x N) positive reciprocal matrix, where the diagonal  $a_{ii} = 1$  and reciprocal property  $a_{ji} = (1/a_{ij})$ ,  $i, j = 1, n$  assuming: if indicator  $i$  is “p-times” the importance of indicator  $j$ , then, necessarily, indicator  $j$  is “1/p-times” the importance of indicator  $i$ . The next step to find the normalized weight of each indicator is normalizing each column in the matrix (dividing an indicator relative weight by the sum of relative weights in column), and then averaging the values across the rows; this average column is the normalized weight vector  $W$  containing weights ( $W_{ji}$ ) of the total indicators in the matrix. In the matrix,  $a_{ij}$  indicates how much more important criteria  $i$  is in comparison to criteria  $j$ . Each column in the matrix is then normalized by dividing the sum of the elements in column  $j$ . Then, an average is taken for each row, yielding the weight of each criterion.

in the Index, with long-term investment in R&D, infrastructure, and M&A activity in RRP categories relative to HRP categories indicative of structural shifts. The increase in marketing costs for RRP categories relative to HRP categories, as captured in the Marketing Expenditure sub-category, could lead to the long-term development of RRP categories, as long as companies mitigate against unintended consequences (e.g. youth uptake or uptake by non-smokers).

- **Focus on Performance** – While transparency and commitment from companies are crucial for achieving tobacco harm reduction, it is recognized that the best intentions can only have an impact if backed up by measurable performance. Within the Index, performance is most clearly demonstrated by sales and investments in HRP categories versus RRP categories. Therefore, the related indicators are allocated higher weightings. This is captured mainly within the Product Sales and Capital Allocation & Expenditure categories, that are considered the two leading categories.
- **Volume sales relevance** – Volume sales of HRP categories and ratio of volume sales of RRP categories to HRP categories are the unequivocal result of an Index Company's commitment and actions to tobacco harm reduction. Capital Allocation & Expenditure is considered another leading category as indicative of an Index Company's structural shift, but outcomes and effectiveness of financial investments are uncertain. As such, volume sales is given the highest weighting.
- **Commitment and Transparency parallelism** – A strategic commitment to transformation is the starting point for tobacco harm reduction, but it needs to be supported by transparent disclosure and measurement of activities and performance. Companies that welcome scrutiny and share best practices empower consumers and other stakeholders to make informed decisions. Moreover, without transparency, stakeholders cannot assess whether commitments have been met and whether they are effective.
- **Offer Alternatives** – The decrease and ultimate elimination of HRP categories is critical to harm reduction. Core to this Index is making companies accountable for the harm caused by their products and supporting consumers to transition from HRP categories to RRP categories. Therefore, the Index considers the Index Company's activities and performance with RRP categories in relation to HRP categories. The indicators focused on the relative sales and investments of RRP categories and HRP categories are weighted higher than indicators solely focused on HRP categories.

## Scoring

The overall system for scoring, weighting, and aggregation, by which the final Index Company score is calculated, is based on the hierarchy of different levels within the Index as described in the Methodology Overview section. The levels are technical categories, sub-categories, indicators. Each Index Company is scored at indicator, sub-category and technical category level adjusted by the relative weight assigned. The aggregation system leads to a total Index Company score which is compared to other Index Companies to determine their place on the benchmark.

Each indicator has a specific scoring framework which will change depending on the type of indicator:

- Commitment and Transparency Indicators
- Performance Indicators

### Commitment and Transparency Indicators

Commitment and Transparency indicators are qualitative indicators which are broken down into multiple metrics. The metrics follow a set structure, awarding either 0 or 2 points depending on whether the metrics requirements have been met. A single point is available only in the case of multi-criteria metrics, where the Index Company is asked to fulfill more than one requirement to get a full score of 2. Where this is the case, the metrics description will include an 'AND' in capital letters to separate those requirements. This must be distinguished from a lower case 'and' which merely introduces an additional idea within the same requirement.

An Index Company score for each indicator is calculated by adding the number of points awarded and dividing this number by the maximum number of points available. This number is multiplied by 5 to reflect the rating scale chosen 0 to 5<sup>27</sup>.

Given the subjective nature of the qualitative indicators, a set of principles have applied in defining the metrics for each indicator and are outlined below.

- **Materiality** – Metrics chosen are the requirements considered to be relevant in contributing to tobacco harm reduction. Minor differences not considered relevant in supporting tobacco harm reduction have been excluded.
- **Ability to Implement** – Metrics describe actions and practices that are within the realm of possibility for company management to implement.
- **Subjectivity Reduction** – Metrics do not contain ambiguous language which might increase the subjectivity in the scoring.
- **Evidence** – Metrics are assessed using publicly available information from Index Company websites including financial reports, corporate social responsibility and sustainability reports, and internal policy standards such as codes of conduct.

### Performance Indicators

Performance indicators are quantitative indicators whose score is determined through a normalization process. Performance indicators focused only on HRPs are calculated as negative indicators. For example, higher volume sales of HRPs clearly have a negative impact on tobacco harm reduction; with indicators of this type, lower is better. Performance indicators focused on the ratio between RRP and HRPs are considered positive indicators; with indicators of this type, higher is better. For example, a higher ratio of volume sales of RRP versus HRPs is indicative of

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<sup>27</sup> The score for each indicator is calculated as follows = (sum of scores for each metric within each qualitative indicator / maximum score per indicator) \* 5.

greater progress toward transformation and potentially helping consumers to transition away from HRPs. For Index Companies that do not have any RRP offer, the formula ratio is invalid as the numerator equals zero. In this case, the Index Company's score equals zero.<sup>28</sup>

As performance indicators are expressed in different units, a normalization procedure is applied. In this way, the possibility of incorporating different kinds of quantities, with different units of measurement (e.g. sticks, dollars, percentage), is offered. The result of the normalization is then multiplied by 5 to fit the rating scale 0 to 5.

As described in the Introduction of this document (see Changes implemented in the 2022 Tobacco Transformation Index), the scoring normalization formula was changed from linear to logarithmic scale:

#### 2020 Index:

- Normalization formula for positive indicators:  $x = ((x - x_{\min}) / (x_{\max} - x_{\min}))$ ;
- Normalization formula for negative indicators:  $x = ((x - x_{\max}) / (x_{\min} - x_{\max}))$

#### 2022 Index:

- Normalization formula for positive indicators:  $x = ((\ln(x)) - x_{\min}) / (x_{\max} - x_{\min})$
- Normalization formula for negative indicators:  $x = ((\ln(x)) - x_{\max}) / (x_{\min} - x_{\max})$

The calculation of the final Index Company score is a step-by-step procedure of grouping various indicators into subcategories and eventually categories, all adjusted by their respective weighting. The weighted category scores are then combined to arrive at the final Index Company score. This step-by-step approach is defined as aggregation. The aggregation method chosen is the weighted arithmetic mean. This is by far the most widely used additive method in sustainability indices.<sup>29</sup>

## Additional Scoring Elements

Core to this Index is analysis of different product offerings and sales by the 15 Index Companies. As different products have different units of measure and levels of risk associated with their consumption, two additional scoring elements were applied in order to compare Index Companies' activities and performance:

- Relative Risk Assessment
- Per Stick Equivalent Conversion

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<sup>28</sup> Krajnc, D. & Glavic, P. (2005). How to Compare Companies on Relevant Dimensions of Sustainability. *Ecological Economics*. 2005 December. Volume 55 (4): 551-563. <https://doi.org/10.1016/j.ecolecon.2004.12.011>

<sup>29</sup> Gan, X. et al. (2017). When to Use What: Methods for Weighting and Aggregating Sustainability Indicators. *Ecological Indicators*. 2017 October. Volume 81: 491-502. <https://doi.org/10.1016/j.ecolind.2017.05.068>

These additional scoring elements were taken into account only for indicators within the Product Sales and Product Offer categories, as specified in the indicator details in the previous section.

