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Global Trends in Nicotine

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Introduction

The *Global Trends in Nicotine* reports establish the groundwork for the Foundation for a Smoke-Free World in the area of industry transformation, and represent an important component in the Foundation's research program. Specifically, the reports identify the major players in nicotine delivery, outline their product offerings and geographic focus, and quantify their output. The first *Global Trends in Nicotine* report was published based on data from 2017. This report updates the record with data from 2020.

As detailed in this report, in 2020 cigarettes represented 84.1% of the total nicotine ecosystem by retail value sales, compared to 88.9% in 2017. Growing from a much smaller base, noncombustible products, including heated tobacco, vaping products, and nicotine pouches, have continued to take share from combustible products over the past three years. The major nicotine ecosystem players dominate the overall market, although manufacturers of noncombustible products, both new entrants and established players, have gained share. From a legislative perspective, plain packaging gained significant momentum since 2017, with at least 15 countries enforcing plain packaging legislation as of October 2020.

This report identifies the major players worldwide in manufacturing nicotine delivery products, although it does not evaluate the *relative harm* of the various products. We analyze available data for nicotine product manufacturers primarily from two vantages: product type and geographic market. We use a mixture of volume- and value-based analyses to present nicotine ecosystem market size and share by company. Where appropriate, we make a cigarette stick equivalent comparison available.

Research to date has tended to highlight the role of the publicly traded, multinational tobacco companies headquartered in Europe, Japan, and the United States. Few analyses consider the impact of the major state and semi-state tobacco monopolies in Asia and Africa. Even fewer include the role of companies that produce cleaner forms of nicotine delivery products, such as those in the pharmaceutical industry and in non-tobacco companies that produce noncombustible forms of nicotine.

In geographic terms, this report employs the World Health Organization (WHO) regional structure.

A list of acronyms and definitions used throughout this report can be found in the Appendix.

Building upon the *Global Trends in Nicotine* reports, the Foundation sponsored the publication of the first *Tobacco Transformation Index*™ in September 2020. Every two years, the Index ranks the world's 15 largest tobacco companies on their relative progress in supporting tobacco harm reduction. Specifically, the Index assesses tobacco companies' activities concerning phasing out high-risk tobacco products; developing and responsibly offering reduced-risk alternatives to support current users in moving away from high-risk products; preventing access and marketing of such alternatives to all non-smokers and nonusers of high-risk products, especially youth; and ensuring consistency of tobacco harm-reduction activities across all markets of operation, within regulatory guidelines.

Executive Summary

Current state of the nicotine market

Cigarettes remain the dominant global nicotine delivery vehicle, and the global nicotine ecosystem is highly concentrated. We define the nicotine ecosystem as the major players in the business of nicotine delivery through cigarettes, cigars and cigarillos, smoking tobacco, smokeless tobacco, heated tobacco products, tobacco-free oral nicotine, vaping products, and nicotine replacement therapy (NRT) smoking cessation aids. We estimate that in 2020 nicotine ecosystem global retail sales totaled approximately USD853 billion. Cigarettes made up 84.1% of the global retail nicotine ecosystem by value sales. Combustible tobacco products (cigarettes, cigars and cigarillos, and smoking tobacco) constituted 93.1% of the nicotine ecosystem by retail value sales in 2020. Vaping products made up about 2.5% of the nicotine ecosystem, followed by heated tobacco products, 2.4%; smokeless tobacco products, 1.6%; NRT smoking cessation aids, 0.3%; and tobacco-free oral nicotine, 0.1%. Retail sales figures include taxes applied to the final purchase price.

Approximately 5.2 trillion retail cigarette sticks were sold during 2020, compared to 5.4 trillion in 2017. This figure nears 5.6 trillion cigarette sticks when illicit trade is included. Of note, locally manufactured combustible tobacco products, such as bidis in India, are outside the scope of this report. Global retail cigarette unit volumes decreased at a compound annual growth rate (CAGR) of 1.4% between 2017 and 2020. Performance varies widely by country due to factors such as the effects of COVID-19 measures, local taxation changes, regulatory enforcement, consumer tastes, and more.

Increases in retail value sales of cigarettes, smoking tobacco, and smokeless tobacco are being driven by pricing rather than retail volume sales, which are generally stable to declining. The cigars and cigarillos category exhibited retail volume sales growth during recent years. Vaping and heated tobacco products are demonstrating strong value and volume sales growth. Based on 2020 data, heated tobacco is growing faster than vaping, not least because of regulatory and public pressures in the United States.

The emergence of a new category, tobacco-free oral nicotine, is one of the notable developments in the global nicotine ecosystem in recent years. However, sales of the product are still relatively insubstantial, although tobacco-free oral nicotine registered the highest growth rate among all categories for the period 2017-2020. Value sales of NRT smoking cessation aid products are modestly increasing from a small market share position.

A list of acronyms and definitions used throughout this report can be found in the Appendix.

Major players in nicotine delivery

We estimate that the six largest tobacco companies generated 86.3% of cigarette retail volume sales globally in 2020. China National Tobacco Corporation is the largest cigarette producer at 48.0% retail volume share, followed by the five publicly traded tobacco companies: British American Tobacco Plc, 12.3%; Philip Morris International Inc, 12.3%; Japan Tobacco Inc, 8.1%; Imperial Brands Plc, 3.5%; and Altria Group Inc, 2.1%. These companies also appear among the

top producers across the various non-cigarette categories, where they are joined by a range of others, including major state and semi-state tobacco monopolies in Asia and Africa, smaller privately held and publicly traded companies from across the globe, e-cigarette manufacturers centered primarily in China, and several global pharmaceutical companies present in NRT smoking cessation aids.

Regional characteristics

Regionally, the nicotine ecosystem offers some variations, but the basic patterns remain: Cigarettes are the primary nicotine delivery mechanism, and production is dominated by the large global tobacco companies and, in some cases, the regional and/or state-owned tobacco companies. Nevertheless, the underlying dynamics are in flux due to technological innovation, notably in heated tobacco and vaping products.

We organize by the WHO regional structure. Based on our analysis, the respective nicotine ecosystems in Europe, Western Pacific, and the Americas remain relatively large compared to their underlying populations. This is not surprising, given that the regions are home to some of the largest nicotine markets in the world—China, the United States, and Western Europe. Conversely, the nicotine ecosystems in South-East Asia, Africa, and the Eastern Mediterranean are relatively small compared to their underlying populations. This result is caused, in part, by the nature of the data: Retail sales data do not capture illicit trade, nor do they cover locally manufactured, non-machine-manufactured products such as bidis/beedis (India) and papirosy (Russia).

For total world population percentage share and retail value nicotine ecosystem percentage share in USD for 2020, we estimate the following respective share positions by region: Africa, 14%/1%; the Americas, 13%/19%; Eastern Mediterranean, 9%/4%; Europe, 12%/29%; South-East Asia, 26%/6%; and Western Pacific, 25%/41%. That said, regarding 2020 cigarette volume sales, Africa, the Americas, Europe, and South-East Asia are shrinking. Western Pacific and Eastern Mediterranean are demonstrating cigarette volume characteristics that are relatively stable to increasing. Eastern Mediterranean is one of the few remaining regions where cigarettes demonstrated both value and volume growth on a yearly basis in 2020 and in 2017-2020 CAGR terms. This is driven by the stable market in Egypt and growth in countries such as Iraq. Notably, in 2021, Egypt started the process of opening up its market to foreign manufacturers, a decision that could change the future dynamics of the category in the region.

Global Overview

Leading nicotine companies

Global Nicotine Company Shares, 2020

Rank	Cigarettes (84.1%*)	Cigars and Cigarillos (4.9%)	Smoking Tobacco (4.0%)	Vaping Products* (2.5%)	Heated Tobacco (2.4%)	Smokeless Tobacco (1.6%)	NRT Smoking Cessation Aids* (0.3%)	Tobacco-Free Oral Nicotine (0.1%)
1	China National Tobacco Corp 48.0%	Japan Tobacco Inc 16.0%	Japan Tobacco Inc 22.5%	JUUL Labs Inc 27.1%	Philip Morris International Inc 78.9%	Altria Group Inc 24.7%	Johnson & Johnson Inc 30.7%	Swedish Match AB 48.7%
2	British American Tobacco Plc 12.3%	China National Tobacco Corp 13.2%	Imperial Brands Plc 12.0%	British American Tobacco Plc 14.3%	British American Tobacco Plc 14.0%	British American Tobacco Plc 18.8%	GlaxoSmith Kline Plc 28.9%	British American Tobacco Plc 20.3%
3	Philip Morris International Inc 12.3%	Imperial Brands Plc 10.3%	British American Tobacco Plc 7.2%	RELX Technology Co Ltd 4.5%	Japan Tobacco Inc 4.0%	DS Group 10.2%	Private Label 28.7%	Swisher International Group Inc 6.4%
4	Japan Tobacco Inc 8.1%	Swisher International Group Inc 10.2%	Philip Morris International Inc 6.0%	Imperial Brands Plc 2.8%	KT&G Corp 2.8%	Swedish Match AB 9.6%	Perrigo Co Plc 5.4%	Altria Group Inc 5.4%
5	Imperial Brands Plc 3.5%	British American Tobacco Plc 9.1%	Al Fakher Tobacco Trading LLC 5.7%	Japan Tobacco Inc 2.5%	Altria Group Inc 0.0%	Groupe MADAR 6.0%	Pierre Fabre SA, Laboratoires 1.4%	Japan Tobacco Inc 1.4%

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: *The figure in parentheses below each category name relates to that category's share of the total nicotine ecosystem (in retail value terms).

**Company share in retail volume terms for all categories except vaping Products and NRT smoking cessation aids (retail value share).

The leading global nicotine companies are present in multiple categories

Given that cigarettes constitute the largest category in the global nicotine ecosystem by far, it is natural that the leading cigarette manufacturers are also the biggest players overall. In fact, the five top-ranked companies in cigarettes, China National Tobacco Corporation, British American Tobacco, Philip Morris International, Japan Tobacco, and Imperial Brands have a combined volume share of 84.2%. China National Tobacco Corporation derives the overwhelming majority of its sales from cigarettes, while the others in the top five are all multicategory players. While China National Tobacco Corporation is a state-owned, single-country operator which dominates the biggest market in the world, China, the other companies are publicly traded, multinational corporations with a presence in multiple regions.

Cigars and cigarillos is the category with the smallest differences in retail volume share between the five leading companies, with Japan Tobacco on top at 16.0% and British American Tobacco coming in fifth at 9.1%. In smoking tobacco, the number one position is also held by Japan Tobacco, while three of the other global leaders in cigarettes are also in the top five.

Smokeless tobacco is led by Altria Group, which operates mainly in the United States, and to a lesser extent in Canada. Vaping products is the most fragmented category, with the top five leading companies accounting for just 51.3% of total retail value sales, and with major cigarette manufacturers accounting for just three of the top ten companies by value share. While JUUL

Labs, Inc and British American Tobacco register a combined value share of 41.4%, the next biggest player, RELX Technology, has only 4.5%.

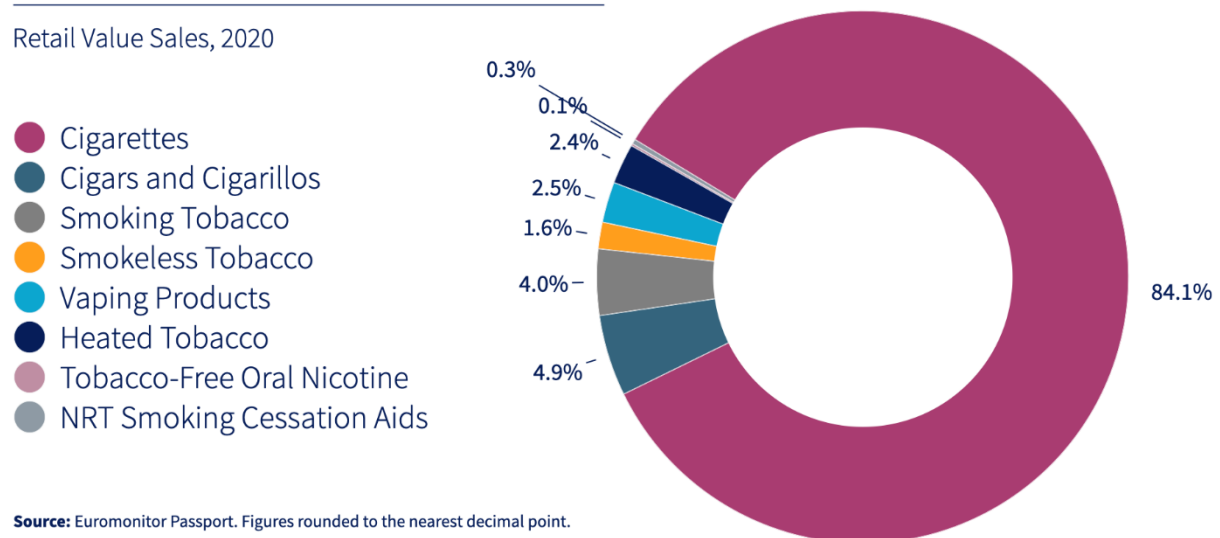
In heated tobacco, only five companies are present in total, with Philip Morris International on top with 78.9% volume share, due to the performance of IQOS in multiple countries around the world. In the most rapidly growing category, tobacco-free oral nicotine, the leader is Swedish Match AB, a traditional manufacturer of oral products with a presence in the United States and Scandinavia.

Finally, in NRT smoking cessation aids, at only 0.3% of the nicotine ecosystem by retail value, tobacco manufacturers are not present in the top five as pharmaceutical companies shape the category. British American Tobacco, with its Zonnic brand available in Scandinavia, ranks sixth in the category globally, although its global value share is less than 1%.

Global category market size

Global Nicotine Ecosystem by Product Category

Retail Value Sales, 2020



Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rate.

The share of cigarettes in the global nicotine ecosystem is decreasing

In 2020, cigarettes remained by far the largest product category in the global nicotine ecosystem in terms of both volume and value. The 84.1% value share corresponds to over USD717 billion, or around 5.2 trillion sticks. Retail sales figures include taxes applied to the final purchase price but do not capture illicit trade or locally manufactured combustible tobacco products, such as bidis in India.

Although retail volume sales declined with a 2017-2020 CAGR of 1.4%, the category performed better in value terms, mainly due to regular price increases. As a reference, in 2017, the value share of cigarettes in the global nicotine ecosystem was just over 89.0%. The other major combustible categories (cigars and cigarillos, smoking tobacco) account for 4.9% and 4.0%, respectively, while smokeless tobacco accounts for 1.6%. Vaping and heated tobacco products have shares of 2.5% and 2.4%, respectively, but are categories that represent a significant investment focus among the leading international manufacturers. At less than 1.0% each, tobacco-free oral nicotine and NRT

smoking cessation aids are the smallest categories, with their shares dwarfed by the other, much larger categories.