## Relative Risk Assessment

**Methodology Review** - Several stakeholders challenged the classification of chewing tobacco and moist snuff as HRPs. Research was commissioned to assess the latest findings on harm profiles for relevant product categories to inform classification. A revised Relative Risk Assessment has been published as part of the 2022 Index Methodology.

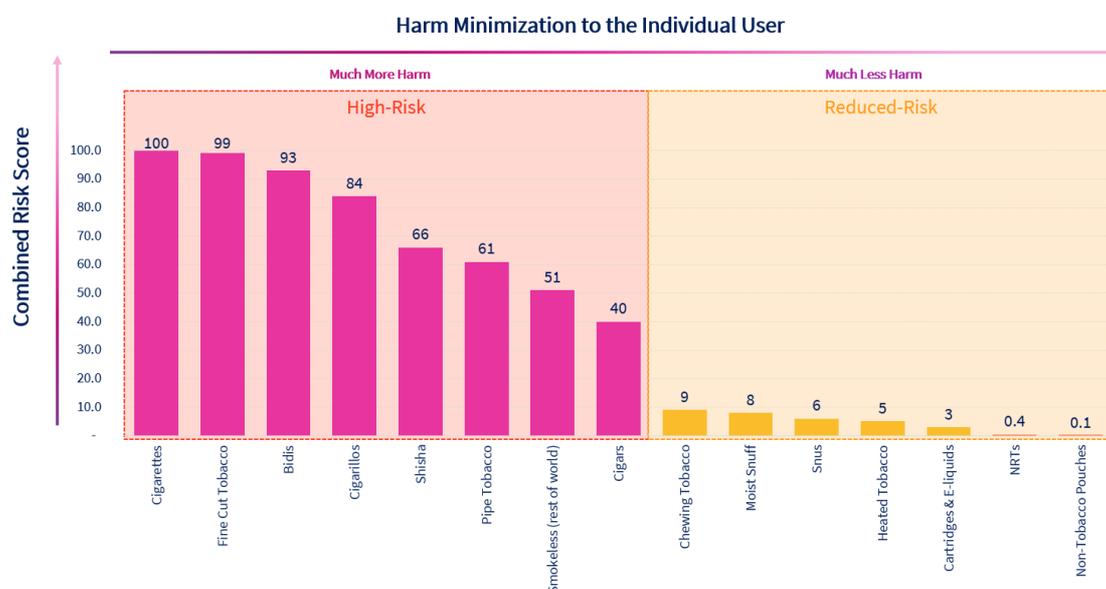
In the absence of an established, internationally standardized spectrum of risk for tobacco products, the Foundation for a Smoke-Free World (FSFW) in 2020 commissioned a scientific literature review to identify a relative risk assessment between products. This process was repeated ahead of the 2022 Index.

The relative risk assessment is based on a systematic review of previous scientific studies of the health risk associated with nicotine products. Studies are reviewed in detail to extract data and assess the level of risk for each product type. The products are analyzed in terms of their toxin emissions and epidemiological data, which were combined on a scale from 0 to 100 (low to high risk) to derive a combined risk score for each product. Additional details on the relative risk assessment are available in the publication “Nicotine Products Relative Risk Assessment: A Systematic Review and Meta-analysis.”<sup>30</sup>

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<sup>30</sup> Murkett, R., Rugh, M. & Ding, B. (2020). Nicotine Products Relative Risk Assessment: A Systematic Review and Meta-Analysis. <https://f1000research.com/articles/9-1225>

## Relative Risk Assessment 2022



Source: Murkett, R., Rugh, M., Ding, B. (2022). *Nicotine Products Relative Risk Assessment: An Updated Systematic Review and Meta-analysis*, Produced for the Foundation for a Smoke-Free World. London, UK: Biochromex.

The relative risk assessment was applied in the same way in the 2022 Index as it was applied in the 2020 Index. This involves each product’s relative risk being used as a multiplier for each Index Company’s sales and product offer in HRP and RRP.<sup>31</sup> For example, volume sales of cigarettes was multiplied by the relative risk of cigarettes (100), while volume sale of chewing tobacco was multiplied by its relative risk, to reflect the different level of risk associated with each type of product. Like the 2020 Index, the 2022 relative risk assessment of products was considered in combination with average consumption patterns, captured through the Per Stick Equivalent Conversion method, as detailed below.

### Risk Spectrum Operator

The Relative Risk Score for each RRP category is normalized using the “Risk Spectrum Operator”. Product Sales and Product Offer indicators include measures of the ratio of RRP (i.e., numerator) versus HRP (i.e., denominator) weighted by the relative risk assessment. Relative risk assessment weights range from 100 (cigarettes) to 0.1 (non-tobacco nicotine pouches). The Risk Spectrum Operator is calculated to invert and normalize Relative Risk Scores for RRP categories in order to compute the applicable ratio for scoring purposes.

<sup>31</sup> The relative risk assessment applied to the indicators in the following sub-categories: 2A Volume Sales of Tobacco Products; 2B Value Sales of Tobacco Products; 4A Product Portfolio (only for indicators 23 Ratio of Product Portfolio (RRPs versus HRPs) and 24 Ratio of Product Portfolio (RRPs versus HRPs) – Rate of Change).

RRP Category	Relative Risk Score	Risk Spectrum Operator
Moist Snuff	8.0	4.6
Chewing Tobacco	9.0	4.2
Heated Tobacco	5.0	6.0
Snus	6.0	5.4
Closed system	3.0	8.2
E-Liquids	3.0	8.2
NRT products - non patches	0.4	27.5
NRT Patches	0.4	27.5
Non-tobacco nicotine pouches	0.1	63.1

To convert the Relative Risk Score into the Risk Spectrum Operator, the following formula is applied:

$$= (100 / \text{Relative Risk Score}) ^ 0.6$$

The score is raised to the power of 0.6 to maintain consistent quantitative relationship across the various RRP categories.

### Per Stick Equivalent Conversion

The Tobacco Transformation Index aims to accelerate the end of combustible cigarettes and other HRPs, while ensuring that RRP's are developed and marketed as responsibly as possible. In order to effectively evaluate this transition through sales volume, it is necessary to develop a conversion methodology of the various tobacco product volumes into the cigarette stick equivalent format. The cigarette stick equivalent metric was selected as the default measure for comparison purposes, since cigarettes remain the dominant tobacco product in global tobacco sales.<sup>32</sup>

As a common source is not available, a volume-conversion methodology is defined in this report to demonstrate how products can be substituted for one another in terms of consumption. The conversion methodology does not demonstrate the relative addictive or toxic elements of specific products.