Global category growth

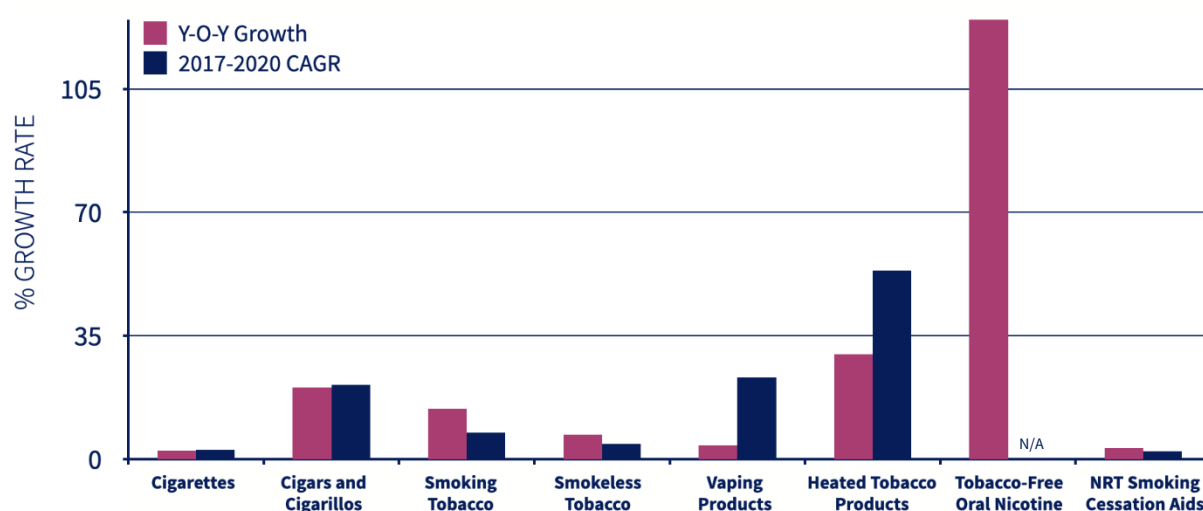
Global Nicotine Ecosystem by Product Category Value and Volume Sales in 2020

Product Category	Retail Value (USD million)	% Retail Value	Retail Value % Change 2020 vs 2019	Retail Value % Change 2017-2020 CAGR	Retail Volume % Change 2020 vs 2019	Retail Volume % Change 2017-2020 CAGR
Cigarettes	717,310	84.1%	2.4%	2.7%	-1.8%	-1.4%
Cigars and Cigarillos	42,070	4.9%	20.4%	21.2%	24.2%	17.2%
Smoking Tobacco	34,253	4.0%	14.3%	7.6%	0.5%	0.6%
Smokeless Tobacco	13,756	1.6%	7.0%	4.3%	-1.2%	-1.9%
Vaping Products	21,061	2.5%	3.9%	23.1%	N/A	N/A
Heated Tobacco Products	20,775	2.4%	29.7%	53.5%	29.6%	56.6%
Tobacco-Free Oral Nicotine	1,174	0.1%	124.7%	N/A	166.9%	N/A
NRT Smoking Cessation Aids	2,501	0.3%	3.3%	2.3%	1.7%	0.5%
Total	852,900	100.0%	4.3%	4.6%	N/A	N/A

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

Product Category Sales Value Growth Rates, 2020, World



Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

Tobacco-free oral nicotine, heated tobacco, and cigars and cigarillos are the prominent growth categories

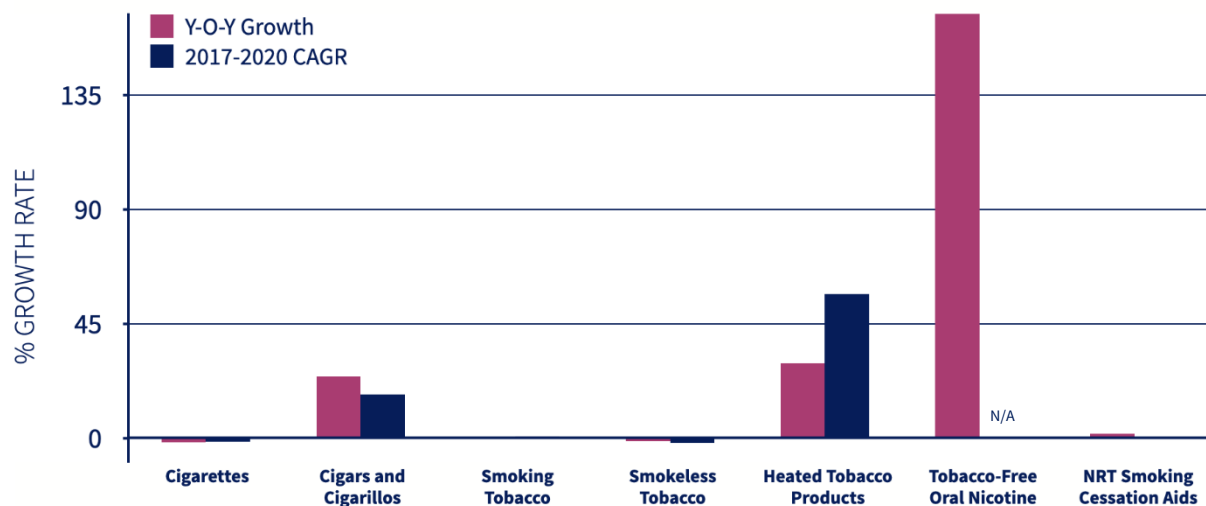
Overall, value sales registered growth across all categories, both in the short term (2020 versus 2019) as well as over the longer three-year review period (2017-2020 CAGR). Value sales of traditional combustible products, cigarettes and smoking tobacco, which collectively account for 88.1% of the global nicotine ecosystem in value terms, were driven largely by pricing increases, while volume sales performance is stable to declining. Cigars and cigarillos, the other major combustible category, showed double-digit growth in both value and volume terms. The primary drivers of volume growth for the category are two-fold. Cigarillo volume sales were positively affected by category dynamics in Japan, where price-conscious consumers switched from cigarettes to price-fighter cigarillos. These products are marketed solely to attract price-conscious cigarette smokers, and so in this sense the trend does not represent a true switch to cigarillos. Incoming regulatory changes in October 2021 eliminating the existing tax differential are likely to put a halt to this trend. Cigar volume sales were primarily affected by growth in China where the category distribution channels, mainly tobacco specialists, were less affected by COVID-19 amid the product's increasing popularity.

Smokeless tobacco, which comprises both the US-style moist snuff ("dip") and chewing tobacco, and the reduced-risk Swedish-style snus, experienced moderate growth performance, driven primarily by the moist snuff categories, although these products are prevalent in only a small number of markets.

Vaping and heated tobacco products, the two leading noncombustible categories, grew in terms of both value and volume. While the two categories are currently almost equal in size, their trajectories in the past year have taken different paths. On the one hand, heated tobacco continued its double-digit growth, driven by increases in several regions, mainly Europe. On the other hand, major regulatory hurdles, partially driven by youth vaping concerns in the United States, as well as COVID-19-related closures and broad public uncertainty, have slowed the scale of growth for vaping products.

Finally, the largest sales increase of all products was generated by tobacco-free oral nicotine, a product that was not widely available prior to 2017. Although starting from a significantly lower base, it is now on course to overtake NRT smoking cessation aids, which experienced low single-digit value and volume growth.

Product Category Sales Volume Growth Rates, 2020, World



Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

In terms of retail volume changes, cigarettes decreased by 1.8% from 2019 to 2020. A total of 5.2 trillion sticks were sold in 2020, compared to 5.4 trillion in 2017. This figure nears 5.6 trillion sticks if illicit trade is accounted for. Unit growth for other categories varied from slightly positive to slightly negative, with regional variations highly dependent on country-specific factors such as taxation changes, regulatory enforcement, and consumer tastes. There are three major outliers in terms of volume growth trends. The highest performer is tobacco-free oral nicotine (starting virtually from zero in 2017), cigars and cigarillos in combustibles, and heated tobacco in noncombustibles.

Top 30 countries by cigarette volume sales

Cigarette Volume: Three-Year CAGR from 2017 through 2020

Rank	2020	2017-2020 CAGR Retail Volume	2017-2020 CAGR Retail and Illicit	Retail Volume (mn sticks)	Retail and Illicit Volume (mn sticks)
1	Turkey	2.7%	0.5%	115,197	119,380
2	Egypt	2.4%	3.0%	99,878	105,683
3	Iraq	2.3%	1.1%	48,185	53,624
4	Romania	2.3%	0.6%	23,960	26,316
5	Algeria	2.2%	2.0%	33,087	34,820
6	Brazil	1.9%	4.7%	53,269	114,201
7	Vietnam	1.6%	1.9%	80,783	98,822
8	Poland	1.2%	-0.2%	43,140	47,451
9	China	0.7%	0.3%	2,391,203	2,474,211
10	Taiwan	-1.2%	-3.1%	33,085	38,176
11	Germany	-1.3%	-1.4%	73,952	80,436
12	Thailand	-1.3%	-0.7%	38,848	41,546
	World	-1.4%	-1.3%	5,185,308	5,641,529
13	South Korea	-1.4%	-1.3%	66,178	66,815
14	Pakistan	-2.1%	1.2%	55,113	86,714
15	Argentina	-2.3%	-0.2%	33,600	39,794
16	Spain	-2.8%	-3.5%	43,984	47,692
17	India	-3.2%	-1.6%	73,812	101,914
18	Canada	-3.3%	-2.9%	25,991	32,725
19	Indonesia	-3.5%	-3.1%	276,583	302,501
20	USA	-4.1%	-4.0%	222,562	232,201
21	Italy	-4.2%	-4.2%	60,860	64,953
22	Bangladesh	-4.3%	-4.2%	73,941	76,490
23	United Kingdom	-4.7%	-4.1%	28,446	32,727
24	Mexico	-5.2%	-4.3%	25,730	31,706
25	Saudi Arabia	-5.2%	-4.5%	21,084	23,202
26	Philippines	-6.6%	-6.2%	58,320	66,409
27	France	-6.8%	-5.8%	35,801	44,636
28	Russia	-7.4%	-5.8%	205,642	226,562
29	Japan	-12.1%	-12.1%	102,700	102,741
30	Ukraine	-12.2%	-10.6%	45,107	48,676

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Cigarette volume for top 30 countries; modeled countries excluded.

Ranked on 2017-2020 CAGR retail volume growth rate.

Naturally, dynamics that occur at the country level are often obfuscated by the global totals. For this reason, we present a summary of cigarette volume trends in the largest 30 markets in the world. To smooth out some of the annual variances, especially after the turbulent year 2020, we focus on the three-year CAGR for the top 30 cigarette markets by volume from 2017 to 2020.

Global retail cigarette unit volumes decreased at a CAGR of 1.4% during that period. Market sizes vary greatly across the selected countries. Estimates for retail volume and retail plus illicit trade volume are also available. The differences between the growth rates associated with retail volume and retail plus illicit volume are due to the rate of change in estimated illicit trade activity relative to retail trade. Both retail and illicit trade factors are likely to be influenced by changes in taxation, regulatory enforcement, and the macroeconomic environment of each country. Nevertheless, cigarette volume growth is limited mainly to emerging markets.

Of the top 30 countries by cigarette volume sales, Egypt and Iraq are among the leading countries in terms of historic retail volume growth. Reflective of this, the Eastern Mediterranean region is one of the few regions where cigarette volumes are growing rather than declining. Cigarette growth in the region is supported by smoking populations that remain stable, and economies that continue to strengthen. Conversely, Ukraine and Japan saw the largest historic cigarette volume declines of the top 30 markets. Ukraine's projected decline was driven both by excise and migration to reduced-risk products, while in Japan migration to heated tobacco products, as well

as some migration to price-fighter cigarillos by price-conscious consumers, were the main factors in the decline.

What has occurred since the end of 2020?

In the first half of 2021, leading tobacco companies reported varied shipment volume results on an annualized basis, breaking the declining trend for the first time in recent history. This was primarily due to weaker previous year comparisons affected by COVID-19 and varying levels of exposure to the most affected markets. British American Tobacco reported that its global cigarette volume increased by 1.8% for the first half of 2021 against the first half of 2020, mainly driven by recovery following COVID-19 lockdowns in emerging markets.¹ Japan Tobacco reported an international shipment growth of 8.0% in the first half of 2021, driven by favorable industry volume trend comparisons in several markets, mainly due to travel restrictions, while volume sales in their domestic cigarette market decreased 9.5%, due to cigarette industry volume contraction and growth in emerging categories.² For the first half of 2021, Philip Morris International reported a cigarette shipment volume decrease of 2.2%, due to lower shipment volume in South and South-East Asia, excluding heated tobacco products.³ Altria Group reported for the first half of 2021 that, when adjusted for trade inventory movements, its US cigarette shipment volume decreased by an estimated 5.3%.⁴ Imperial Brands reported a tobacco volume decrease of 4.3% for half-year 2021 ending March 31 in stick equivalents, partially driven by lower sales in the global duty-free business as international travel was significantly curtailed.⁵

Recently published *first-half 2021 reports* from leading publicly traded manufacturers Altria Group, British American Tobacco, Imperial Brands, Japan Tobacco, Philip Morris International, and Swedish Match show that, with the exception of Swedish Match, each company continues to derive most of its total revenues from combustible products. Swedish Match derives the largest share of its total revenues (66%) from noncombustible products, followed by Philip Morris International (29%), British American Tobacco (12%), and Altria Group (12%). The Japan Tobacco and Imperial Brands shares from noncombustibles are just 3% and 2%, respectively.

¹ British American Tobacco Plc. (2021). Half-Year Report.

² Japan Tobacco Inc. (2021). Second-Quarter Results.

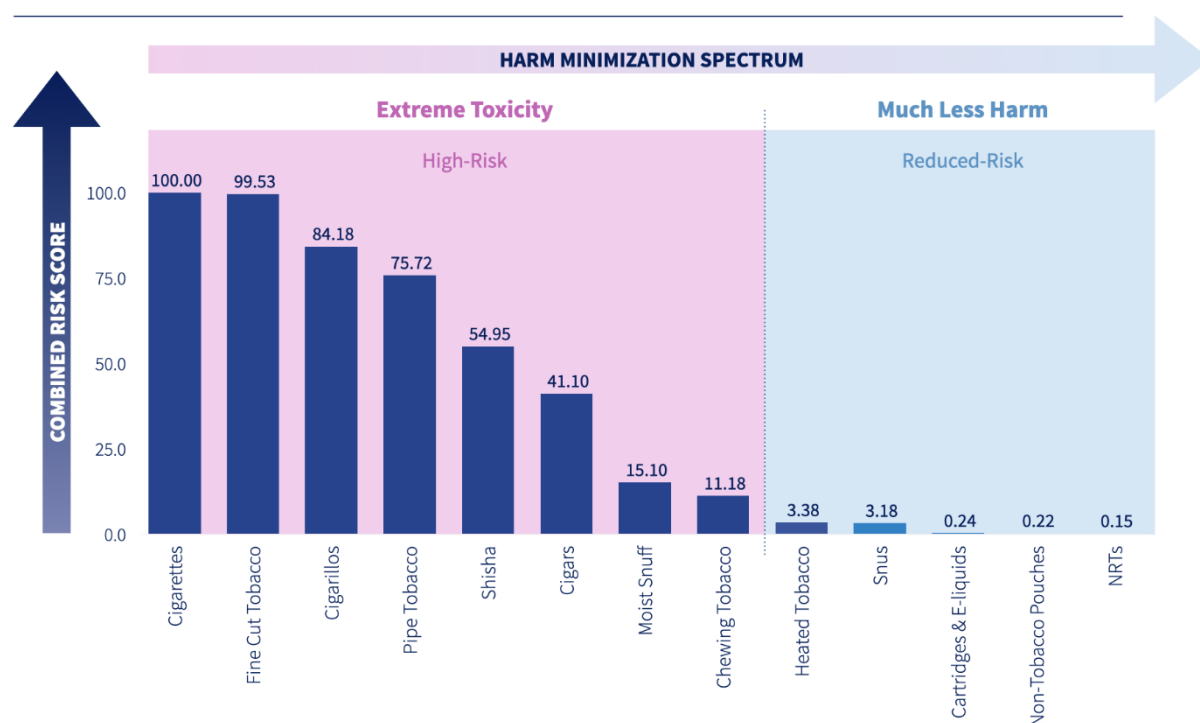
³ Philip Morris International Inc. (2021). Second-Quarter Results.

⁴ Altria Group Inc. (2021). 2021 Second-Quarter and First-Half Results.

⁵ Imperial Brands Plc. (2021). Half-Year Results Statement.

Relative risk spectrum

Relative Risk Assessment Hierarchy



Source: Murkett, R., Rugh, M. & Ding, B. (2020). Nicotine Products Relative Risk Assessment: A Systematic Review and Meta-Analysis.

The industry is slowly transforming

It is simplistic to look at the total nicotine figures and conclude that the global nicotine ecosystem is driven by cigarettes and, in turn, by the large multinationals. Taking this view omits important developments that are reshaping the industry and leading to unprecedented strategic shifts and product innovations.

The latest example of change is the emergence of another nicotine category: tobacco-free oral nicotine. These products come in the form of pouches that contain nicotine but no tobacco. They are intended for oral use, similar to snus. At the time of this writing, the products are generally not subject to existing moist snuff regulations and are gaining momentum in a number of markets, mainly in the United States and Europe. British American Tobacco (VELO), Altria Group (on!), Imperial Brands (Skruf/ZoneX), Japan Tobacco (Nordic Spirit), Swedish Match (ZYN), and Swisher International Group (Rogue) are among the manufacturers that are investing in commercializing such products.

A developing view of tobacco harm reduction is visualized above in the relative risk spectrum graph. While it is not the purpose of this report to elaborate on the potential merits of harm reduction, we believe it is appropriate to consider the weighted harm scale of the various products. Tobacco-free oral nicotine, in terms of the relative risk hierarchy, is estimated to be marginally more harmful than the least harmful category, NRT products.

Similarly, vaping products and heated tobacco, the largest noncombustible categories, are no longer niche products, but take a significant share of the total ecosystem in many markets. The development of these categories represents innovation in the tobacco industry.

Legislative overview

Tobacco regulations are extending to all nicotine products

Plain packaging is arguably one of the most important regulatory developments currently reshaping the global nicotine ecosystem. While it is challenging to estimate the direct effect of plain packaging on the volume performance of impacted categories, especially in cases where other anti-smoking provisions and tax increases occur, plain packaging limits brand recognition and elevates the importance of price. By the end of 2020, more than 15 markets had adopted plain packaging, including countries in the top 30 in terms of cigarette volume, including France and the United Kingdom. Others are formally in the process of passing legislation or seriously considering its adoption, for instance South Africa and Finland. Currently, plain packaging primarily targets the most popular category, cigarettes, but there are cases in which other noncombustible categories are also included, such as snus in Norway. If extended to reduced-risk categories, this type of legislation could potentially limit the shift of consumers towards emerging products. In the United States, for example, plain packaging is not currently on the agenda, but pictorial health warnings on cigarette packaging will be mandatory for the first time starting in October 2022 (this date has been pushed back several times due to legal action).