The research undertaken concluded the following principle metrics for volume conversion:

- **Tobacco Weight:** An average cigarette contains 0.74g of tobacco, according to a research program carried out by the National Institute on Drug Abuse, US.<sup>33</sup>

<sup>32</sup> The Per Stick Equivalent Conversion is applied to the indicators in the sub-category: 2A Volume Sales of Tobacco Products.

<sup>33</sup> Malson, J., Sims, K., Murty, R. & Pickworth, W. (2001). Comparison of the nicotine content of tobacco used in bidis and conventional cigarettes. Tobacco Control. 2001 June. Volume 10 (2): 181-183. doi: 10.1136/tc.10.2.181

- **Unit:** Products such as NRT will be analyzed from a per unit perspective.
- **Puffs:** The average number of puffs on a typical cigarette is estimated to be between 8 and 16. For the basis of the Index a rate of 11 is used, which reflects the medium figure from the Smoking and Cancer Control Monograph No.7 study.<sup>34</sup>
- **Nicotine:** Average nicotine per gram in a cigarette is set to 16.3mg, as per the National Institute on Drug Abuse research published by Tobacco Control. However, it is acknowledged that levels vary widely between different products.

While certain categories can be converted using a single metric, others may need to consider more than one given the diversity of product formats. For this reason, where appropriate, results from Euromonitor International’s Nicotine Survey have also been considered.<sup>35</sup>

The nature of tobacco means that exact consumption patterns will vary by individual consumer. In performing volume conversions, it is necessary to use a series of estimates and assumptions, as outlined in this document. Several studies support the methodology, but it is worth noting there is no universally accepted conversion. Furthermore, some companies quote per stick equivalents in corporate literature, but methodologies for these conversions are generally not disclosed. All Index Company data will be converted using the Index methodology of “per stick equivalent” irrespective of individual Index Company conversion rates for certain product categories.

#### Per Stick Equivalent Conversion Table

Format	Conversion factor to cigarettes
Closed System Vaping Products	1 ml = 13 cigarettes
Chewing Tobacco	1 gram = 0.7 cigarettes
Cigarillos	1 unit = 5.4 cigarettes
Cigars	1 unit = 8.1 cigarettes
E-Liquids	1 ml = 13 cigarettes
Fine Cut Tobacco	1 gram = 2.0 cigarettes
Heated Tobacco	1 stick = 1 cigarette
Moist Snuff	1 gram = 1.4 cigarettes
Non-Tobacco Nicotine Pouches	1 unit = 1 cigarette
Nicotine Replacement Therapy (NRT) Products	1 unit = 10 cigarettes (patches) 1 unit = 1 cigarette (non patches)

<sup>34</sup> Zacny, J. & Stitzer, M. (1996). Human Smoking Patterns. *Smoking and Tobacco Control Monograph 7*. US Department of Health and Human Services, National Institutes of Health, National Cancer Institute. 151-160.

<sup>35</sup> Euromonitor International. (2021). Euromonitor International’s Nicotine Survey 2021. Surveyed 40,000 consumers across 20 markets on nicotine consumption habits and perceptions.

<b>Pipe Tobacco</b>	1 gram = 3.2 cigarettes
<b>Shisha</b>	1 gram = 0.3 cigarettes
<b>Snus</b>	1 gram = 1.4 cigarettes

*Note: The table of definitions covers products offered by the 15 Index Companies. It does not cover products which are not offered by the 15 Index Companies, but which may be prevalent in certain geographies, such as Asian-style chewing tobacco (e.g. Gutkha), Bidis, Cheroots and Papirosy.*

The following outlines the key assumptions and sources used to derive a suitable conversion factor for each product type.

- **Closed system vaping products; E-liquids – 1 ml = 13 cigarettes** – For the purpose of these ratios, we have grouped these categories and will analyse on a puff per ml basis. As a starting point, we used information from leading global brands in the USA (leading market for e-vapour products), as below:

<b>Brand</b>	<b>Puffs per unit</b>	<b>Vol. ml</b>	<b>Puff per ml</b>
Juul	200	0.7	286
Blu	400	1.0	400
Logic	300	1.7	176
NJOY	325	1.9	171

Source: Company and brand websites

The median per puff rate of these products is 231 per ml, while the Dutch National Institute for Public Health and the Environment quotes a conversion factor of 60 puffs per ml for e-liquid.<sup>36</sup> The Index therefore uses the median figure of 60 and 231 puffs, which equates to 145 puffs per ml. Given an average puff rate for cigarettes of 11, this makes a conversion rate per ml of 13 cigarettes.<sup>37</sup>

The range of puff rates published illustrates the difficulty in creating an average for the categories. The median rate was used to take into account the per puff performance of the largest brands in the market, but also account for the smaller brands likely to have lower per puff rates. It is also noted that brands use puff rates to promote the value of their products, and some review sites indicate the actual per puff rates per unit are often lower than those stated.<sup>38</sup>

<sup>36</sup> National Institute for Public Health and the Environment (RIVM). (2014). E-sigaretten Factsheet, Accessed September 7, 2022, from <https://www.rivm.nl/sites/default/files/2018-11/E-cigarette%20factsheet.pdf>

<sup>37</sup> Zacny, J. & Stitzer, M. (1996). Human Smoking Patterns. *Smoking and Tobacco Control Monograph 7*. US Department of Health and Human Services, National Institutes of Health, National Cancer Institute. 151-160.

<sup>38</sup> E-cigarettes Reviewer.com. (n.d.). Blu Cigs Disposables. <https://electriccigaretterviewer.com/blu-cigs-disposables>

- **Chewing tobacco – 1 gram = 0.7 cigarettes** – Research on moist snuff and chewing tobacco brands, indicates that chewing tobacco on average contains half the nicotine levels of moist snuff.<sup>39</sup> The cigarette conversion rate of 1.4 per gram used for moist snuff and snus is therefore halved to achieve the 0.7 conversion for chewing tobacco.
- **Cigarillo – 1 unit = 5.4 cigarettes** – In the US, which accounts for over a third of global volume sales of cigarillos, leading brands are commonly 4 grams, which is 5.4 times larger than the average weight of a cigarette which the Index cites at 0.74g.<sup>40</sup> As such, the Index uses a conversion rate of 5.4 cigarettes to 1 cigarillo.
- **Cigars – 1 unit = 8.1 cigarettes** – The Centre of Disease Control and Prevention equates larger cigars to being 14 grams.<sup>41</sup> As per Euromonitor International’s Passport Tobacco Database definitions, the Index defines the minimum size of a cigar as 3 grams.<sup>42</sup> Assuming the average weight of a small cigar is 3 grams, a large cigar is 14g, and a standard cigar is the median point 8.5 g, we have applied these ratios to global volumes and calculated the weighted average of a cigar to be 6g. The conversion factor of 8.1 cigarettes to 1 cigar is therefore be applied, with 6g having been divided by 0.74g, the average weight of a cigarette.
- **Fine cut tobacco – 1 gram = 2.0 cigarettes** – Research funded by the United Kingdom Department of Health Smoking Policy Unit indicates that on a per gram basis nicotine yields from roll-your-own (RYO) cigarettes are higher than those for commercial cigarettes. It concludes that the average nicotine absorbed from a RYO is between 0.9mg and 1.8mg, the median point being 1.35mg.<sup>43</sup> Research indicated that on average the amount of tobacco used in a RYO is 0.5g, so on a per gram basis an average yield of 2.7mg/g is achieved. The US Food and Drug Administration (FDA) puts cigarette yields at between 1.1 and 1.7 mg, with 1.4mg being the median.<sup>44</sup> This equates to 1.9mg/g, 40% lower than the RYO yield. The Index therefore applies the nicotine yield ratio between RYO and cigarettes to calculate RYO per stick equivalents. As the average tobacco weight of a cigarette is 0.74g, each gram of cigarette tobacco is equal to 1.4 cigarettes. Given the average nicotine yield of RYO tobacco is 40% higher than cigarette tobacco, applying the 40% increase to 1.4 cigarettes leads to 1g of RYO tobacco equating to 2 cigarettes.<sup>45</sup>
- **Heated tobacco – 1 unit = 1 cigarette** – Heated tobacco sticks, are sold as direct cigarette replacements and as such a one-to-one ratio can be applied. Japan is the world’s largest heated tobacco market accounting for 65% of stick sales and Euromonitor International’s Nicotine Survey