Bans on flavors in tobacco products is another measure that has the potential to shift the balance of sales in multiple markets. In the European Union, the Tobacco Products Directive has already prohibited all flavors in cigarettes, while flavored vaping products are also in the spotlight. Some countries, such as Denmark and Hungary, have banned certain flavors in vaping products, but EU-wide prohibition remains unlikely. Similarly, in the United States, underage vaping and unauthorized flavors have resulted in the adoption of much stricter measures, including increased US Food and Drug Administration (FDA) scrutiny of flavors in vaping products. In August 2021, the FDA issued the first marketing denial orders for electronic nicotine delivery systems (ENDS) due to lack of sufficient evidence that they are appropriate for the protection of public health, which is the statutory standard.⁶ At the time of this writing, the FDA had denied the applications of almost 300 companies producing flavored vaping liquids. In October 2021, the FDA *authorized the marketing* of three new tobacco products, marking the first set of electronic nicotine delivery system (ENDS) products ever to be authorized by the FDA through the premarket tobacco product application (PMTA) pathway.

Taxation levels for the new categories is another factor that is playing a key role in shaping the future of the global nicotine ecosystem. Because many of the emerging products are new to the industry, they are rarely coded into existing tax regimes. The main question is whether regulators in different markets will take into consideration the relative risk factors when updating the related

⁶ US Food and Drug Administration. (2021). FDA denies marketing applications for about 55,000 flavored e-cigarette products for failing to provide evidence they appropriately protect public health. Retrieved September 10, 2021, from <https://www.fda.gov/news-events/press-announcements/fda-denies-marketing-applications-about-55000-flavored-e-cigarette-products-failing-provide-evidence>

tax schemes. A number of regulators (for instance, in South Korea and Japan) have started to increase taxation for reduced-risk categories, closing the gap with the rates applied to combustibles.

Apart from taxation, there are other important regulatory developments concerning new categories. These include restrictions on contents (such as, in Canada, nicotine levels), or authorization to sell online. For example, China banned online sales in 2019. Ultimately, these events affect the affordability and accessibility of such products, which are key to the future of the categories.

Another measure taking center stage in the global tobacco regulation domain is the increase of the legal purchase age for tobacco products. At the end of 2019, FDA legislation raised the minimum age for buying tobacco products from 18 to 21 for both cigarettes and vaping products. Other countries, including India, are also drafting regulations to increase the existing age limit.

COVID-19 impact

COVID-19 disrupted major markets

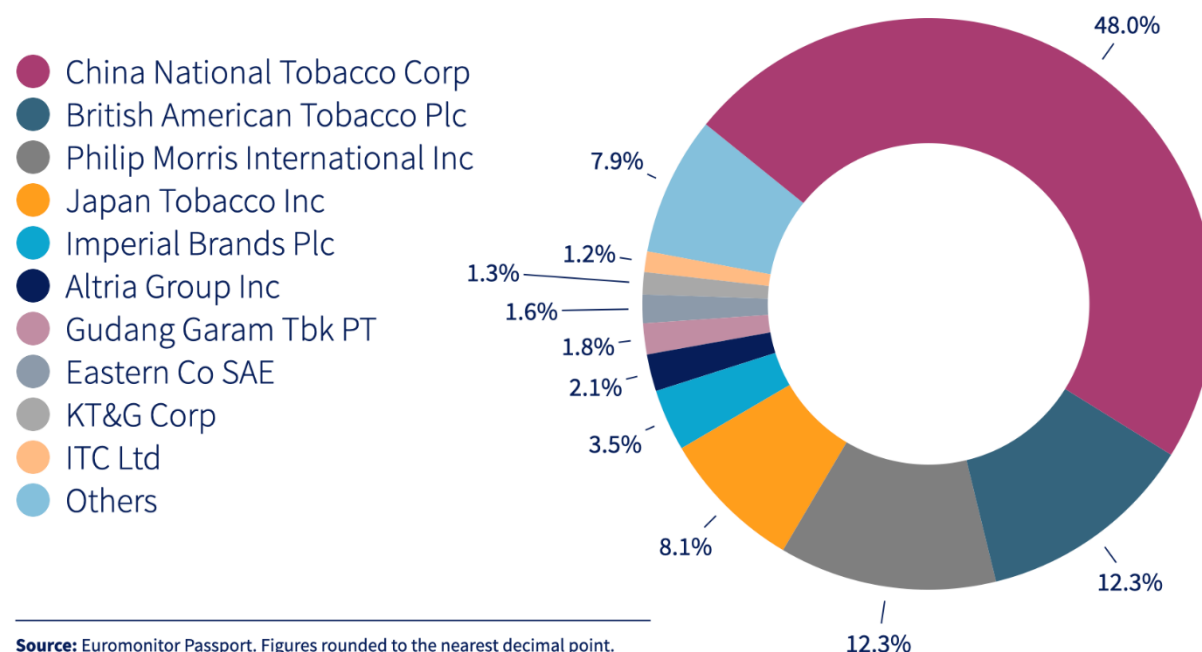
The outbreak of COVID-19 across the globe in 2020, and the continued uncertainty that prevails in 2021, is having an impact on the global nicotine ecosystem. The most radical measures were taken in South Africa and India, where sales of tobacco products were prohibited during the imposed lockdowns. Other countries, including Turkey and Spain, introduced restrictions on smoking outside. Consumers experienced varied reactions. While in most markets the volume decline continued, other markets, most notably in the United States, registered record performance that was driven by higher stress levels, more time at home, and increased purchasing power.

The trends of growing public spending on health and economic stagnation have also led to different approaches by regulators and governments in major markets. While some nations, such as New Zealand, postponed planned tax increases, others, including Russia and Indonesia, imposed higher rates on multiple industries in order to boost their budgets. In general, the focus on public health, which is now considered of primary importance, could establish new realities within the industry.

Major Producers by Product Category

Largest global cigarette producers

Global Company Share of Cigarettes, 2020, World



China National Tobacco Corp accounts for nearly half of global cigarette volume sales

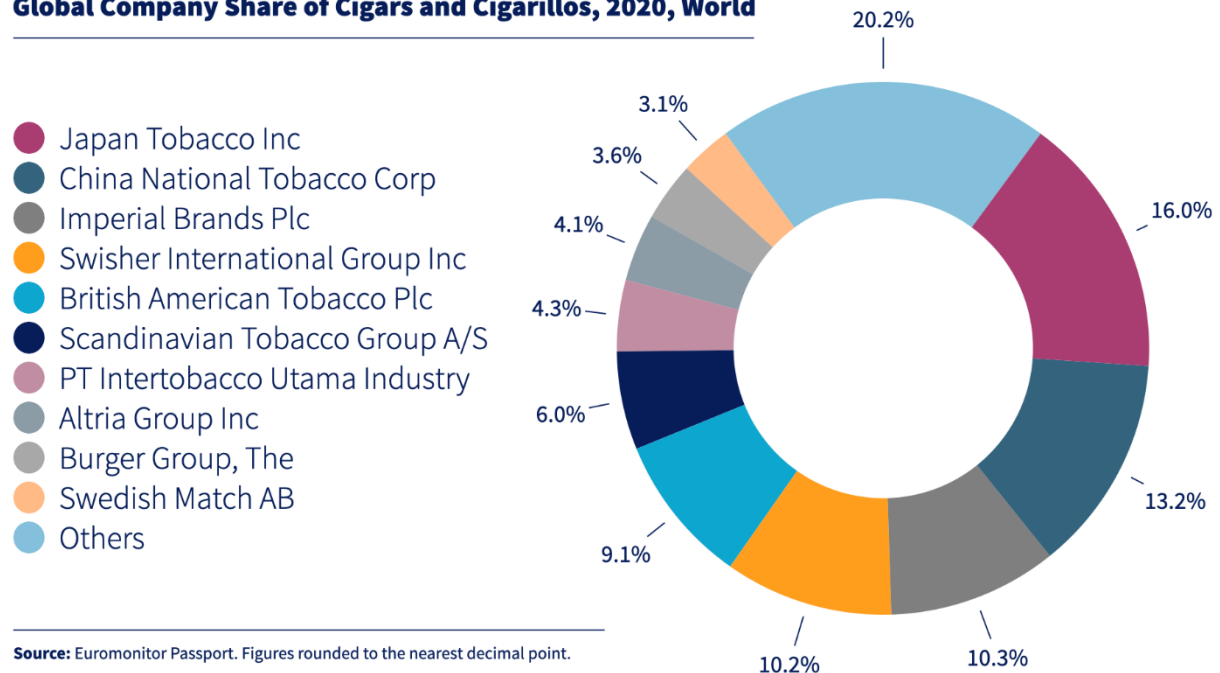
In 2020, the total retail market for cigarettes, the biggest global nicotine ecosystem category in both volume and value terms, was 5.2 trillion sticks with an estimated value of USD717 billion. Domestic sales of China National Tobacco Corporation, the Chinese state-owned monopoly, accounted for close to half of the world figure in volume terms. In addition, the company owns eight of the 10 largest cigarette brands in volume terms. The largest international manufacturers, British American Tobacco and Philip Morris International, hold 12.3% volume share each and have a presence in all regions. Notably, when excluding China from the world total, British American Tobacco's global cigarette volume share rises to 24.0%, and that of Philip Morris International rises to 23.8%. Philip Morris International is the brand owner of Marlboro (the best-selling international brand) in all markets except for the United States. Ultimately, the top three companies account for close to three-quarters of the world's cigarette volume sales.

The next two largest tobacco players, Japan Tobacco and Imperial Brands, which are also active in multiple regions, represent 8.1% and 3.5% of the global cigarette market, respectively. The big four international players are all publicly traded companies. However, the Japanese government has a minority stake of approximately 33.3% in Japan Tobacco. Altria Group, another publicly traded company, follows with 2.1% share, primarily due to sales of Marlboro in the United States. The remaining four manufacturers in the top 10 have comparatively smaller shares, ranging from 1.8% to 1.2%. Gudang Garam Tbk PT (1.8%), publicly traded and based in Indonesia, focuses on sales of kretek cigarettes, which are popular in the company's home market. Eastern Company SAE (1.6%), located in Egypt, has a commanding share of its home cigarette market, while also

specializing in categories such as smoking tobacco. The publicly traded KT&G Corporation (1.3%) is based in South Korea and exports cigarettes, heated tobacco, and other tobacco products internationally in markets across the Western Pacific, Eastern Mediterranean, South-East Asia, and Europe. ITC Limited (1.2%) is an Indian conglomerate that leads in cigarettes in its home market. ITC Limited is publicly traded but state enterprises own approximately 28.5% of the company.

Largest global producers of cigars and cigarillos

Global Company Share of Cigars and Cigarillos, 2020, World



Small differences between the leading cigars and cigarillos manufacturers

Unlike the cigarette category, where the leading company accounts for a substantial volume share of the total market, in cigars and cigarillos there are multiple manufacturers that have similar volume presence on a global level. In 2020, the total retail market for cigars and cigarillos was USD42.1 billion, or 4.9% of the global nicotine ecosystem in value terms. In value terms, cigars represent 83.7% of the category, with cigarillos accounting for the remaining 16.3%. In volume terms, cigars and cigarillos registered sales of 42.6 billion units (272.5 billion stick equivalents), of which 37.2% were cigars and 62.8% cigarillos.

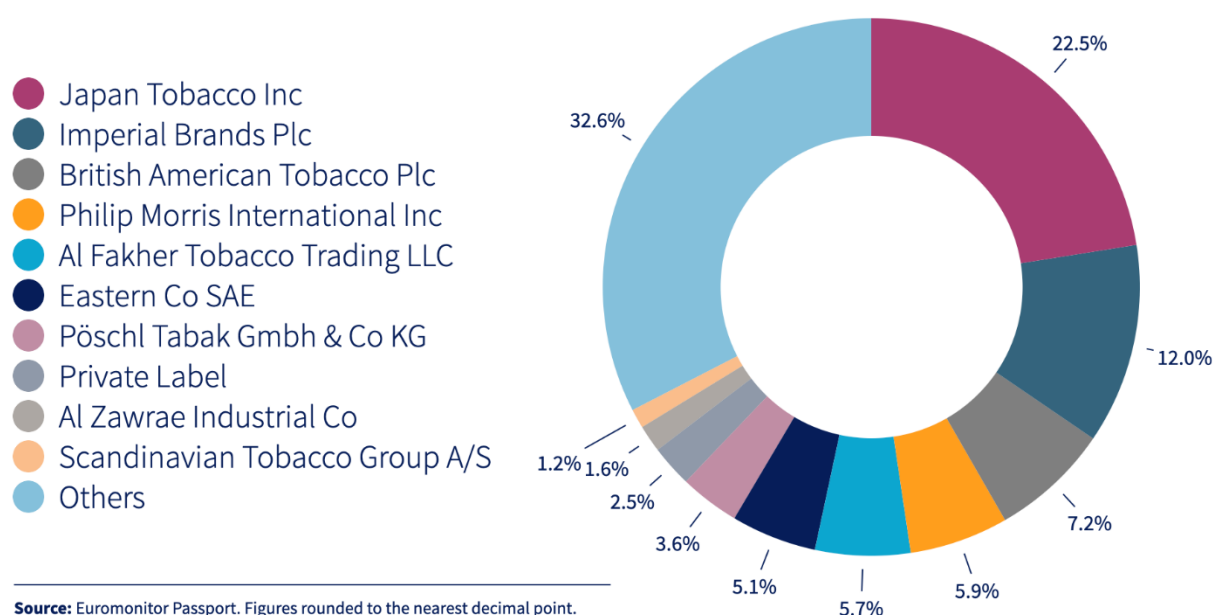
The three category leaders in cigars and cigarillos are also among the top 10 in cigarettes: Japan Tobacco, China National Tobacco Corporation, and Imperial Brands. These companies have 16.0%, 13.2%, and 10.3% volume shares in the category, respectively. Two other prominent cigarette producers are also in the list: British American Tobacco (9.1%) and Altria Group (4.1%). US-based Swisher International Group, which recently entered the tobacco-free oral nicotine market, holds a 10.2% share of global sales. Scandinavian Tobacco Group, based in Denmark and specializing in smoking tobacco, has a 6.0% share. PT Intertobacco Utama Industry (4.3%) owes its position to the rapid growth of cigarillos in Japan. Burger Söhne AG (3.6%), a privately held company based in Switzerland but active in multiple regions, and Swedish Match (3.1%), a publicly traded company in Sweden that also has a strong presence in oral tobacco, round out the top 10

list. In September 2021, Swedish Match announced the planned spin-off of its cigar business, signaling an end to the company's long-standing presence in the category, the last combustible tobacco category in its portfolio. The separation of its cigar business is expected to conclude in the second half of 2022. Collectively, the top 10 cigars and cigarillos manufacturers generated 79.8% of category retail volume globally, compared to 82.1% of global volumes for the top 10 cigarette producers.

The primary drivers of volume growth within the cigars and cigarillos category (2020 versus 2019: 24.2%; 2017-2020 CAGR: 17.2%) are twofold. Cigarillo volume sales were positively affected by category dynamics in Japan, where price-conscious consumers switched from cigarettes to price-fighter cigarillos. These products are marketed solely to attract price-conscious cigarette smokers, and so in this sense the trend does not represent a true switch to cigarillos. As a result, however, Japan Tobacco (Camel, Wakaba, Echo), British American Tobacco (Kool, Lucky Strike, Kent), and PT Intertobacco Utama Industry (Forte), all registered record sales increases. However, incoming regulatory changes in October 2021 that will eliminate the existing tax differential are likely to put a halt to this trend. Cigar volume sales were primarily affected by growth in China where the category distribution channels, mainly tobacco specialists, were less affected by COVID-19, while the product is growing in popularity. The main beneficiary of this was state-owned China National Tobacco Corporation.

Largest global producers of smoking tobacco

Global Company Share of Smoking Tobacco, 2020, World



Manufacturers of fine-cut tobacco in Europe and shisha in the Eastern Mediterranean shape the category

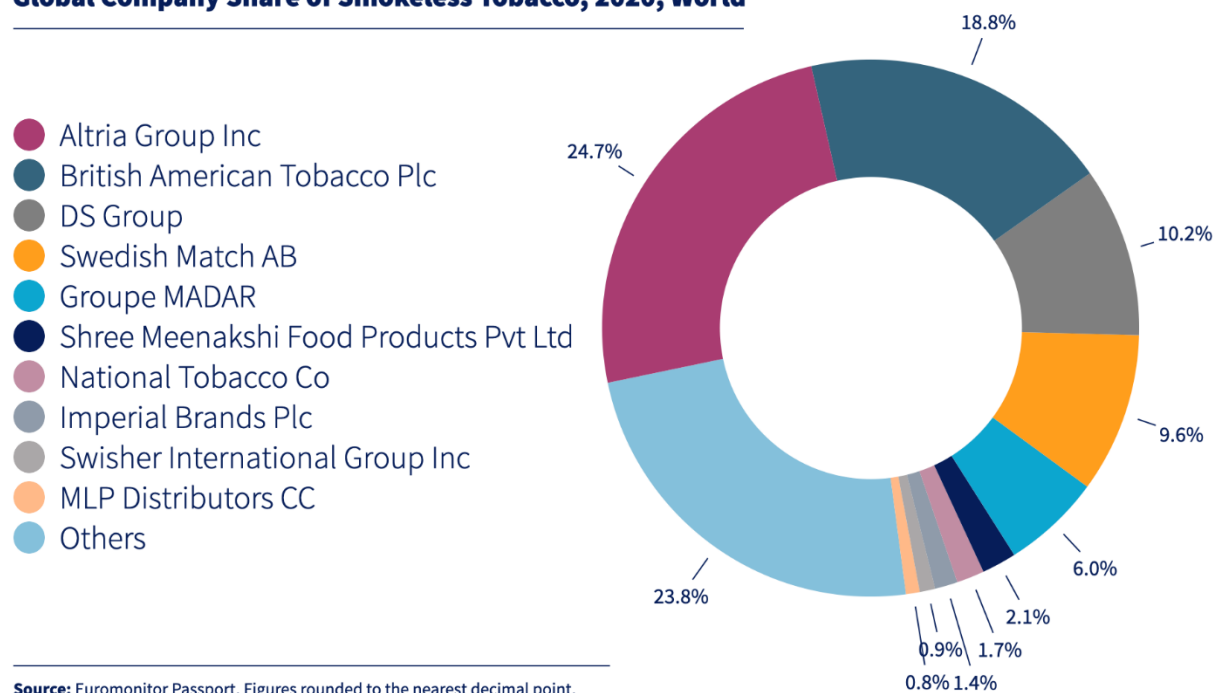
In 2020, the total retail market for smoking tobacco was USD34.3 billion, or 4.0% of the global nicotine ecosystem in value terms. Fine-cut tobacco represents 82.1% of the category, while pipe tobacco (including shisha) accounts for the remaining 17.9%. In volume terms, smoking tobacco

registered sales of 229.8 million kilograms (615.4 billion stick equivalents), of which 43.5% were fine-cut and 56.5% pipe tobacco. Five of the companies that have a presence in the top 10 list of smoking tobacco are also among the major cigarette producers. Japan Tobacco (22.5%) is leading the category in retail volume sales terms, followed by Imperial Brands (12.0%) and British American Tobacco (7.2%). Philip Morris International (5.9%) comes fourth, while state-owned Eastern Company (5.1%) is sixth. Scandinavian Tobacco Group (1.2%), which is also present in cigars and cigarillos, is the smallest manufacturer among the top 10 in volume terms. Another substantial player in the category is Al Fakher Tobacco Trading, based in the United Arab Emirates. Al Fakher Tobacco Trading specializes in pipe tobacco, shisha in particular, and is popular in the Eastern Mediterranean with a 5.7% global volume share. Pöschl Tobacco Group, a German family-owned company, has an extensive export business and plays a leading role in Europe, resulting in a 3.6% share of global volume. Al Zawrae Industrial Company, a privately held company in Jordan, distributes tobacco molasses and registers 1.6% volume share. Collectively, the top 10 smoking tobacco manufacturers generated 67.4% of category retail volume globally.

Trends in smoking tobacco (2020 versus 2019: 0.5%; 2017-2020 CAGR: 0.6% in volume terms) are mainly driven by two factors. The first relates to affordability. Smokers for whom cost is an issue are switching to alternative fine-cut products. This is particularly prevalent in a number of markets in Europe, including Germany, the United Kingdom, France, Italy, and Spain, which all registered year-on-year volume and value increases in 2020. The second is pipe tobacco, mainly shisha, which is popular in the Eastern Mediterranean, particularly in Egypt, Saudi Arabia, and countries with a substantial Middle Eastern population, such as Germany. Nevertheless, smoking tobacco has experienced stable total volumes in recent years, while growth is primarily achieved through pricing in value terms.

Largest global producers of smokeless tobacco

Global Company Share of Smokeless Tobacco, 2020, World



The leaders in smokeless tobacco are involved in the US-style moist snuff market

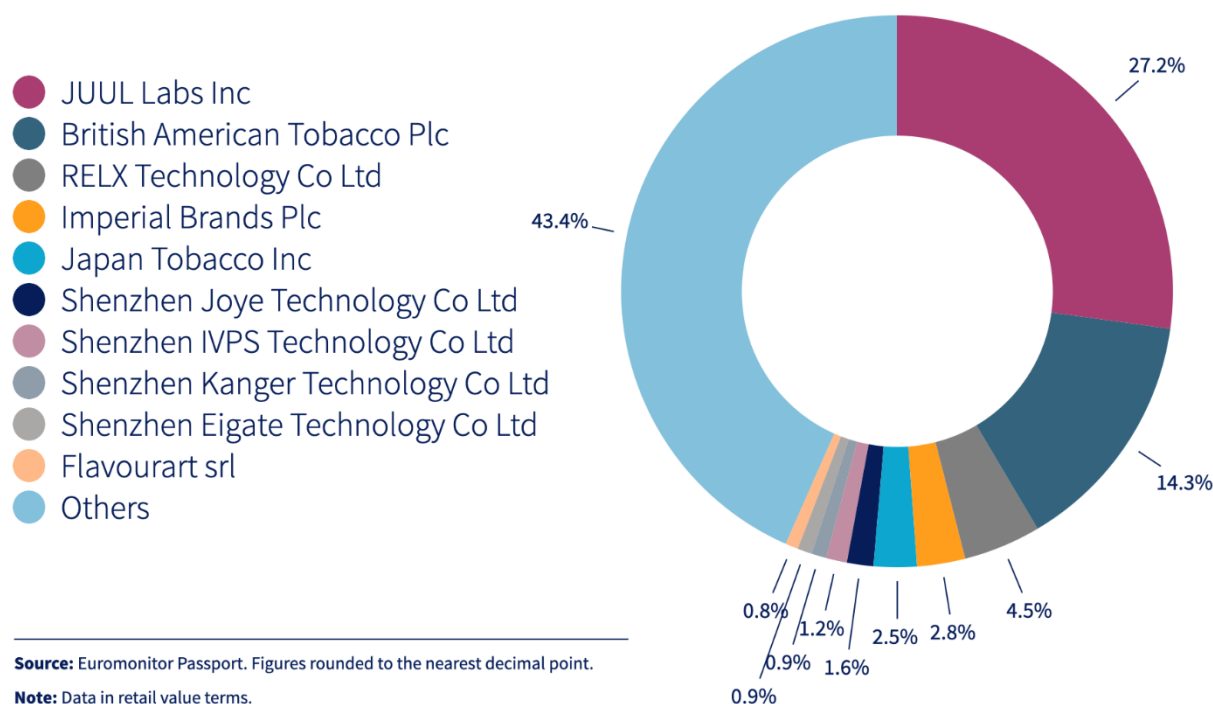
In 2020, the total retail market for smokeless tobacco was USD13.8 billion, or 1.6% of the global nicotine ecosystem in value terms. US-style moist snuff represents 72.8% of the category; Swedish-style snus, 19.8%; and chewing tobacco, 7.4%. In volume terms, smokeless tobacco registered sales of 126.3 million kilograms (144.5 billion stick equivalents), of which 56.1% were US-style moist snuff, 7.3% Swedish-style snus, and 36.5% chewing tobacco. Only three manufacturers that are present in the top 10 cigarettes list are also present in smokeless tobacco.

Altria Group (Copenhagen, Skoal) is the biggest category player with 24.7%, followed by British American Tobacco (Grizzly) with 18.8%, while among the multinationals Imperial Brands (Knox, Skruf) has a smaller presence of 1.4% in volume terms. Swedish Match (9.6%), which is also present in the cigars and cigarillos and the tobacco-free oral nicotine categories, is fourth. DS Group (10.2%), an Indian conglomerate with a presence in other fast-moving consumer goods sectors, owes its rank to chewing tobacco sales in its home market, which are large enough to place it in the top three. Groupe MADAR, which resulted from the restructuring of the National Tobacco and Match company in Algeria, is a single-market operator with 6.0% of global sales. Shree Meenakshi Food Products Pvt Ltd (2.1%) is another Indian company with a presence in chewing tobacco in India and Pakistan. National Tobacco Company (1.7%) is a privately held manufacturer located in the United States that has a smaller presence in the cigars and cigarillos and the smoking tobacco categories. MLP Distributors CC (0.9%) is a leading producer of US-style moist snuff in South Africa. Collectively, the top 10 smokeless tobacco manufacturers generated 76.2% of category retail volume globally.

Smokeless tobacco is a relatively stable category which has experienced moderate rates of decline in volume terms in recent years (2020 versus 2019: -1.2%; 2017-2020 CAGR: -1.9%). This is to some extent a result of the gradual decline in popularity of chewing tobacco in India, resulting in part from health awareness campaigns. That being said, chewing tobacco sales do not include local products such as gutkha and paan, which are illegal in India yet widely consumed in the country. In Scandinavia, COVID-19 travel restrictions put downward pressure on Swedish-style snus and consumers are switching to alternatives, mainly tobacco-free oral nicotine.

Largest global producers of vaping products

Global Company Share of Vaping Products, 2020, World



Vaping products growth slowing down due to a mix of health concerns and regulatory changes

In 2020, the total retail market for vaping products was USD21.1 billion, or 2.5% of the global nicotine ecosystem in value terms. Closed vaping systems represent 64.1% of the category's value, while open vaping systems account for the remaining 35.9%. Unlike most other categories, only three of the leading cigarette manufacturers are among the top 10 vaping product companies: British American Tobacco (VUSE), 14.3%; Imperial Brands (blu), 2.8%; and Japan Tobacco (Logic), 2.5%. JUUL Labs remains the leader with 27.2%, due to the sales of its closed systems in the United States. It is worth noting that Altria Group, present in other categories, acquired a 35% stake in the company, subject to antitrust clearance.⁷ RELX Technology, China's largest e-cigarette maker, has registered strong growth and is now firmly among the leaders of the category. In addition, four other Chinese makers are also in the list: Shenzhen Joye Technology, Shenzhen IVPS Technology, Shenzhen Kanger Technology, and Shenzhen Eigate Technology, accounting for below 2% each. FlavourArt srl, an Italian producer of vaping liquids, completes the list.

One of the traits that distinguishes the vaping products category from the rest of the global nicotine ecosystem is that it remains largely fragmented and is not dominated by the largest tobacco companies. Collectively, the top 10 vaping products manufacturers generated only 56.6% of category retail value globally, the lowest share of all. Consumers from different markets, even within the same region, often have widely different product preferences. The biggest global vaping products market is the United States, followed by the United Kingdom and China. Several

⁷ Businesswire. (2018). Altria makes \$12.8 billion minority investment in JUUL to accelerate harm reduction and drive growth. Retrieved August 25, 2021, from <https://www.businesswire.com/news/home/20181220005318/en/Altria-Makes-12.8-Billion-Minority-Investment-in-JUUL-to-Accelerate-Harm-Reduction-and-Drive-Growth>

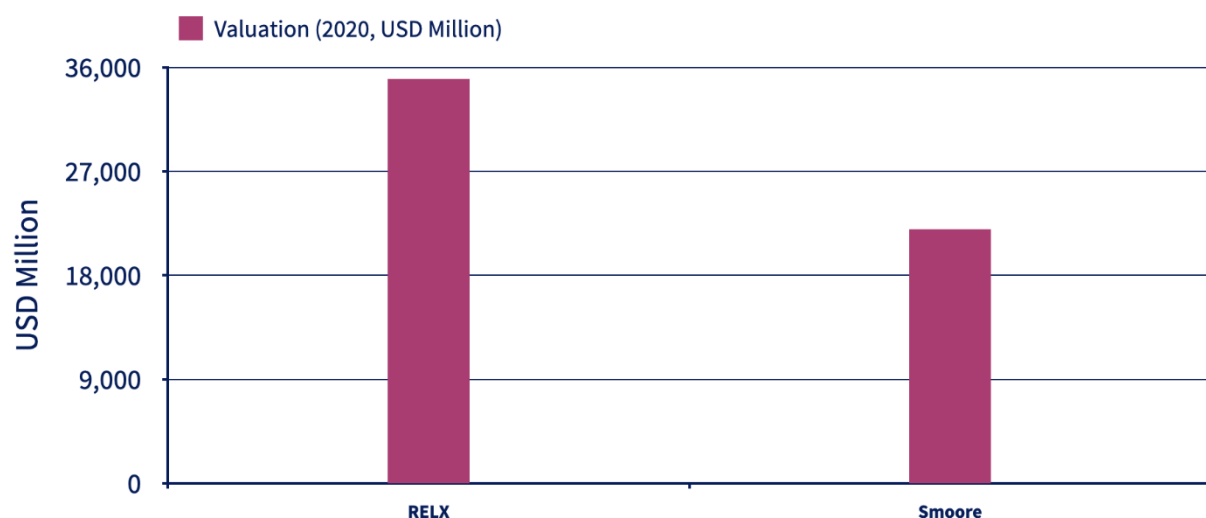
European countries have also contributed to value growth between 2017 and 2020: France, Germany, Poland, Russia, and Italy.

While the category experienced double-digit value increases between 2017 and 2019 (2017-2020 CAGR: 23.1%), 2020 proved to be challenging. This was partially due to market developments in the United States. In 2019, EVALI, the acronym for e-cigarette or vaping use-associated lung injury, was connected to the deaths of dozens of people across the country. Although the outbreak was later proven to be linked mostly to illicit THC vaping products, it had a considerable negative effect on the overall category trajectory. In addition, the closed vaping systems of JUUL Labs grew rapidly until 2019, but concerns related to underage consumption of its products resulted in demands for the removal of various flavors from the market. At the beginning of 2020, the FDA ordered the removal from the market of all cartridge-based vaping product flavor varieties except tobacco and menthol. Consequently, the growth of the entire category decelerated to single-digit figures (2020 versus 2019: 3.9%). At the time of this writing, the FDA had not yet ruled on product applications submitted by leading manufacturer JUUL Labs.

The rise of vaping product manufacturers in China

RELX Technology Inc and Smoore International Holdings Ltd

Valuation at IPO (2020)



Source: Reuters, Vaping 360.

Major Chinese vaping product manufacturers are going public

Founded in 2018, Beijing-based RELX Technology is among the fastest growing companies in the global nicotine ecosystem. Although vaping products in China registered a value growth slowdown in 2020, RELX Technology was able to remain relatively unscathed, due to its aggressive offline retail expansion prior to the internet retailing ban in the country in late 2019. The Chinese manufacturer made its debut on the New York Stock Exchange (NYSE) in 2021 through its initial

public offering (IPO), which raised over USD1.4 billion. This translated into an initial market capitalization of around USD35 billion.⁸

Smooore International Holdings Ltd, based in Shenzhen, China, is another major vaping product manufacturer that exports its products around the world. The company has partnered with other leading players in the global nicotine ecosystem, including Japan Tobacco and British American Tobacco. In mid-2020, Smooore International Holdings offered shares in its Hong Kong IPO, raising close to USD1 billion, giving the company a USD21.8 billion valuation.^{9,10}

However, the success of the public offerings was soon overshadowed by draft proposals from Chinese regulators released in March 2021 that suggest vaping products could be treated similarly to cigarettes. As a result, the shares of the listed companies were hit hard.