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<sup>39</sup> Rodu, B. (2012). Nicotine levels in American smokeless tobacco products. Tobacco Trust, R Street, Accessed September 8, 2022, from <https://www.rstreet.org/2012/11/07/nicotine-levels-in-american-smokeless-tobacco-products/>

<sup>40</sup> Malson, J., Sims, K., Murty R. & Pickworth, W. (2001). Comparison of the nicotine content of tobacco used in bidis and conventional cigarettes. *Tobacco Control*. 2001 June. Volume 10 (2): 181-183. doi: 10.1136/tc.10.2.18

<sup>41</sup> Centres For Disease Control and Prevention. (2020). Cigars, Accessed September 8, 2022, from [https://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/tobacco\\_industry/cigars/index.htm](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/tobacco_industry/cigars/index.htm)

<sup>42</sup> Cigar size split estimated from Euromonitor International’s Passport Tobacco Database.

<sup>43</sup> Malson, J., Sims, K., Murty R. & Pickworth, W. (2001). Comparison of the nicotine content of tobacco used in bidis and conventional cigarettes. *Tobacco Control*. 2001 June. Volume 10 (2): 181-183. doi: 10.1136/tc.10.2.181

<sup>44</sup> FDA. (2018). Tobacco Product Standard for Nicotine Level of Combusted Cigarettes.

<sup>45</sup> Ibid.

indicates that on average a cigarette smoker in Japan consumes 16 cigarettes per day compared to a heated tobacco user consuming 14 sticks.<sup>46</sup> This illustrates that consumption patterns are similar. This is supported by PMI's development of 'Platform One' where it described each unit generating 14 puffs, which is consistent with cigarette usage.<sup>47</sup> The Index uses a different average for puffs per cigarette, which is 11, but it is within an acceptable range. In terms of nicotine per stick, research funded by Philip Morris International Inc (PMI), put nicotine yield levels of heated tobacco between 0.49mg and 2.19mg per stick, the Index uses a 1.4mg per cigarette figure.<sup>48</sup> Given this falls within the range quoted by Philip Morris research it supports the one-to-one conversion rate.

- **Moist snuff – 1 gram = 1.4 cigarettes** – The physical volume of moist snuff per use is assumed to be the same as snus, and a study by the University of Minnesota Cancer Center indicates the nicotine per gram rates between product types being similar.<sup>49</sup> The same conversion factor for moist snuff and snus has therefore been applied.
- **Non-tobacco nicotine pouches – 1 unit = 1 cigarette** – It is assumed that consumption patterns of non-tobacco nicotine pouches align to those of products such as snus. As such, a one-to-one conversion rate with cigarettes has been applied. The snus conversion is calculated to grams as it is consumed both loose and in pouches; there is no need to do this for non-tobacco nicotine pouches. It is noted non-tobacco nicotine pouches will represent a very small part, if any, of the sales for the Index Companies under review and therefore will have limited impact on Index Company score related to share of sales generated from RRP to HRP.
- **Non-patch NRT products – 1 unit = 1 cigarette** – NRT gum and lozenges are direct substitutes for cigarette use. For inhalers, it is observed that the Nicorette inhaler brand contains nicotine levels of 15mg per unit, close to the average used for a cigarette (16.3mg/g). Therefore, a one-to-one ratio is applied to that category as well.<sup>50</sup> It is noted, though, that consumption patterns are different to those of cigarettes and only six inhalers are indicated to be used per day. Despite these differences, the one-to-one ratio on NRT products other than patches is an acceptable approximation.
- **NRT patches – 1 unit = 10 cigarettes** – Product variants are commonly marketed for consumers who would otherwise smoke different quantities of cigarettes each day (usually over or under 10 cigarettes), with one patch being used per day. It is therefore assumed that one patch is equivalent to 10 cigarettes.

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<sup>46</sup> Category size data sourced from Euromonitor International's Passport Tobacco Database.

<sup>47</sup> Philip Morris International Inc. (n.d.). PMI Science. <https://www.pmisience.com>

<sup>48</sup> Schaller, J. et al. (2016). Evaluation of the Tobacco Heating System 2.2. Part 2: Chemical Composition, Genotoxicity, Cytotoxicity, and Physical Properties of the Aerosol. *Regulatory Toxicology and Pharmacology*. 2016 November 2016. Volume 81 (2): S27-S47. <https://doi.org/10.1016/j.yrtph.2016.10.001>

<sup>49</sup> Stepanov, I, Jensen, J., Hatsukami, D. & Hetch, S. (2008). New and Traditional Smokeless Tobacco: Comparison of Toxicant and Carcinogen Levels. *Nicotine Tob Res*. December 2008. Volume 10 (12):1773-1782. doi: 10.1080/14622200802443544

<sup>50</sup> Amazon.UK. (2020). Nicorette Inhalator Cartridges Stop Smoking, Accessed May 1, 2022, from <https://www.amazon.co.uk/Nicorette-Inhalator-Cartridges-Stop-Smoking>.

- **Pipe tobacco – 1 gram = 3.2 cigarettes** – Research indicates the nicotine content of pipe tobacco is on average 38.17g per mg, which compares to 16.3mg/g for commercial cigarettes, creating a 2.3 ratio.<sup>51</sup> The Index uses an average tobacco weight for cigarettes of 0.74g, therefore each gram of tobacco equals 1.4 cigarettes.<sup>52</sup> This multiplied by the 2.3 ratio creates the 3.2 cigarette per pipe equivalent.
- **Shisha – 1 gram = 0.3 cigarettes** – Research indicates shishas contain on average nicotine levels of 3.4 mg/g.<sup>53</sup> This is 4.8 times less than the Index ratio for cigarettes of 16.3mg/g.<sup>54</sup> The Index uses an average tobacco weight for cigarettes of 0.74g, therefore each gram of tobacco equals 1.4 cigarettes.<sup>55</sup> This divided by the 4.8 ratio creates the 0.3 cigarettes per shisha equivalent.
- **Snus – 1 gram = 1.4 cigarettes** – Snus is consumed both loose and in pouches. Portion sizes will vary but leading snus manufacturer Swedish Match offers ranges between 0.3g and 1.1g, which are in line with the average commercial cigarette size of 0.74g.<sup>56</sup> Swedish Match describes on its website that the average consumer in Sweden uses 3.8 cans a week.<sup>57</sup> The largest-selling brand in Sweden is General, according to Euromonitor International’s Tobacco system, and a can of its General Classic Original variant contains 24 portions. Therefore, the usage rate implies that, on average, 13 portions are used per day. This usage rate is in line with average cigarette consumption rates as found by Euromonitor International’s nicotine survey. It is therefore assumed that it is possible to use the cigarette to gram conversion rate, given portion weights for snus and cigarettes are comparable (one cigarette stick is considered to weight 0.74g).<sup>58</sup> It is noted that absorption patterns differ between inhalation and oral consumption, but in the case of snus, underlying nicotine intake is similar as outlined by the European Commission’s paper ‘Health Effects of Smokeless Tobacco Products Preliminary Report.’<sup>59</sup>

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<sup>51</sup> Malson, J., Sims, K., Murty R. & Pickworth, W. (2001). Comparison of the nicotine content of tobacco used in bidis and conventional cigarettes. *Tobacco Control*. 2001 June. Volume 10 (2): 181-183. doi: 10.1136/tc.10.2.181

Taghavi, S. et al. (2012). Nicotine Content of Domestic Cigarettes, Imported Cigarettes and Pipe Tobacco in Iran. *Addict Health*. Winter-Spring 2012. Volume 4 (1-2): 28-35.

<sup>52</sup> Ibid.

<sup>53</sup> Kassem, N. et al. (2018). Levels of Urine Cotinine from Hookah Smoking and Exposure to Hookah Tobacco Secondhand Smoke in Hookah Lounges and Homes. *Int J High Risk Behav Addict*. March 2018. Volume 7 (1): e67601. doi: 10.5812/ijhrba.67601

<sup>54</sup> Ibid.

<sup>55</sup> Ibid.

<sup>56</sup> Swedish Match AB. (n.d.). Swedish Match. <https://www.swedishmatch.com/>

<sup>57</sup> Ibid.

<sup>58</sup> Malson, J., Sims, K., Murty R. & Pickworth, W. (2001). Comparison of the nicotine content of tobacco used in bidis and conventional cigarettes. *Tobacco Control*. 2001 June. Volume 10 (2): 181-183. doi: 10.1136/tc.10.2.181

<sup>59</sup> European Commission, Health & Consumer Protection Directorate-General. (2007). *Health Effects of Smokeless Tobacco Products Preliminary Report*.

### **LMIC versus HMIC Multiplier**

A key component of the Index is monitoring Index Companies' activities and performance across different markets, in order to evaluate whether they are pursuing a consistent, global approach to harm reduction or only transitioning within selected markets. Therefore, some indicators are adjusted by a multiplier which focuses on the comparison of the Index Company's performance across markets, particularly LMICs versus HMICs.

The LMIC versus HMIC multiplier applies only to Index Companies that have a presence in both LMICs and HMICs. When an Index Company has positive tobacco harm reduction performance only in HMICs, a multiplier of 0.75 is applied to the indicator score to reflect the lack of consistency across different income markets. The multiplier is set at 0.75 as positive harm reduction performance at global level is considered to be three times more important than consistency of performance across different income markets, in line with feedback received from expert reviewers.

Multipliers are applied only to specific indicators within the Product Sales and Product Offer categories, as specified in the indicator details in the previous section<sup>60</sup>. For example, for the indicator Volume Sales of HRPs – Rate of Change a multiplier of 0.75 is applied to the Index Company score in cases where Index Company's sales of HRPs have been decreasing in HMICs but increasing in LMICs which reflects the lack of a global approach to tobacco harm reduction.

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<sup>60</sup> The LMIC versus HMIC multiplier is applied to the indicators in the following sub-categories: 2A Volume Sales of Tobacco Products; 2B Value Sales of Tobacco Products; 4A Product Portfolio

## Data Collection and Analysis

The 2022 Tobacco Transformation Index research process was led by Euromonitor International as the Index Research Partner. The data collection process relied on publicly available information from a wide range of sources, supplemented by additional relevant information that the Index Companies provided. A robust quality assurance process was applied to ensure accurate data collection, interpretation, and estimations. The quality assurance process involved crosschecking of information by multiple analysts to ensure consistency of data and analysis, followed by a final crosscheck by research managers.

Data was triangulated from multiple sources, as summarized below, utilizing a robust data collection, verification, and finalization process to ensure accurate and reliable results.

Euromonitor International is ultimately responsible for the collection, analysis and presentation of all final data and information related to the 15 Index Companies.

- **Secondary Research:** Euromonitor International collected publicly available information from company websites, formal financial and non-financial reporting such as annual corporate social responsibility (CSR) or sustainability reports, as well as other documents such as investor briefings, press releases, codes of conduct, policies, values, guidelines, and frequently asked questions (FAQs). Furthermore, a range of non-company sources of information (e.g. industry and financial databases such as Euromonitor International's Passport database, and Capital IQ) was consulted to access relevant company data and information.
- **Trade Interviews:** Trade interviews with industry experts were leveraged to validate data from secondary sources and address data gaps. Interviews were conducted with trade organizations, former company employees, and relevant stakeholders across the supply chain, however the Index Companies were not engaged as part of the trade interview process.
- **In-Country Research:** In-country researchers identified and targeted stores to visit across the 36 countries under scope to collect information available only at country level, such as product offer and pricing. In-country researchers allowed the Index to conduct public domain data searches in multiple languages.
- **Industry Consultation:** In order to ensure the most accurate and comprehensive picture of company activities and performance, each Index Company was given the opportunity to share feedback on the data collected from the public domain. See "[Industry Engagement Summary](#)" for details of the timing, nature and content of all interactions with Index Companies.
- **Data Analysis:** Based on all data collected from Index Company reporting and/or public domain research, scores were assigned for each metric according to the scoring framework, with the weighting and aggregation algorithms applied to arrive at final scores for each Index Company.