Nevertheless, two other Chinese vaping product specialists are also considering IPOs—Aspire Global¹¹ and Shenzhen IVPS Technology Company Ltd, producer of the SMOK brand.¹² Other smaller players are also gaining global recognition. For example, Geekvape announced an official partnership with the French soccer club Paris Saint-Germain. The two entities will be working together on marketing campaigns and television commercials.¹³

⁸ Reuters. (2021) Chinese vaping firm RELX valued at nearly \$35 billion in U.S. market debut. Retrieved August 25, 2021, from <https://www.reuters.com/article/us-relx-technology-ipo-idUSKBN29R273>

⁹ Reuters. (2020). Smooore International raises \$918 million in Hong Kong IPO: sources. Retrieved August 25, 2021, from <https://www.reuters.com/article/us-smooore-ipo-hongkong-idUSKBN2470J6>

¹⁰ Cision. (2020). Smooore, Vapresso's parent, is the first vaping company listed in Hong Kong. Retrieved August 25, 2021, from <https://www.prnewswire.com/news-releases/smoore-vapresso-parent-is-the-first-vaping-company-listed-in-hong-kong-301093681.html>

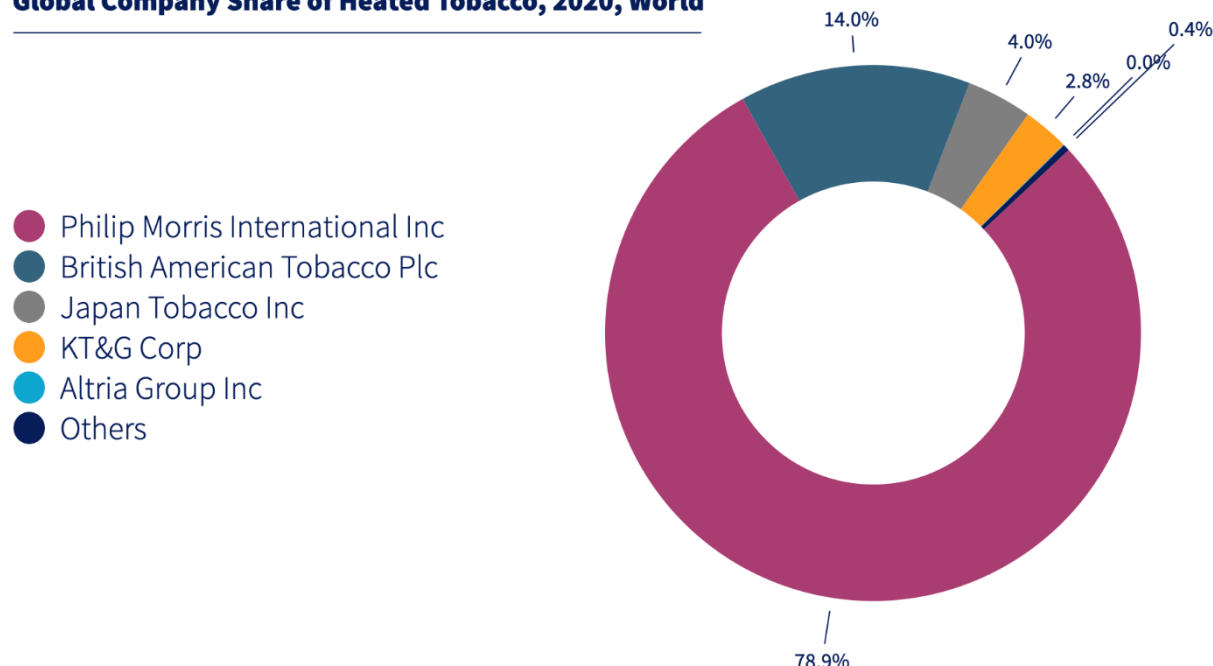
¹¹ Nasdaq. (2021). Chinese vaping brand Aspire Global sets terms for \$120 million US IPO. Retrieved August 25, 2021, from <https://www.nasdaq.com/articles/chinese-vaping-brand-aspire-global-sets-terms-for-%24120-million-us-ipo-2021-07-16>

¹² Bloomberg. (2021). Chinese vaping firm weighs \$500 million Hong Kong IPO. Retrieved August 25, 2021, from <https://www.bloomberg.com/news/articles/2021-08-23/chinese-vaping-firm-is-said-to-mull-500-million-hong-kong-ipo>

¹³ Tobacco Journal International. (2021). Geekvape and Paris Saint-Germain announce official partnership. Retrieved August 25, 2021, from http://www.tobaccojournal.com/Geekvape_and_Paris_Saint-Germain_announce_official_partnership.56556.0.html

Largest global producers of heated tobacco products

Global Company Share of Heated Tobacco, 2020, World



Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Philip Morris International leads in heated tobacco but competition is growing

In 2020, the total retail market for heated tobacco products, a category that includes both tobacco heating devices and consumables, was USD20.8 billion, or 2.4% of the global nicotine ecosystem in value terms. In volume terms, heated tobacco registered sales of 94.5 billion sticks. In contrast to vaping products, where multiple smaller players are competing around the world, in heated tobacco the field is primarily contested by the big international manufacturers, which represent the vast majority of the global market.

Philip Morris International, 78.9%, is the largest category player, offering its heated tobacco system IQOS in over 60 markets.¹⁴ British American Tobacco, 14.0%, is also investing in its alternative products portfolio. In 2020, the company's heated tobacco product (glo) was available in 20 markets.¹⁵ Japan Tobacco, 4.0%, another player in the category, relies mainly on sales of its heated tobacco products (Ploom) in its home market, which is also the largest market in the world for heated tobacco. KT&G Corporation, 2.8%, signed a strategic agreement with Philip Morris International at the beginning of 2020 for the commercialization of the company's smoke-free products. As a result, KT&G Corporation started the global expansion of its heated tobacco portfolio (lil) in Russia and Ukraine, which was later followed by six new markets in 2021. Altria Group, which has the rights to sell IQOS in the United States, launched the product in a few test regions. The remaining sales are attributed to the limited presence of companies including Imperial Brands. Imperial Brands launched its heated tobacco device (Pulze) in Japan, but later in 2021 announced its exit from the market. Other smaller tobacco manufacturers in this market include Poda Holdings Inc (Beyond Burn), which commenced a PMTA process in the United

¹⁴ Philip Morris International Inc. (2021). 2020 Annual Report.

¹⁵ British American Tobacco Plc. (2021). 2020 Annual Report.

States.¹⁶ In August 2021, Imperial Brands launched Pulze in the Czech Republic, part of the new company strategy for the product line.¹⁷

While the category is showing strong volume growth (2020 versus 2019: 29.6%; 2017-2020 CAGR: 56.6%) globally, Japan remains a key market for heated tobacco. Japan is the country where the product first gained significant popularity, and in 2020 heated tobacco accounted for around a fifth of the total local nicotine ecosystem; it also represents 40.9% of the global category volume sales. Nevertheless, there are signs that the category is maturing in Japan, such as significantly lower year-on-year growth compared to the recent past, even though the product benefited from higher rates of consumption at home during COVID-19. Regardless, this is the only market where all four leading players are present and where new heated tobacco product launches regularly occur. For example, in August 2021, Philip Morris International introduced the next-generation heated tobacco device IQOS ILUMA together with the new TEREA SMARTCORE STICK, which will make their market debut in Japan.¹⁸

In 2020, the FDA issued modified risk tobacco product (MRTTP) orders for several IQOS variants, permitting the marketing of these products with reduced exposure claims. However, at the time of this writing, an ongoing legal dispute regarding claims that IQOS infringes two patents owned by British American Tobacco is preventing Philip Morris International and Altria Group from importing infringing products.

Product perception and the underlying regulations are also important for the development of the category. In Euromonitor's *Global Nicotine Survey*, around a third of the respondents believe that heated tobacco is somewhat or much safer than cigarettes. In contrast, about half of the respondents believe the same of vaping products. In the new realities shaped by COVID-19, governments could see heated tobacco as a target for excise hikes to help cover the extensive costs imposed by the pandemic.

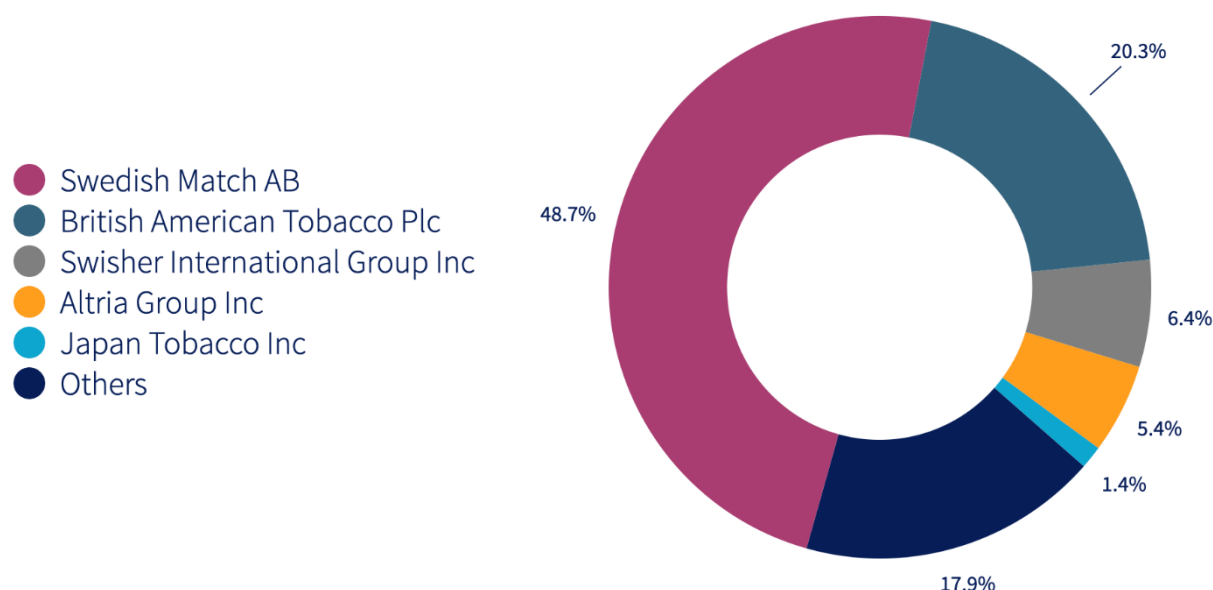
¹⁶ Poda Lifestyle and Wellness Ltd. (2021). Poda to commence PMTA process in the USA. Retrieved August 25, 2021, from <https://podalifestyle.com/wp-content/uploads/2021/08/2021-08-24-PressRelease-Poda-to-Commence-PMTA-Process-in-the-USA.pdf>

¹⁷ Imperial Brands PLC. (2021). Pulze and iD heated tobacco products launched in Czech Republic. Retrieved September 8, 2021, from <https://www.imperialbrandsPLC.com/media/news-and-features/2021/pulze-and-id-heated-tobacco-products-launched-in-czech-republic.html>

¹⁸ Philip Morris International Inc. (2021). Philip Morris International launches new IQOS ILUMA in Japan to accelerate the achievement of a smoke-free future. Retrieved August 25, 2021, from <https://www.pmi.com/media-center/press-releases/press-details/?newsId=24261>

Largest global producers of tobacco-free oral nicotine

Global Company Share of Tobacco-Free Oral Nicotine, 2020, World



Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Swedish Match and British American Tobacco take the lead in tobacco-free oral nicotine

In 2020, the total retail market for tobacco-free oral nicotine was USD1.2 billion, or 0.1% of the global nicotine ecosystem in value terms, the smallest category with the largest year-on-year volume growth performance (2020 versus 2019: 166.9%). Most of the leading manufacturers are well established in cigarettes and other traditional tobacco products. Swedish Match (48.7%), one of the pioneers in the category, is selling its nicotine pouches ZYN in the United States and Europe. British American Tobacco (20.3%) is also expanding within the category through sales of VELO in 23 markets worldwide.¹⁹ Swisher International Group (6.4%), a leading player in the cigars and cigarillos and the smokeless tobacco categories, has also recently entered the market with its Rogue brand in the United States, the largest market for the product type. Altria Group (5.4%) acquired on! brand nicotine pouches in 2019. The company made significant progress in increasing product availability, growing its store presence fivefold in 2020.²⁰ Japan Tobacco (1.4%) is active in nine markets, including Scandinavia and the United States, through its Nordic Spirit brand.²¹ Collectively, the top five tobacco-free oral nicotine manufacturers generated 82.1% of category retail volume globally.

¹⁹ British American Tobacco PLC. (2021). 2020 Annual Report.

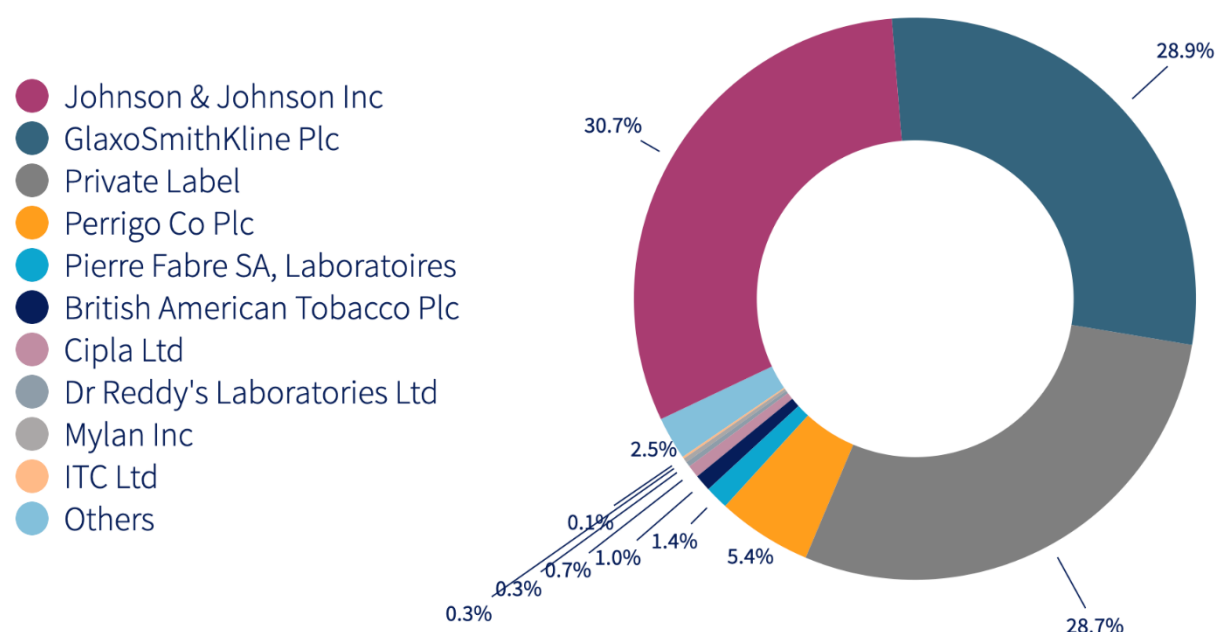
²⁰ Altria Group Inc. (2021). Annual Report 2020.

²¹ Japan Tobacco Inc. (2021). Annual Report 2021.

Tobacco-free oral nicotine's future will be closely connected with the developing regulatory framework. At the time of this writing, the regulatory burden remains light compared to most other categories. In addition, nicotine pouches could gain from ongoing user concerns related to vaping products. The future trajectory of the legislative framework in the European Union is also likely to be a key determinant in the category's long-term development. Finally, given its possible health benefits compared to smoking and even chewing tobacco types, oral nicotine could benefit from general attitudes and pressures in the context of the COVID-19 pandemic. The delivery system could further be used for other products beyond nicotine, such as cannabis.

Largest global producers of NRT smoking cessation aids

Global Company Share of NRT Smoking Cessation Aids, 2020, World



Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Only two tobacco manufacturers are present in NRT smoking cessation aids

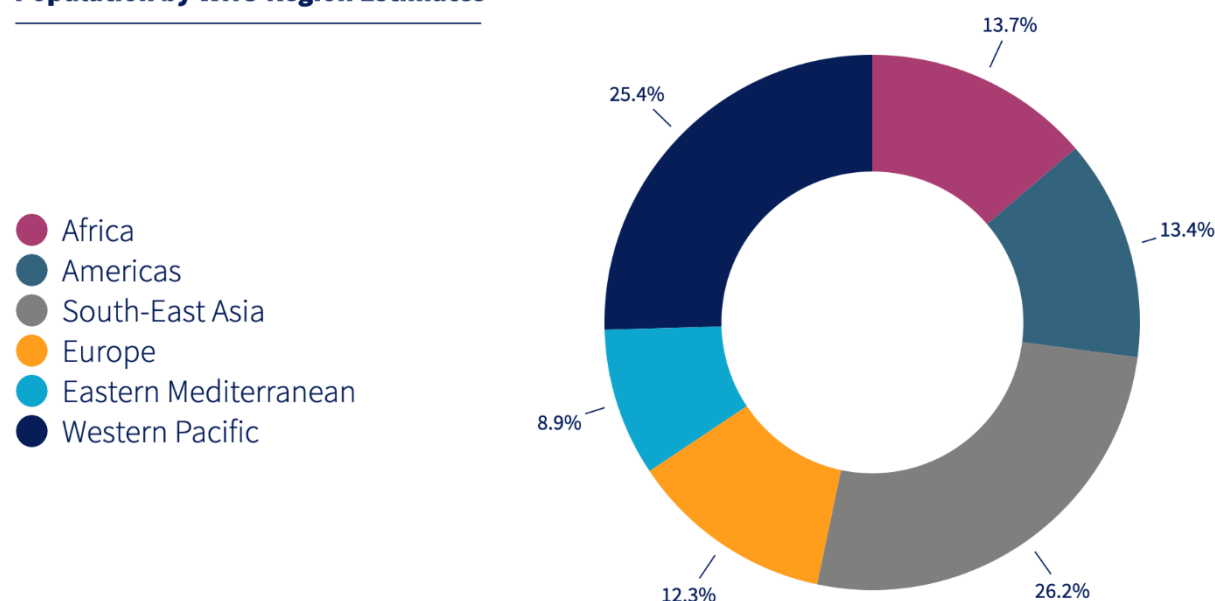
In 2020, the total retail market for NRT smoking cessation aids was USD2.5 billion, or 0.3% of the global nicotine ecosystem in value terms. Also in value terms, NRT gum represents 51.4% of the category; NRT lozenges, 21.3%; NRT patches, 20.4%; and NRT inhalers; 1.0%. The Americas and Europe are the only regions where the product type has substantial sales, accounting for 50.3% and 38.8% of total sales value, respectively. In fact, the only crossover between the category and traditional tobacco producers is British American Tobacco and ITC Limited, which each have shares of 1.0% or less. The leaders are Johnson & Johnson and GlaxoSmithKline Plc, collectively holding 59.6% value share of the market.

While NRT smoking cessation aids were previously the main products used for limiting and stopping cigarette consumption, the field is now occupied by other, much more rapidly growing categories, including vaping products, heated tobacco, and tobacco-free oral nicotine. For this reason, NRT smoking cessation aids sales growth has stagnated, increasing just 2.3% in value (2017-2020 CAGR) and 0.5% in volume over the same period. With no major nicotine ecosystem players sharing future plans for the category, it is likely it will continue to be dominated by manufacturers outside of the tobacco industry. In September 2021, Pfizer Inc voluntarily recalled 0.5 mg and 1.0 mg variants of its smoking cessation drug Chantix from the market due to high levels of nitrosamine being found in the product. Overexposure to nitrosamine is linked to an increased cancer risk. This development could further hamper the outlook of an already stagnating category.