## Appendix

### Full List of 35 indicators

- 1 Strategy & Management** (Category weight: 10%)
  - 1A Vision & Management Systems** (Sub-Category weight: 80%)
    - 1A.1 Harm Reduction Strategy** (Indicator weight: 25%)
    - 1A.2 Disclosure of Harm Reduction Targets & Performance** (Indicator weight: 25%)
    - 1A.3 Governance & Management Systems** (Indicator weight: 25%)
    - 1A.4 Performance Management & Incentives** (Indicator weight: 25%)
  - 1B Stakeholder Engagement** (Sub-Category weight: 20%)
    - 1B.1 Stakeholder Engagement** (Indicator weight: 50%)
    - 1B.2 Disclosure of Stakeholder Engagement** (Indicator weight: 50%)
- 2 Product Sales** (Category weight: 35%)
  - 2A Volume Sales of Tobacco Products** (Sub-Category weight: 80%)
    - 2A.1 Volume Sales of HRPs** (Indicator weight: 5%)
    - 2A.2 Volume Sales of HRPs- Rate of Change** (Indicator weight: 5%)
    - 2A.3 Ratio of Volume Sales (RRPs versus HRPs)** (Indicator weight: 45%)
    - 2A.4 Ratio of Volume Sales (RRPs versus HRPs) – Rate of Change** (Indicator weight: 45%)
  - 2B Value Sales of Tobacco Products** (Sub-Category weight: 20%)
    - 2B.1 Value Sales of HRPs** (Indicator weight: 5%)
    - 2B.2 Value Sales of HRPs - Rate of Change** (Indicator weight: 5%)
    - 2B.3 Ratio of Value Sales (RRPs versus HRPs)** (Indicator weight: 45%)
    - 2B.4 Ratio of Value Sales (RRPs versus HRPs) – Rate of Change** (Indicator weight: 45%)
- 3 Capital Allocation & Expenditure (previously “Capital Allocation”)** (Category weight: 30%)
  - 3A Capital Allocation** (Sub-Category weight: 80%)
    - 3A.1 M&A Expenditure on HRPs** (Indicator weight: 6%)
    - 3A.2 Ratio of M&A Expenditure (RRPs versus HRPs)** (Indicator weight: 10%)
    - 3A.3 R&D Expenditure on HRPs** (Indicator weight: 10%)
    - 3A.4 Ratio of R&D Expenditure (RRPs versus HRPs)** (Indicator weight: 32%)
    - 3A.5 Capital Expenditure on HRPs** (Indicator weight: 10%)
    - 3A.6 Ratio of Capital Expenditure (RRPs versus HRPs)** (Indicator weight: 32%)
  - 3B Marketing Expenditure** (Sub-Category weight: 20%)
    - 3B.1 Marketing Expenditure on HRPs** (Indicator weight: 20%)
    - 3B.2 Ratio of Marketing Expenditure (RRPs versus HRPs)** (Indicator weight: 80%)
- 4 Product Offer** (Category weight: 10%)
  - 4A Product Portfolio** (Sub-Category weight: 60%)
    - 4A.1 Ratio of Number of Countries (RRPs versus HRPs)** (Indicator weight: 25%)

- 4A.2** Ratio of Number of Countries (RRPs versus HRPs) – Rate of Change (Indicator weight: 25%)
- 4A.3** Ratio of Product Portfolio (RRPs versus HRPs) (Indicator weight: 25%)
- 4A.4** Ratio of Product Portfolio (RRPs versus HRPs) – Rate of Change (Indicator weight: 25%)
- 4B Pricing** (Sub-Category weight: 40%)
  - 4B.1** Ratio of Average Lowest Price (RRPs versus HRPs) (Indicator weight: 50%)
  - 4B.2** Ratio of Average Lowest Price (RRPs versus HRPs) – Rate of Change (Indicator weight: 50%)
- 5 Marketing Policy & Compliance (Previously “Marketing”)** (Category weight: 10%)
  - 5A Marketing Policy** (Sub-Category weight: 65%)
    - 5A.1** Marketing Policy (Indicator weight: 25%)
    - 5A.2** Disclosure of Marketing Policy Violations (Indicator weight: 25%)
    - 5A.3** Youth Access Prevention Policy (Indicator weight: 25%)
    - 5A.4** Disclosure of Youth Access Prevention Policy Violations (Indicator weight: 25%)
  - 5B Marketing Compliance** (Sub-Category weight: 35%)
    - 5B.1** Disclosure of Violations (Indicator weight: 100%)
- 6 Lobbying & Advocacy** (Category weight: 5%)
  - 6A Lobbying & Advocacy** (Sub-Category weight: 100%)
    - 6A.1** Disclosure of Policy Positions (Indicator weight: 50%)
    - 6A.2** Disclosure of Lobbying & Advocacy Activities (Indicator weight: 50%)

## Comparison with Other Indexes and Frameworks

The design of the Tobacco Transformation Index draws inspiration from other issue-specific indexes, commitments and sustainability transparency tools. To ensure alignment and to demonstrate areas of difference, the Index indicators were compared to some of the following indexes and tools listed below.

The following table provides a mapping from the Index subcategories to the reference framework indicators, where applicable.

Subcategory		Reference Framework
<b>1A</b>	Vision & Management Systems	SASB: FB-TB-260a.2 GRI 102: General Disclosures GRI Disclosures 102-15, 102-16, 102-20, 102-26, 102-32, 102-35, 416-1 Sustainable Development Goal n. 3 DJSI Innovation Management – Tobacco Alternatives & Reduced Risk Products

## 2022 Tobacco Transformation Index Methodology

<b>1B</b>	Stakeholder Engagement	GRI 102: General Disclosures GRI Disclosures 102-40, 102-42, 102-43, and 102-44
<b>2A</b>	Volume Sales of Tobacco Products	SASB: FB-TB-000.A, FB-TB-000.B DJSI Innovation Management – Tobacco Alternatives & Reduced Risk Products
<b>2B</b>	Value Sales of Tobacco Products	SASB: FB-TB-260a.1 GRI Disclosure 201-1 DJSI Innovation Management – Tobacco Alternatives & Reduced Risk Products
<b>3A</b>	Capital Allocation	DJSI Innovation Management – Tobacco Alternatives & Reduced Risk Products
<b>3B</b>	Marketing Expenditure	WHO FCTC Article 13
<b>4A</b>	Product Portfolio	SASB FB-TB-260a.2 DJSI Innovation Management – Tobacco Alternatives & Reduced Risk Products
<b>4B</b>	Pricing	WHO FCTC Article 6
<b>5A</b>	Marketing Policy	SASB: FB-TB-270a.2 GRI 417 Management Approach GRI Disclosure 417-1 WHO FCTC Article 11, 13 DJSI Marketing Practices
<b>5B</b>	Marketing Compliance	SASB: FB-TB-270a.1 GRI 417 Management Approach GRI Disclosures 417-2, and 417-3 GRI 419 Management Approach GRI Disclosure 419-1
<b>6A</b>	Lobbying & Advocacy	GRI 102: General Disclosures GRI Disclosure 102-13 GRI 415 Management Approach GRI Disclosure 415-1 WHO FCTC Article 5.3 DJSI 3.5.1, 3.5.2

### Sustainability Accounting Standards Board (SASB)

In its Sustainability Accounting Standards for the tobacco industry, SASB sets out metrics and disclosures on the material topic areas of Public Health and Marketing Practices in their financial reporting. The Tobacco Transformation Index shares SASB’s goal of increasing transparency and accountability and has some similar metrics and principles for certain categories.