Regional Nicotine Ecosystems

Population overview

Population by WHO Region Estimates



Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

South-East Asia and Western Pacific account for about half of the global population

Throughout this report, data and analyses are organized around the WHO geographical categories, which comprise six regions: Africa, the Americas, South-East Asia, Europe, Eastern Mediterranean, and Western Pacific. WHO estimates a world population of approximately 7.4 billion people for 2018.²² South-East Asia and Western Pacific account for roughly a quarter of the global population each, not least due to India and China, each of which has about 1.4 billion citizens. Africa, the Americas, and Europe constitute relatively equal parts of the global population with between 900 million and one billion people, while Eastern Mediterranean is the smallest WHO region with less than 700 million.

²² WHO. (2018). Population data by WHO Region. Retrieved August 25, 2021, from <https://apps.who.int/gho/data/view.main.POP2020>

Regional share overview

Regional Ecosystem by Product Category, Retail Value USD Million, 2020

Product Category	World	Africa	Americas	Eastern Mediterranean	Europe	South-East Asia	Western Pacific
Cigarettes	717,310	9,920	125,393	30,001	194,631	49,526	307,839
Cigars and Cigarillos	42,070	133	13,685	125	6,301	87	21,739
Smoking Tobacco	34,253	262	2,422	2,928	24,769	50	3,822
Smokeless Tobacco	13,756	347	10,887	21	2,055	441	5
Vaping Products	21,061	290	10,603	121	7,307	140	2,599
Heated Tobacco Products	20,775	127	101	328	8,803	No Presence	11,415
Tobacco-Free Oral Nicotine	1,174	No Presence	837	No Presence	337	-	No Presence
NRT Smoking Cessation Aids	2,501	6	1,257	18	969	30	221
TOTAL	852,900	11,085	165,185	33,541	245,173	50,275	347,641

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

Regional Ecosystem Heatmap by Product Category, % Share, Retail Value, 2020

Product Category	World	Africa	Americas	Eastern Mediterranean	Europe	South-East Asia	Western Pacific
Cigarettes	717,310	1.4%	17.5%	4.2%	27.1%	6.9%	42.9%
Cigars and Cigarillos	42,070	0.3%	32.5%	0.3%	15.0%	0.2%	51.7%
Smoking Tobacco	34,253	0.8%	7.1%	8.5%	72.3%	0.1%	11.2%
Smokeless Tobacco	13,756	2.5%	79.1%	0.2%	14.9%	3.2%	0.0%
Vaping Products	21,061	1.4%	50.3%	0.6%	34.7%	0.7%	12.3%
Heated Tobacco Products	20,775	0.6%	0.5%	1.6%	42.4%	No Presence	54.9%
Tobacco-Free Oral Nicotine	1,174	No Presence	71.3%	No Presence	28.7%	0.0%	No Presence
NRT Smoking Cessation Aids	2,501	0.2%	50.3%	0.7%	38.7%	1.2%	8.8%
TOTAL	852,900	1.3%	19.4%	3.9%	28.7%	5.9%	40.8%
% of Population	-	13.7%	13.4%	8.9%	12.3%	26.2%	25.4%
Category Share Less % Population	-	-12.4%	6.0%	-22.3%	16.4%	-3.0%	15.3%

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

Americas and Europe account for the highest value share in most categories

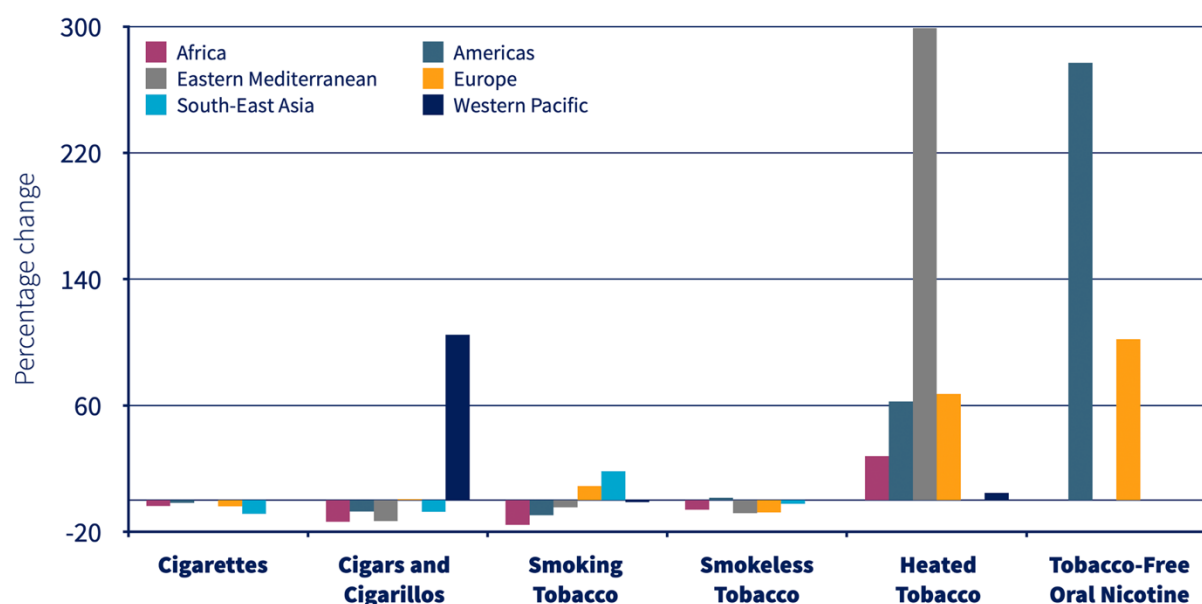
In each of the six regions defined by WHO, cigarettes constitute the largest nicotine ecosystem category in terms of both volume and value. The region with the highest share of cigarettes as a share of total nicotine ecosystem value sales is South-East Asia (98.5%), and the region with the lowest share is the Americas (75.9%). Notably, this estimate excludes illicit cigarette sales and locally manufactured tobacco products, such as bidis in India. Regarding other non-cigarette product categories, cigars and cigarillos holds the highest value share in the Americas (8.3%), while smoking tobacco accounts for 10.1% in Europe. Smokeless tobacco and vaping products stand out in the Americas as they represent 6.6% and 6.4% of total nicotine ecosystem value sales, respectively. Europe (3.6%) and Western Pacific (3.3%) account for the highest product value shares in heated tobacco, while tobacco-free oral nicotine and NRT smoking cessation aids register no share above 1.0% in any region.

In several nicotine categories, Europe and the Americas tend to take the biggest proportion of value sales. One clear outlier is Western Pacific, which is strongly affected by the size of China, especially in the cigarettes and the cigars and cigarillos categories; and Japan, especially in heated tobacco.

The heatmap provides another view of the global regions and their corresponding populations. In three regions, the nicotine ecosystem is relatively large compared to populations: Europe, Western Pacific, and the Americas. On the other hand, in the other three regions (South-East Asia, Africa, and Eastern Mediterranean), the nicotine ecosystem is relatively small compared to their populations.

Category movement by region

Retail Volume Annual Percentage Change, 2020 vs 2019



Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Heated tobacco and tobacco-free oral nicotine show the strongest volume growth rates

Volume movements in 2020 versus 2019 reveal important regional differences for key global nicotine categories. In cigarettes, the category is shrinking in South-East Asia, Europe, Africa, and the Americas, while it is stable to increasing in Eastern Mediterranean and Western Pacific. In cigars and cigarillos, most regions are declining. However, the category demonstrated strong growth in Western Pacific, resulting from cigarillo sales in Japan and cigars in China; this is shifting the global balance. In smoking tobacco, the biggest decline registered in Africa, the Americas, and Eastern Mediterranean, but the category performed better in South-East Asia and Europe. While smoking-tobacco category growth in South-East Asia is relative to a small base, in Europe it is in part due to downtrading cigarette smokers switching to fine-cut products.

In smokeless tobacco, the overall trajectory in all regions is downward, except in the Americas, where volume sales of US-style moist snuff are stable. In heated tobacco, growth is present in all regions except South-East Asia, where the product has yet to be introduced. The growth in heated tobacco is the highest in Eastern Mediterranean, but it is starting from a comparatively low base. The same is the case for tobacco-free oral nicotine, which has been introduced in the Americas, Europe, and Indonesia only; growth rates are among the highest across all product types.

Category split: Western Pacific region

Western Pacific Region — Product Category Summary, 2020

Product Category	Retail Value (USD million)	% Retail Value	Retail Value % Change 2020 vs 2019	Retail Value % Change 2017-2020 CAGR	Retail Volume % Change 2020 vs 2019	Retail Volume % Change 2017-2020 CAGR
Cigarettes	307,839	88.6%	2.7%	3.1%	0.1%	-0.2%
Cigars and Cigarillos	21,739	6.3%	42.1%	56.1%	104.8%	111.3%
Smoking Tobacco	3,822	1.1%	13.6%	13.6%	-1.3%	0.5%
Smokeless Tobacco	5	0.0%	4.5%	10.3%	-0.2%	1.3%
Vaping Products	2,599	0.7%	17.3%	36.2%	N/A	N/A
Heated Tobacco Products	11,415	3.3%	6.8%	31.6%	4.6%	29.2%
Tobacco-Free Oral Nicotine	No Presence	No Presence	No Presence	No Presence	No Presence	No Presence
NRT Smoking Cessation Aids	221	0.1%	1.9%	1.8%	1.9%	1.5%
Total	347,641	100.0%	4.9%	5.6%	N/A	N/A

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

(See Appendix of this report for list of countries included in each region.)

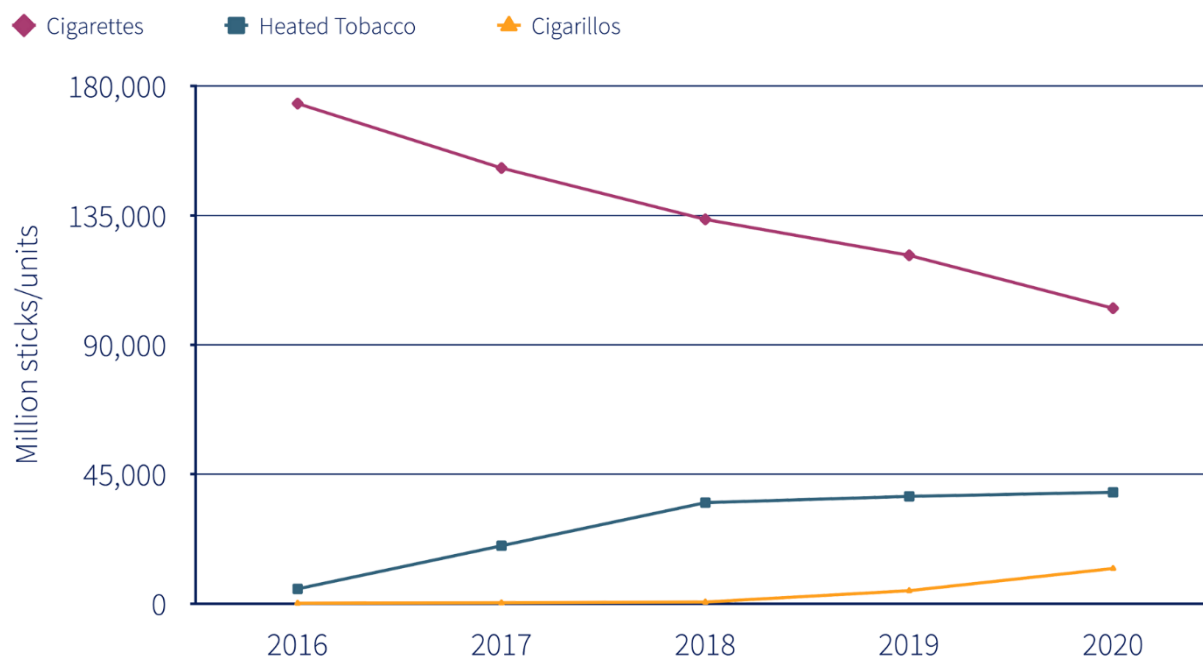
China dominates Western Pacific; Japan is the largest global heated tobacco market

Western Pacific is strongly affected by market dynamics in China, which is the largest country in the global nicotine ecosystem. Other large markets in the region include Japan, South Korea, Australia, and the Philippines. Cigarettes account for 88.6% of total retail value, followed by cigars and cigarillos (6.3%) and heated tobacco products (3.3%). All other categories account for a significantly smaller fraction of the regional nicotine ecosystem. Notably, at 40.8%, Western Pacific is the single largest region in the world in terms of nicotine ecosystem value.

In China, volume sales of cigarettes increased by 1.2% on an annual basis in 2020. Despite the imposed lockdowns due to COVID-19, the country resumed manufacturing and retailing in a number of key industries, including tobacco. China also strongly influenced the regional growth in cigars, where the most popular distribution channel for the category, tobacco specialists, was less affected by the pandemic. In Japan, cigarette volume sales marked another sharp year-on-year decline, 15.2%, affected by COVID-19 restrictions and a migration to heated tobacco and cigarillos. Japan is the largest global heated tobacco market, and the category benefited from individuals spending more time at home due to the pandemic. Nevertheless, as the category matures, heated tobacco growth rates slowed down in Japan in 2020.

Japan's shift from cigarettes

Cigarettes, Cigarillos and Heated Tobacco Volume Movement, Japan, 2016-2020



Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Data in retail volume terms.

Cigarillos attract price-conscious cigarette smokers in Japan

In Japan, cigarillos registered substantial year-on-year volume growth (172.3%) in 2020 against 2019, benefiting from price-conscious consumers switching from cigarettes to price-fighter cigarillos. This resulted in multiple product launches from British American Tobacco (Kool, Lucky Strike, and Kent) and Japan Tobacco (Wakaba, Echo, and Camel), among others. Distribution of cigarillos has also expanded since 2019, especially in convenience stores. Existing excise differentials between the two products are supporting the trend, but tax code amendments expected to enter into force towards the end of 2021 are likely to put a halt to this trend. Another important factor that supports the rapid decline in cigarettes in Japan is the growth of heated tobacco.

Top company shares: Western Pacific region

Western Pacific Region Company Shares, 2020

Rank	Cigarettes (88.6%*)	Cigars and Cigarillos (6.3%)	Heated Tobacco (3.3%)	Smoking Tobacco (1.1%)	Vaping Products** (0.7%)	NRT Smoking Cessation Aids** (0.1%)	Smokeless Tobacco (0.0%)
1	China National Tobacco Corp 85.2%	Japan Tobacco Inc 35.6%	Philip Morris International Inc 70.0%	Imperial Brands Plc 52.7%	RELX Technology Co Ltd 38.1%	Johnson & Johnson Inc 63.4%	Raa S AB 50.0%
2	Japan Tobacco Inc 3.8%	China National Tobacco Corp 30.6%	British American Tobacco Plc 16.4%	British American Tobacco Plc 27.0%	Shenzhen IVPS Technology Co Ltd 6.7%	GlaxoSmithKline Plc 22.0%	Japan Tobacco Inc 47.0%
3	Philip Morris International Inc 3.2%	British American Tobacco Plc 19.5%	Japan Tobacco Inc 7.5%	Japan Tobacco Inc 2.9%	Imperial Brands Plc 1.4%	Perrigo Co Plc 4.9%	British American Tobacco Inc 2.9%
4	British American Tobacco Plc 2.3%	PT Intertobacco Utama Industry 10.1%	KT&G Corp 5.5%	Mac Baren Tobacco Co A/S 2.4%	K3 Distribution 0.6%	Mylan Inc 2.8%	-
5	Vietnam National Tobacco Corp 1.7%	Philip Morris International Inc 1.4%	-	Von Eicken GmbH, Johann Wilhelm 2.2%	Fantasi Lab Venture Co 0.5%	Dr Reddy's Laboratories Ltd 1.9%	-

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: *The figure in parentheses below each category name relates to that category's share of the total nicotine ecosystem (in retail value terms).

**Company share in retail volume terms for all categories except vaping products and NRT smoking cessation aids (retail value share).

China National Tobacco Corporation leads in cigarettes; four companies compete in heated tobacco

China National Tobacco Corporation (85.2%) is the dominant producer in the largest category in the region, cigarettes, and places second in cigars and cigarillos with a volume share of 30.6%. The company produced 2.4 trillion cigarette sticks in 2020, about double the combined total world cigarette retail sales of the next two global players, British American Tobacco and Philip Morris International. Vietnam National Tobacco Corporation (1.7%), one of the largest cigarette manufacturers in the world, is also in the top five list for cigarettes, through its performance in its home market.