- Under Activity Metrics, the SASB Tobacco Standard requires disclosure of volume sales of combustible tobacco products: (1) cigarettes, (2) cigars, and (3) other smoked tobacco products (FB-TB-000.A). This also applies to non-combustible product sales volume: (1) traditional smokeless tobacco, (2) non-tobacco nicotine products, (3) heated tobacco products, and (4) nicotine replacement therapy products (FB-TB-000.B). Volume reporting also forms a core indicator of the Tobacco Transformation Index. The Index covers volume sales through indicators analyzing total sales of HRPs and their evolution over the last three years, but also the ratio of RRP to HRPs, and its evolution. In addition, the Index extends the analysis of these factors to indicators covering the ratio of volume sales in LMICs versus HMICs (see 2. *Product Sales*).
- Within its Public Health topic area, the SASB Tobacco Standard requires the separate reporting of: (1) gross revenue and (2) revenue net of excise taxes from (a) non-tobacco nicotine products and (b) heated tobacco products (FB-TB-260a.1.). The Index also evaluates revenue from RRP and HRPs separately and as compared to each other globally and in LMICs versus HMICs (see 2. *Product Sales*).
- As part of its Public Health topic area, the SASB Tobacco Standard stipulates that companies' disclosures should include "discussion of the process to assess the risk and opportunities associated with tobacco harm reduction products" (FB-TB-260a.2.). The Index reflects this by assessing how the Index Company has made a specific commitment to reducing the harm associated with tobacco use, and how its approach is embedded within its business strategy and management systems (see 1. *Strategy & Management*). This is also related to an Index Company's current portfolio and development (see 4A. *Product Portfolio*).
- As part of its Marketing Practices topic, under codes FB-TB-270a.1 and FB-TB-270a.2, the SASB Tobacco Standard requires analysis of advertising, promotion, and packaging against international standards, principally the World Health Organization Framework Convention on Tobacco Control (Articles 11 and 13). The Index applies the same principle by incorporating indicators which analyze whether Index Companies have a robust marketing policy in place, and if they report violations of their own marketing policy. It also assesses the existence and content of a youth access prevention policy and any violations (see 5. *Marketing Policy & Compliance*).

### **The WHO Framework Convention on Tobacco Control (WHO FCTC)**

The WHO FCTC is a treaty for national governments under which signatories are recommended to act and legislate in accordance with the conventions of the treaty for tobacco control. Its focus is on improving public health and defining how regulatory frameworks facilitate this. Its activities impact tobacco companies indirectly through government policies in each country, and as a result some articles of the FCTC are used as a reference for stakeholders within the text rather than as indicators a company would report to, in order to show the complementary nature of the Index indicators.

For example, Article 11 restricts packaging and labeling, while Article 13 stipulates bans on advertising, promotion and sponsorship to which tobacco companies must adhere, as implemented by national governments. The complement within the Index would be all those related to Marketing and Youth Access prevention (see *5. Marketing Policy & Compliance*).

The WHO FCTC uses a list of indicators to assess the current status of implementation by signatory countries, which are focused on societal factors and health conditions of the country rather than any company actions. However, the WHO FCTC's Indicator Compendium tracks the "Retail price of a pack of the most widely sold brand of tobacco product." The FCTC does this to assess the affordability of products and the impact of taxes on reducing consumption. This is related to Article 6, which covers price and tax measures to reduce demand for tobacco. In order to analyze affordability as a complement, the Index compares the average price of RRP's to that of HRP's for each company, and how this is evolving, as well as how this relationship differs between LMICs and HMICs (see *4B. Pricing*).

The WHO FCTC also covers the topic of lobbying and advocacy (see *6A. Lobbying & Advocacy*) from the viewpoint of regulators, stating in Article 5.3 stating that "Parties shall act to protect these policies from commercial and other vested interests of the tobacco industry in accordance with national law."

### **SAM Corporate Sustainability Assessment (CSA) as used by the Dow Jones Sustainability Indices (DJSI)**

The CSA assesses a company's sustainability credentials through economic, environmental, and social dimensions. In its coverage of the tobacco industry, it is not focused on consumption reduction, but rather a company's impact on environment and society. This limits the crossover with the Tobacco Transformation Index, which is focused solely on industry transformation rather than broader environmental, social, and governance (ESG) topics (see *Methodology Overview* section).

Within its tobacco assessment, the CSA analyzes Policy Influence in terms of how much a company does and how transparent it is in disclosing its activities. The Tobacco Transformation Index has two indicators which are related to this area within the Lobbying & Advocacy section, which are "Disclosure of Policy Positions" and "Disclosure of Lobbying & Advocacy activities."

The CSA also assesses Innovation Management, which relates to the Index's analysis of R&D (see *3. Capital Allocation & Expenditure*) and also requires companies to report revenues (see *2. Product Sales*).

## Global Reporting Initiative (GRI)

The GRI Sustainability Reporting Standards set out how organizations should report their impacts on the economy, the environment and/or society. The disclosures apply broadly across many industries.

The GRI's General Disclosures (GRI 102) include a number of standards in relation to overall company management and reporting of the scope of operations, including whether executives' performance-related pay is linked to social issues, which is covered in the Index's Strategy & Management indicators (see *1. Strategy & Management*). Among others, this includes an ethical evaluation, with GRI 102-16 requiring "a description of the organization's values, principles, standards, and norms of behavior." GRI 102-26 further specifies the role of the highest governance body in setting purpose, values and strategy, and GRI 102-35 extends this to remuneration, requiring reporting on "how performance criteria in the remuneration policies relate to the highest governance body's and senior executives' objectives for economic, environmental, and social topics." This directly correlates with the Index's metrics on Performance Management & Incentives. GRI Disclosures 102-40, 102-42, 102-43 and 102-44 also highlight the importance of stakeholder engagement in a similar vein to the Index's 1B. Stakeholder Engagement section. These include recording all engagements, how the participants were identified, how they were approached, and the topics discussed.

The standards from the GRI on Public Policy (GRI 415) and Marketing and Labelling (GRI 417) are reflected in the Index's analysis of Marketing Compliance (see *5B. Marketing Compliance*) and Marketing and Youth Policies (see *5A. Marketing Policy*).

## Non-Tobacco Sector-Focused Indexes

There are also well-established indexes covering sectors unrelated to tobacco, which the Tobacco Transformation Index has leveraged in terms of research approach, methodology, and indicators. The most relevant include:

- Access to Medicines Index (ATMI)
- Access to Nutrition Index (ATNI)
- Corporate Human Rights Benchmark (CHRB)
- World Benchmarking Alliance (WBA) – Seafood Stewardship Index (SSI)
- Access to Seeds Index (ATSI)

While each has its own nuances, there were several underlying commonalities among them which the Index was able to adopt. The underlying pillars of performance, commitment and transparency are utilized in the Tobacco Transformation Index. The structure of the Index, composed of numeric scores generated from qualitative and quantitative metrics assigned to

each indicator, has been developed based on principles leveraged from the aforementioned indexes.

Each of the indexes endeavors to evaluate company behavior in an equitable, accessible, and robust manner that supports their specific aims. While each index has tailored its indicators to meet the specific needs and nuances of the industry under consideration, there are common thematic areas in certain indexes that the Tobacco Transformation Index has leveraged; for example, sections on governance, stakeholder engagement, marketing practices, R&D and pricing.

### **Other Indexes and Standards**

There are other organizations which track, analyze, and set standards for sustainability related issues, which can be applied to a multitude of industries. The Tobacco Transformation Index has analyzed the FTSE Russell, FTSE4Good Index, the UN Sustainable Development Goals and Global Compact, and the International Organization of Securities Commissions (IOSCO) – Financial Benchmarks Principles. These have broader areas of focus than the Tobacco Transformation Index, covering wider environmental, social and governance areas. For the most part, direct indicators were not mapped to the Index indicators, but the approaches and principles used informed the methodologies adopted.