Japan Tobacco is the market leader in Japan with a volume share of 59.8% in cigarettes. The company is also present in the heated tobacco category in the country, with a share of 9.0% in volume terms. However, in 2020, Philip Morris International remained the heated tobacco category leader in Japan, with a share of 72.5%. Japan was the first market in which the company launched its new IQOS ILUMA heated tobacco product in 2021, the brand's first tobacco-heating system with induction-heating technology, which uses no blade. The two other manufacturers present in heated tobacco in Western Pacific are British American Tobacco (16.4%) and KT&G Corporation (5.5%), mainly due to their sales in Japan and South Korea.

Category split: South-East Asia region

South-East Asia Region — Product Category Summary, 2020

Product Category	Retail Value (USD million)	% Retail Value	Retail Value % Change 2020 vs 2019	Retail Value % Change 2017-2020 CAGR	Retail Volume % Change 2020 vs 2019	Retail Volume % Change 2017-2020 CAGR
Cigarettes	49,526	98.5%	-0.6%	4.6%	-8.7%	-3.3%
Cigars and Cigarillos	87	0.2%	-1.7%	5.0%	-7.4%	0.4%
Smoking Tobacco	50	0.1%	22.1%	17.1%	18.3%	14.2%
Smokeless Tobacco	441	0.9%	3.8%	-3.6%	-2.4%	-6.3%
Vaping Products	140	0.3%	-47.2%	-9.3%	N/A	N/A
Heated Tobacco Products	No Presence	No Presence	No Presence	No Presence	No Presence	No Presence
Tobacco-Free Oral Nicotine	0	0.0%	N/A	N/A	N/A	N/A
NRT Smoking Cessation Aids	30	0.1%	9.1%	12.4%	6.9%	10.1%
Total	50,275	100.0%	-0.8%	4.4%	N/A	N/A

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

(See Appendix of this report for list of countries included in each region.)

Cigarettes decline in Indonesia; vaping products category suffers from regulatory and pandemic-related constraints

South-East Asia is the most populated region in the world, with 26.2% of the global population. The region includes big tobacco markets such as Indonesia, India, Thailand, and Bangladesh. However, its nicotine ecosystem accounts for just 6.0% of global value sales. In fact, this is the largest relative disparity between the size of the market and population in all regions. Although locally manufactured products, such as bidis in India, are not included in the data, factory-made hand-rolled kreteks, a significant category in Indonesia, are included. The cigarettes category takes 98.5% of total retail value, while no other category represents more than 1.0%.

Decreases in the volume of cigarettes occurred in all the top South-East Asian markets. Indonesia, which accounts for 55.0% of regional volume sales in 2020, registered a 9.8% year-on-year decline mainly due to lockdown effects and a significant excise tax hike. As a result, some of the leading

category players in the market introduced new propositions at lower price points to mitigate the effects of the excise tax increase. For example, HM Sampoerna, a subsidiary of Philip Morris International, introduced a more affordable brand, Sampoerna 234, in March 2020, which the company stated helped to solidify its share in the hand-rolled kretek cigarette category.

The ban on vaping products in India enacted toward the end of 2019 played a key role in the rapid decline of the category in the region. Another contributing factor is the rapid decline of sales of open vaping systems in Indonesia due to the economic shock caused by the COVID-19 pandemic. In addition, JUUL Labs, the biggest vaping products player globally, ended its presence in Indonesia only a year after entering the market. Heated tobacco products are not available in South-East Asia, while tobacco-free oral nicotine is present only in Indonesia as a result of sales by British American Tobacco, starting in 2020.

Top company shares: South-East Asia region

South-East Asia Region Company Shares in 2020

Rank	Cigarettes (98.5%*)	Smokeless Tobacco (0.9%)	Vaping Products** (0.3%)	Cigars and Cigarillos (0.2%)	Smoking Tobacco (0.1%)	NRT Smoking Cessation Aids** (0.1%)	Tobacco-Free Oral Nicotine (0.0%)
1	Philip Morris International Inc 21.4%	DS Group 33.2%	Shenzhen iSmoka Electronics Co Ltd 0.3%	Imperial Brands Plc 34.9%	Indonesian Tobacco Tbk PT 42.1%	Cipla Ltd 60.5%	British American Tobacco Plc 100.0%
2	Gudang Garam Tbk PT 18.3%	Shree Meenakshi Food Products Pvt Ltd 6.7%	Shenzhen Joye Technology Co Ltd 0.3%	Corporación Habanos SA 11.0%	Piangjai Industries (1989) Co Ltd 8.1%	Johnson & Johnson Inc 16.4%	-
3	British American Tobacco Plc 14.6%	Kaus Chemical Works 0.1%	Indonesian Juices 0.3%	Swisher International Group Inc 9.4%	Taru Martani PT 7.6%	ITC Ltd 9.7%	-
4	ITC Ltd 12.2%	-	Kai's Virgin Vapor 0.1%	Oettinger Davidoff AG 7.9%	Surapayanak Co Ltd 7.1%	Millimed Co Ltd 4.1%	-
5	Djarum PT 7.9%	-		J Cortes Cigars NV 4.5%	Pöschl Tabak GmbH & Co KG 0.1%	GlaxoSmithKline Plc 3.0%	-

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: *The figure in parentheses below each category name relates to that category's share of the total nicotine ecosystem (in retail value terms).

**Company share in retail volume terms for all categories except vaping products and NRT smoking cessation aids (retail value share).

Philip Morris International leads in cigarettes; local manufacturers are among the top category players

Philip Morris International (21.4%) is the regional leader in cigarettes mainly due to sales in Indonesia, where the company comes second after Gudang Garam, and Thailand, where it is the category leader. Among the key brands for the company in the region are A Mild, DJI Sam Soe, L&M, and Marlboro. Gudang Garam (18.3%) owes its second position in the region to sales of kretek cigarettes in Indonesia, which is also the home market of Djarum (7.9%). British American Tobacco (14.6%) leads cigarettes in Bangladesh but is also present in most other substantial cigarette markets in South-East Asia.

ITC Limited (12.2%) has a 77.9% share of the factory-made cigarette market in India, where it sells the three leading cigarette brands, Gold Flake, Wills, and Scissors. The company, which is partly owned by British American Tobacco (with a 29.7% stake), was active in vaping products in India prior to the 2019 vaping ban through its Eon E Vape brand. Since the ban, the category in South-East Asia remains fragmented and relatively small in total size. British American Tobacco is the only player in tobacco-free oral nicotine. The company has expanded its category presence through sales in minimarts across Indonesia.

Category split: Eastern Mediterranean region

Eastern Mediterranean Region — Product Category Summary, 2020

Product Category	Retail Value (USD million)	% Retail Value	Retail Value % Change 2020 vs 2019	Retail Value % Change 2017-2020 CAGR	Retail Volume % Change 2020 vs 2019	Retail Volume % Change 2017-2020 CAGR
Cigarettes	30,001	89.4%	8.9%	6.9%	0.1%	0.5%
Cigars and Cigarillos	125	0.4%	-5.2%	3.1%	-13.3%	-6.1%
Smoking Tobacco	2,928	8.7%	4.5%	9.4%	-4.5%	0.8%
Smokeless Tobacco	21	0.1%	18.6%	1.1%	-8.1%	-2.0%
Vaping Products	121	0.4%	201.0%	47.7%	N/A	N/A
Heated Tobacco Products	328	1.0%	895.0%	N/A	299.0%	N/A
Tobacco-Free Oral Nicotine	No Presence	No Presence	No Presence	No Presence	No Presence	No Presence
NRT Smoking Cessation Aids	18	0.1%	2.9%	2.0%	0.1%	-0.2%
Total	33,541	100.0%	9.6%	7.6%	N/A	N/A

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

(See Appendix of this report for list of countries included in each region.)

Cigarettes continue to grow but COVID-19–related limitations affected shisha in 2020

Eastern Mediterranean is the smallest region in terms of total population (8.9%). The region is the second smallest in the world in terms of nicotine ecosystem value (3.9%). The leading markets include Egypt, Saudi Arabia, and Iraq. Cigarettes account for 89.4% of the regional ecosystem in terms of value, followed by smoking tobacco (8.7%), largely driven by the popularity of shisha. Heated tobacco (1.0%) registered the highest year-on-year volume growth (299.0%) starting from a low base, primarily driven by sales in the United Arab Emirates. In 2020, tobacco-free oral nicotine was unavailable in Eastern Mediterranean.

Eastern Mediterranean is one of the few remaining regions where cigarettes demonstrated both value and volume growth on a yearly basis in 2020 and in 2017-2020 CAGR terms. This is driven by the stable market in Egypt and growth in locations such as Iraq. Notably, in 2021, Egypt started the process of opening up its market to foreign manufacturers. Local authorities altered the initial

requirements for companies to submit their bids after complaints from a range of players²³, delaying the process, but this action could change the future dynamics of the category in the region.

The performance of the smoking tobacco category in Eastern Mediterranean is due to shisha, which grew in both value and volume terms. However, the category took a significant hit in 2020. As a result of COVID-19, the government in Egypt banned coffee shops and shisha houses from serving the product. The same happened in Saudi Arabia in 2020, where the ban on shisha took effect in major cities, including the capital Riyadh. In addition, tighter regulations were imposed on the importation of such products.

Top company shares: Eastern Mediterranean region

Eastern Mediterranean Region Company Shares, 2020

Rank	Cigarettes (89.4%*)	Smoking Tobacco (8.7%)	Heated Tobacco (1.0%)	Cigars and Cigarillos (0.4%)	Vaping Products** (0.4%)	Smokeless Tobacco (0.1%)	NRT Smoking Cessation Aids** (0.1%)
1	Eastern Co SAE 27.8%	Japan Tobacco Inc 34.1%	Philip Morris International Inc 100.0%	Corporación Habanos SA 28.0%	British American Tobacco PLC 26.5%	Régie Nationale des Tabacs et des Allumettes (RNTA) 40.1%	GlaxoSmithKline PLC 46.3%
2	British American Tobacco PLC 21.6%	Al Fakher Tobacco Trading LLC 13.2%	-	Scandinavian Tobacco Group A/S 9.7%	Shenzhen IVPS Technology Co Ltd 2.7%	Pan Parag India Ltd 20.1%	Johnson & Johnson Inc 11.3%
3	Philip Morris International Inc 15.7%	Eastern Co SAE 12.3%	-	Imperial Brands PLC 8.3%	Shenzhen Smoore Technology Co Ltd 1.9%	Shree Meenakshi Food Products Pvt Ltd 10.1%	Pierre Fabre SA, Laboratoires 10.6%
4	Imperial Brands PLC 6.5%	Al Zawrae Industrial Co 3.9%	-	Eastern Co SAE 3.6%	Shenzhen Joye Technology Co Ltd 1.3%	-	-
5	Japan Tobacco Inc 5.6%	Alandalus Flavoured Tobacco & Molassese Co LLC 0.8%	-	Régie Nationale des Tabacs et des Allumettes 3.1%	Artisan Vapor Co 0.8%	-	-

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: *The figure in parentheses below each category name relates to that category's share of the total nicotine ecosystem (in retail value terms).

**Company share in retail volume terms for all categories except vaping products and NRT smoking cessation aids (retail value share).

Eastern Company is the leader in cigarettes; local players are active in smoking tobacco

Eastern Company (27.8%) dominated the cigarette market in Egypt in 2020, with a volume share of 94.7%. In addition, the company is expanding its product portfolio in flavored cigarettes, while production capacity increases are also expected. Eastern Company's Cleopatra is the leading cigarette brand in Egypt, accounting for three-quarters of the category in terms of volume. The top four international manufacturers—British American Tobacco (21.6%), Philip Morris International (15.7%), Imperial Brands (6.5%), and Japan Tobacco (5.6%)—are the other substantial cigarette players in the region.

²³ Reuters. (2021). Egypt amends tender terms for cigarette-making licence. Retrieved November 2, 2021 from <https://www.reuters.com/world/middle-east/exclusive-egypt-amends-tender-terms-cigarette-making-licence-document-2021-06-02/>

Japan Tobacco (34.1%) is number one in smoking tobacco due to its leadership in Egypt and Saudi Arabia, two of the biggest global markets for the category. In Egypt, Japan Tobacco has several top-performing smoking tobacco brands, including Nakhla and Mizo, while in Saudi Arabia the leading brand is El Basha, also owned by Japan Tobacco. Al Fakher Tobacco Trading is among the category leaders through sales of the popular Al Fakher brand. Philip Morris International is the only manufacturer of heated tobacco in the region. As of 2021, heated tobacco is present in United Arab Emirates, Saudi Arabia, Kuwait, Lebanon, Jordan, and Palestine.

Category split: Africa region

Africa Region — Product Category Summary, 2020

Product Category	Retail Value (USD million)	% Retail Value	Retail Value % Change 2020 vs 2019	Retail Value % Change 2017-2020 CAGR	Retail Volume % Change 2020 vs 2019	Retail Volume % Change 2017-2020 CAGR
Cigarettes	9,920	89.5%	-0.8%	3.9%	-3.6%	-0.7%
Cigars and Cigarillos	133	1.2%	-2.9%	4.4%	-13.7%	-6.3%
Smoking Tobacco	262	2.4%	-8.2%	-3.3%	-15.7%	-10.7%
Smokeless Tobacco	347	3.1%	-3.9%	1.5%	-6.0%	-0.5%
Vaping Products	290	2.6%	8.7%	20.0%	N/A	N/A
Heated Tobacco Products	127	1.1%	60.4%	68.8%	28.0%	37.4%
Tobacco-Free Oral Nicotine	No Presence	No Presence	No Presence	No Presence	No Presence	No Presence
NRT Smoking Cessation Aids	6	0.1%	5.5%	6.4%	5.1%	2.7%
Total	11,085	100.0%	-0.5%	4.2%	N/A	N/A

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

(See Appendix of this report for list of countries included in each region.)

Declines in volume for most categories, in part driven by COVID-19 restrictions

As a proportion of world population, Africa's population (13.7%) is comparable to that of the Americas and Europe; however, the region's nicotine ecosystem (1.3%) is the smallest in terms of value. Among the most substantial tobacco markets in Africa are Algeria, Nigeria, South Africa, Ethiopia, and Kenya. Cigarettes account for 89.5% of the ecosystem in terms of value, followed by smokeless tobacco (3.1%), vaping products (2.6%), smoking tobacco (2.4%), cigars and cigarillos (1.2%), and heated tobacco products (1.1%). Most of the largest nicotine categories registered volume declines over the review period. The notable exception was heated tobacco, with an increase was driven by South Africa, where distribution expanded significantly.

Volume declines in cigarettes were driven by severe restrictions in some of the key regional markets. For example, the South African government imposed a total ban on sales of tobacco products in 2020. This situation lasted for more than five months and affected the trajectory of several categories, including smokeless tobacco. Most traditional categories also suffered declines

in Kenya due to lockdown restrictions and growing health awareness. This trend was partially offset by the stable cigarette markets in Algeria and Nigeria.

Top company shares: Africa region

Africa Region Company Shares, 2020

Rank	Cigarettes (89.5%*)	Smokeless Tobacco (3.1%)	Vaping Products** (2.6%)	Smoking Tobacco (2.4%)	Cigars and Cigarillos (1.2%)	Heated Tobacco (1.1%)	NRT Smoking Cessation Aids** (0.1%)
1	British American Tobacco Plc 40.8%	Groupe MADAR 65.0%	British American Tobacco Plc 76.8%	Philip Morris International Inc 62.5%	Swisher International Group Inc 26.7%	Philip Morris International Inc 93.6%	Johnson & Johnson Inc 99.9%
2	Japan Tobacco Inc 17.1%	MLP Distributors CC 9.0%	Ritchy Group Ltd 10.1%	Société Nationale des Tabacs et Allumettes (SNTA) 9.4%	Corporación Habanos SA 16.0%	Gold Leaf Tobacco Corp Pty Ltd 0.8%	-
3	Philip Morris International Inc 15.1%	SIFACO Bénélux SA 8.4%	DiGiCig Ltd 5.8%	Scandinavian Tobacco Group A/S 8.5%	Burger Group, The 15.5%	British American Tobacco Plc 0.4%	-
4	Imperial Brands Plc 12.1%	Philip Morris International Inc 7.4%	OTP Distributors (Pty) Ltd 3.4%	Al Fakher Tobacco Trading LLC 2.6%	Scandinavian Tobacco Group A/S 6.5%	-	-
5	Groupe MADAR 4.4%	Van Erkoms Tobacco (Pty) Ltd 1.3%	Hookah Lite (Pty) Ltd 0.5%	Swisher International Group Inc 1.6%	Arnold André Cigars GmbH & Co KG 6.4%	-	-

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

British American Tobacco is the biggest nicotine company in the region

British American Tobacco (40.8%) is the leading cigarette and vaping products manufacturer in Africa. The company leads producers of cigarettes in South Africa and Nigeria. In both markets, the company owns the three best-selling cigarette brands: Peter Stuyvesant, Pall Mall, and Dunhill in the former; and Benson & Hedges, Rothmans, and London in the latter. The company is also the leading player in the largest vaping products regional market, South Africa. In 2019, British American Tobacco acquired Twisp, the largest multichannel distributor of vaping products in the country.²⁴

Japan Tobacco (17.1%), Philip Morris International (15.1%), and Imperial Brands (12.1%) are the other leading players in cigarettes. Imperial Brands owns the best-selling cigarette brands in Algeria (Gauloises) and Cameroon (Lambert & Butler). Philip Morris International is in the top three in most substantial regional markets. Japan Tobacco registers the largest cigarette volume sales in Ethiopia, where the company owns a majority stake in the National Tobacco Enterprise, the only player in the market.