## Acronyms

<b>AHP</b>	– Analytical Hierarchical Process
<b>BAT</b>	– British American Tobacco Plc
<b>CNTC</b>	– China National Tobacco Corp
<b>CSA</b>	– Corporate Sustainability Assessment
<b>DJSI</b>	– Dow Jones Sustainability Indices
<b>ESG</b>	– Environmental, Social and Governance
<b>FCTC</b>	– Framework Convention on Tobacco Control
<b>FDA</b>	– US (United States) Food and Drug Administration
<b>GNI</b>	– Gross National Income
<b>GRI</b>	– Global Reporting Initiative
<b>HMIC</b>	– High-Medium Income Country
<b>HRP</b>	– High-Risk Product
<b>IOSCO</b>	– International Organization of Securities Commissions
<b>JT</b>	– Japan Tobacco Group
<b>LMIC</b>	– Low-Medium Income Country
<b>M&amp;A</b>	– Mergers and Acquisitions
<b>NRT</b>	– Nicotine Replacement Therapy
<b>PMI</b>	– Philip Morris International Inc
<b>R&amp;D</b>	– Research and Development
<b>RRP</b>	– Reduced-Risk Product
<b>SASB</b>	– Sustainability Accounting Standards Board
<b>TOAT</b>	– Tobacco Authority of Thailand
<b>USA</b>	– United States of America
<b>Vinataba</b>	– Vietnam National Tobacco Corp
<b>WHO</b>	– World Health Organization

## Definitions

**2020 Index** – The 2020 Tobacco Transformation Index, which was published in September 2020, and covered the review period 2017-2019.

**2022 Index** – The 2022 Tobacco Transformation Index, which covers the review period 2019-2021.

**Bidis** – Refers to non-machine tobacco manufactured products typically originating from India.

**CAGR** – Compound Annual Growth Rate. Refers to the Index review period (2019 to 2021) unless otherwise specified.

**Capital Expenditure** – Includes but is not limited to funds used by a company to acquire, upgrade and maintain physical assets such as properties, buildings, plants, equipment, and intangible assets such as technology, software as well as developing networks including contract manufacturers.

**Company Index/Ranking** – The company index/ranking of the Tobacco Transformation Index aims to highlight corporate actions of the top 15 largest tobacco companies by cigarette stick equivalent, which either support or impede progress toward a world free of combustible cigarettes and other HRPs.

**Country Fact Sheets** – The supplemental output of the Tobacco Transformation Index, which will profile “the state of nicotine” in 36 countries (accounting for around 85% of current global smoking sales and consumption), to contextualize the environment in which companies operate.

**Dow Jones Sustainability Index (DJSI)** – A family of benchmarks for investors who believe sustainable business practices are critical to generating long-term shareholder value and who wish to reflect their sustainability convictions in their investment portfolios.

**Environmental, Social, and Governance (ESG)** – A set of factors that measure the sustainability and/or societal impact of an investment in a company. ESG factors are typically tied with long-term performance.

**Foundation for a Smoke-Free World** – An independent, non-profit organization created in 2017 with the mission to end smoking within this generation.

**Framework Convention on Tobacco Control (FCTC)** – The first global treaty negotiated by the WHO focused on a regulatory strategy to address tobacco addiction through demand reduction and supply issues.

**Gutka** - Is a type of smokeless tobacco that is made in India and is widely used throughout Asia. It is a mixture of tobacco, crushed areca nut (also called betel nut), spices, and other ingredients. It is used like chewing tobacco and is placed in the mouth, usually between the cheek and gum.

**High-Medium Income Country (HMIC)** – Captures high-income countries as defined by the World Bank (as of July 1, 2021), which includes countries with a national income per person (GNI per capita) of over USD4,095 in 2020.

**Index Countries** – The 36 countries covered within the scope of the Tobacco Transformation Index (see “Index Country Scope”).

**Index Regions** – The four regions defined by the Tobacco Transformation Index - Americas, Asia Pacific, Europe, Middle East & Africa (see “Index Country Scope”).

**Index Companies** – The 15 nicotine and tobacco companies ranked by the Tobacco Transformation Index (see “Index Company Scope”). All references to Index Companies throughout this report include all of the company’s subsidiaries, affiliates and equivalent operating entities.

**High-Risk Products (HRPs)**– Combustible or non-combustible nicotine products, which include cigarettes, cigarillos, cigars, fine cut tobacco, pipe tobacco, and shisha.

**Key Performance Indicators** – A summary of company performance for each of the six categories. Categories are made up of multiple sub-categories and indicators (see “Full List of 35 Indicators”).

**Low-Medium Income Country (LMIC)** – Captures middle and low income countries as defined by the World Bank (as of July 1, 2021), which includes countries with a national income per person (GNI per capita) of up to USD4,095 in 2020.

**Marketing Expenditure** – Includes but is not limited to funds invested in programs such as advertising, trade promotions, and consumer engagements.

**Mergers & Acquisitions (M&A) Investment** – Total value of deals closed in the acquisitions of manufacturing companies only (acquisitions of distributors or retailers are excluded).

**Net Value Sales** – Gross sales minus applicable sales returns, allowances, and discounts. Gross sales do not include cost of goods sold, operating expenses, excise tax expenses or other charges.

**Operating Environment** – The countries in which a company sells nicotine and tobacco products (see “Index Product Scope”).

**Rate of Change** – The difference between a company’s score in 2021 compared with 2019.

**Ratios** – For all “Ratio of” indicators (for example, "Ratio of Volume Sales (RRPs versus HRPs)”), the RRP is the numerator, and the HRP is the denominator.

**Reduced-Risk Products (RRPs)** – Nicotine products that are considered to be less harmful than combustible cigarettes and/or other traditional products. Products that are potentially reduced-risk include vapor products (closed system vaping products, e-liquids, and heated tobacco), chewing tobacco, moist snuff, non-tobacco nicotine pouches, NRT products, and snus.

**Smoking Prevalence** – Defined by the WHO as the percentage of persons aged 15 years and older who smoke tobacco currently.

**Sustainable Development Goals (SDGs)** – The 17 goals that make up the United Nations’ 2030 Agenda for Sustainable Development. The Tobacco Transformation Index aims to contribute to SDG 3 (Good Health and Well-Being) and SDG 9 (Industry, Innovation, and Infrastructure).

**Tobacco Transformation Index** – An Index that will highlight and critically evaluate tobacco companies’ activities that either support or impede progress towards a world free of combustible cigarettes and other HRPs.

**Volume Sales** – A company’s total volume sales, converted into per stick equivalents (see “Per Stick Equivalent Conversion”). Only products within the scope of the Tobacco Transformation Index are included (see “Index Product Scope”).

**Value Sales** – Net value sales i.e. gross sales minus applicable sales returns, allowances, and discounts. Gross sales do not include the cost of goods sold, operating expenses, excise tax expenses or other charges. Only products within the scope of the Tobacco Transformation Index are included (see “Index Product Scope”).

**World Health Organization (WHO)** – The agency of the UN that directs international health and leads partners in global health responses.

**Youth Access Prevention Policy** – A policy that a company puts in place with the intended effect of preventing those under the age of 18, or those under the legal smoking age where it is higher than 18, from accessing nicotine and tobacco products.

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## 2022 Tobacco Transformation Index Methodology

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