²⁴ British American Tobacco PLC. (2019). Green light for Twisp acquisition to further drive BAT's strategic New Category growth. Retrieved August 25, 2021, from https://www.bat.com/group/sites/UK_9D9KCY.nsf/vwPagesWebLive/DOBF2J6G

Category split: Europe region

Europe Region — Product Category Summary, 2020

Product Category	Retail Value (USD million)	% Retail Value	Retail Value % Change 2020 vs 2019	Retail Value % Change 2017-2020 CAGR	Retail Volume % Change 2020 vs 2019	Retail Volume % Change 2017-2020 CAGR
Cigarettes	194,631	79.4%	2.0%	2.0%	-3.8%	-3.6%
Cigars and Cigarillos	6,301	2.6%	4.2%	2.8%	0.7%	-0.2%
Smoking Tobacco	24,769	10.1%	18.5%	8.4%	9.0%	2.1%
Smokeless Tobacco	2,055	0.8%	2.8%	3.6%	-7.7%	-2.1%
Vaping Products	7,307	3.0%	7.8%	13.8%	N/A	N/A
Heated Tobacco Products	8,803	3.6%	70.9%	132.9%	67.3%	153.1%
Tobacco-Free Oral Nicotine	337	0.1%	105.1%	N/A	102.0%	N/A
NRT Smoking Cessation Aids	969	0.4%	4.1%	2.3%	2.0%	-0.3%
Total	245,173	100.0%	5.3%	4.1%	N/A	N/A

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

(See Appendix of this report for list of countries included in each region.)

Cigarettes decline while alternative categories register relatively high growth rates

Europe (28.7%) is the second largest regional nicotine ecosystem in terms of value. This is mainly due to the number of sizeable tobacco markets, including Germany, the United Kingdom, France, Italy, Russia, Spain, and Turkey. In contrast to some other regions where cigarettes account for the vast majority of product value sales, in Europe the category accounts for 79.4%. This is partially attributable to the increasing market shares of other categories, such as smoking tobacco (10.1%), heated tobacco (3.6%), and vaping products (3.0%), which have all registered value growth greater than that of cigarettes. In fact, about three-quarters of global smoking tobacco and just under one-half of the world's heated tobacco value sales come from Europe. This can be accounted for by cigarette smokers in Western Europe (Germany, France, and Italy) switching to fine-cut tobacco where price differentials are significant. Another contributing factor is the increasing popularity of heated tobacco, particularly in certain Eastern European markets (Russia, Ukraine, and Poland).

Although cigarette value sales continue to register positive growth rates, the volume trajectory is signaling the opposite trend. This trend is being driven by several factors: smoking prevalence decreases, switching to cheaper and alternative products, and strict lockdowns imposed due to COVID-19. On a yearly basis, the total cigarette market in Russia declined by 5.9%, in Italy by 5.5%, in Ukraine by 11.9%, and in Spain by 8.5%.

Tobacco-free oral nicotine also attracts company investment, primarily driven by Scandinavia, where traditional smokeless products account for a significant share of the total nicotine ecosystem. Europe, mainly due to the United Kingdom, is the second largest market for NRT

smoking cessation aids after the Americas, although the growth rates of the category are lower than all other alternative products.

Top company shares: Europe region

Europe Region Company Shares, 2020

Rank	Cigarettes (79.4%*)	Smoking Tobacco (10.1%)	Heated Tobacco (3.6%)	Vaping Products** (3.0%)	Cigars and Cigarillos (2.6%)	Smokeless Tobacco (0.8%)	NRT Smoking Cessation Aids** (0.4%)	Tobacco- Free Oral Nicotine (0.1%)
1	Philip Morris International Inc 32.2%	Imperial Brands Plc 24.1%	Philip Morris International Inc 87.9%	British American Tobacco Plc 12.0%	Scandinavian Tobacco Group A/S 15.8%	Swedish Match AB 56.6%	Johnson & Johnson Inc 51.1%	British American Tobacco Plc 47.8%
2	Japan Tobacco Inc 25.8%	Japan Tobacco Inc 17.5%	British American Tobacco Plc 11.6%	Japan Tobacco Inc 4.9%	Burger Söhne AG 14.2%	Imperial Brands Plc 21.2%	GlaxoSmithKline Plc 24.8%	Swedish Match AB 8.1%
3	British American Tobacco Plc 23.8%	British American Tobacco Plc 13.8%	Japan Tobacco Inc 0.4%	Imperial Brands Plc 4.3%	Royal Agio Cigars NV 6.6%	British American Tobacco Plc 13.7%	Perrigo Co Plc 11.7%	Japan Tobacco Inc 4.1%
4	Imperial Brands Plc 11.7%	Philip Morris International Inc 11.4%	-	Shenzhen Joye Technology Co Ltd 3.7%	Villiger Söhne AG 6.5%	Japan Tobacco Inc 4.6%	Pierre Fabre SA, Laboratoires 3.3%	Imperial Brands Plc 3.8%
5	Private Label 0.7%	Pöschl Tabak GmbH & Co KG 7.6%	-	Shenzhen Eigate Technology Co Ltd 2.4%	Imperial Brands Plc 5.6%	Scandinavian Tobacco Group A/S 1.0%	Private Label 3.2%	Burger Group, The 3.4%

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: *The figure in parentheses below each category name relates to that category's share of the total nicotine ecosystem (in retail value terms).

**Company share in retail volume terms for all categories except vaping products and NRT smoking cessation aids (retail value share).

Top four international companies compete in multiple nicotine categories

In terms of volume, Philip Morris International (32.2%) is the regional leader in cigarettes, given its number one position in large markets such as Turkey, Italy, Germany, France, and Spain. Marlboro is the most popular cigarette brand in the Europe region. The company also leads in heated tobacco, with 87.9%, due to the performance of IQOS. Japan Tobacco (25.8%) is the biggest cigarette manufacturer in Russia, through sales of Winston, while also competing in smoking tobacco, smokeless tobacco, and vaping products. British American Tobacco (23.8%) is among the top three manufacturers in the biggest regional cigarette markets. It notably leads in vaping products as a result of the expansion of VUSE, especially in the United Kingdom. Imperial Brands (11.7%) is fourth leading producer in Europe, but first in the United Kingdom and second in Germany and Spain. The company also leads in the smoking tobacco category, in part due to popular fine-cut brands such as Golden Virginia.

In cigars and cigarillos, smaller manufacturers such as Scandinavian Tobacco Group (15.8%), Burger Söhne AG (14.2%), and Royal Agio Cigars (6.6%) are share leaders as the category continues its stable long-term trajectory. Swedish Match (56.6%), a traditional oral tobacco manufacturer from Scandinavia, is the largest producer in smokeless products.

The vaping products category has attracted some of the big international tobacco companies, which have grown their closed vaping system sales across the region. VUSE (British American Tobacco), Logic (Japan Tobacco), and blu (Imperial Brands) are among the leading brands in the still fragmented vaping products category. Multiple manufacturers are also active in tobacco-free oral nicotine. British American Tobacco (Lyft/VELO), Swedish Match (ZYN), Japan Tobacco (Nordic Spirit), and Imperial Brands (Skruf) are all participating in the new category, which registered the highest growth rate, albeit from a relatively low base.

Category split: the Americas region

Americas Region — Product Category Summary, 2020

Product Category	Retail Value (USD million)	% Retail Value	Retail Value % Change 2020 vs 2019	Retail Value % Change 2017-2020 CAGR	Retail Volume % Change 2020 vs 2019	Retail Volume % Change 2017-2020 CAGR
Cigarettes	125,393	75.9%	2.3%	0.8%	-1.7%	-3.5%
Cigars and Cigarillos	13,685	8.3%	3.4%	5.1%	-7.0%	-0.1%
Smoking Tobacco	2,422	1.5%	-5.7%	-6.0%	-9.4%	-6.8%
Smokeless Tobacco	10,887	6.6%	8.4%	5.0%	1.6%	0.9%
Vaping Products	10,603	6.4%	-1.0%	29.2%	N/A	N/A
Heated Tobacco Products	101	0.1%	66.3%	99.3%	62.6%	121.8%
Tobacco-Free Oral Nicotine	837	0.5%	133.6%	N/A	227.1%	N/A
NRT Smoking Cessation Aids	1,257	0.8%	2.9%	2.2%	0.9%	0.5%
Total	165,185	100.0%	2.7%	2.6%	N/A	N/A

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: Retail value in current (nominal) terms, fixed 2020 exchange rates.

(See Appendix of this report for list of countries included in each region.)

Strong cigarette sales in the United States limit the regional year-on-year volume decline

The Americas (19.4%) is the third largest regional nicotine ecosystem in terms of value. It contains the United States market, which accounts for a large proportion of the regional performance of many non-cigarette categories. Other large cigarette markets in the region include Brazil, Argentina, Canada, and Mexico. Of note, the Americas is the region with the lowest share of cigarettes (75.9%) in the global nicotine ecosystem in terms of value. Cigars and cigarillos (8.3%), smokeless tobacco (6.6%), and vaping products (6.4%) are all substantial categories that affect the corresponding global trends. For example, 79.1% of global smokeless tobacco value sales, 71.3% of global tobacco-free oral nicotine value sales, 50.3% of global vaping products value sales, and 32.5% of global cigars and cigarillos value sales are registered in the region. The only category with a minimal presence is heated tobacco.

Cigarette sales in Americas are largely affected by category dynamics in the United States, which accounts for more than half of the region's total volume sales. While the category registered an above-average decline in the region for 2017-2020 (3.5% CAGR), the decline slowed in 2020 versus 2019 (1.7%). This slowing decline was due to the strongest performance of cigarettes in the United States in several decades, driven by increases in purchasing power, more time at home, and higher stress levels.

Vaping products is another category that registered conflicting performance in 2017-2020 CAGR terms against 2020 versus 2019. During 2020, underage vaping and the EVALI crisis led to stricter measures on the category in the United States, including the elimination of most vaping product flavors and increased public scrutiny. Access to products also was disrupted by the COVID-19 pandemic. As a result, the growth trend of the category was blunted, leading to negative performance in value terms for the first time in the category's history.

Heated tobacco and tobacco-free oral nicotine registered the highest period growth rates in the region, albeit starting from relatively low bases. Growth in the former category was a result of pilot sales in North America, while growth in the latter was due to an increased demand for the product in the United States. Notably, in 2021, Mexico lifted its ban on importing heated tobacco products.

Top company shares: the Americas region

Americas Region Company Shares, 2020

Rank	Cigarettes (75.9%*)	Cigars and Cigarillos (8.3%)	Smokeless Tobacco (6.6%)	Vaping Products** (6.4%)	Smoking Tobacco (1.5%)	NRT Smoking Cessation Aids** (0.8%)	Tobacco-Free Oral Nicotine (0.5%)	Heated Tobacco (0.1%)
1	British American Tobacco Plc 40.7%	Swisher International Group Inc 31.9%	Altria Group Inc 46.4%	JUUL Labs Inc 52.0%	Tabacalera Sarandí SA 4.6%	Private Label 54.2%	Swedish Match AB 69.4%	Philip Morris International Inc 73.2%
2	Altria Group Inc 26.1%	Imperial Brands Plc 27.9%	British American Tobacco Plc 33.6%	British American Tobacco Plc 17.7%	British American Tobacco Plc 4.1%	GlaxoSmithKline Plc 33.8%	Swisher International Group Inc 9.6%	Altria Group Inc 21.8%
3	Philip Morris International Inc 16.8%	Altria Group Inc 12.8%	Swedish Match AB 11.2%	Imperial Brands Plc 2.2%	Scandinavian Tobacco Group A/S 3.3%	Johnson & Johnson Inc 9.7%	Altria Group Inc 8.1%	British American Tobacco Plc 2.6%
4	Imperial Brands Plc 5.5%	Swedish Match AB 9.8%	National Tobacco Co 3.1%	Japan Tobacco Inc 1.5%	Twist Tobacco NV 2.6%	Perrigo Co Plc 0.9%	British American Tobacco Plc 6.3%	Japan Tobacco Inc 0.8%
5	Liggett Vector Brands Inc 2.4%	Scandinavian Tobacco Group A/S 6.0%	Swisher International Group Inc 1.8%	NJOY Inc 0.7%	Coimexpor Argentina SA 2.3%	Dr Reddy's Laboratories Ltd 0.3%	-	-

Source: Euromonitor Passport. Figures rounded to the nearest decimal point.

Note: *The figure in parentheses below each category name relates to that category's share of the total nicotine ecosystem (in retail value terms).

**Company share in retail volume terms for all categories except vaping products and NRT smoking cessation aids (retail value share).

Company performance in the United States affects ranking in most categories

British American Tobacco (40.7%) was number one in cigarettes due to the company's 2020 position in the two biggest volume markets in the region: second in the United States and first in Brazil. British American Tobacco also places second in vaping products after the expansion of VUSE. Altria Group (26.1%) is second in cigarettes, as it leads the United States market through sales of Marlboro. At 46.6%, Altria Group is also at the top of smokeless tobacco, driven by sales of the Copenhagen brand in US-style moist snuff.

Swisher International Group (31.9%) is the leader in the second largest regional category, cigars and cigarillos. This is due to Swisher Sweets, which is the brand leader in the United States. The company also recently entered the tobacco-free oral nicotine category with its Rogue brand. In vaping products, the underage consumption associated with the leading US vaping product, JUUL, together with the elimination of certain flavors, had a negative impact on the category.

Appendix

Product Scope and Per Stick Equivalent Conversion Rates

Definitions & Per Stick Equivalent Conversion Table

Product	Type	Definitions	Per Stick Conversion
High-Risk Products			
Chewing Tobacco	Smokeless Tobacco	Chewing tobacco consists primarily of two types of product: Asian-style and US-style available in those specific geographic areas; and other chewing tobacco available in all other markets.	1 gram = 0.7 cigarettes
Cigarettes	Combustible Tobacco	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 US or Europe, or those that are not machine-manufactured.	
Cigarillos	Combustible Tobacco	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 vs cigars as some cigarillos can be quite long. However, six inches is the maximum length a cigarillo tends to be.	1 unit = 5.4 cigarettes
Cigars	Combustible Tobacco	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.	1 unit = 8.1 cigarettes
Fine-Cut Tobacco	Combustible Tobacco	Fine-Cut tobacco is usually sold in plastic or foil pouches, metal tins or plastic tubs. It can also be flavored.	1 gram = 2.0 cigarettes
Moist Snuff	Combustible Tobacco	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 distinguished from Snus by its processing: Moist snuff is fermented; compared to snus which is pasteurized (heat-treated).	1 gram = 1.4 cigarettes
Pipe Tobacco	Combustible Tobacco	Western-style pipe tobacco includes cut tobacco sold in packaged format for smoking in pipes and available in pouches, tins, and cans.	1 gram = 3.2 cigarettes
Shisha	Combustible Tobacco	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.	1 gram = 0.3 cigarettes
Reduced-Risk Products			
Cartridges	Vapor Products	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. Currently, these are universally proprietary in nature (pods are useable exclusively with a single specific hardware device).	1 ml = 13 cigarettes
Vaping Products	Vapor Products	Vaping products refer to e-liquids and 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.	1 ml = 13 cigarettes
Heated Tobacco	Vapor Products	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.	1 unit = 1 cigarette
Non-Tobacco Nicotine Pouches	Smokeless Tobacco	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.	1 unit = 1 cigarette
NRT Products	NRT Products	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.	1 unit = 10 cigarettes (patches)
Snus	Smokeless Tobacco	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.	1 gram = 1.4 cigarettes

Source: Detailed assumptions and sources used to derive suitable conversion factor for each category is available in the 2020 Index Methodology report.

Sources: Euromonitor International Passport's Tobacco and Consumer Health databases, and the National Cancer Institute's Dictionary of Cancer Terms

Abbreviations

CAGR - Compound annual growth rate

ENDS - Electronic Nicotine Delivery System

EU - European Union

FDA - U.S. Food and Drug Administration

FMCG - Fast-moving consumer goods

HRPs - High-risk products

NRT - Nicotine replacement therapy

PMTA - Premarket tobacco product applications

R&D - Research and development

RRPs - Reduced-risk products

UAE - United Arab Emirates

UK - United Kingdom

US - United States

WHO - World Health Organization

Definitions

Foundation for a Smoke-Free World – An independent, nonprofit organization created in 2017 with the mission of ending smoking within this generation

High-risk products – Combustible or other high-risk nicotine products, including cigarettes, cigars, cigarillos, smoking tobacco, moist snuff, and bidis, as well as traditional smokeless tobacco, such as gutkha

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

Reduced-risk products (RRPs) – Nicotine products that are considered less harmful than combustible cigarettes and/or other traditional products. Products that are reduced-risk include vapor products (including open and closed vaping systems and their consumables, and heated tobacco), snus, NRT products, and non-tobacco nicotine pouches.

World Health Organization (WHO) Regional Breakdown

WHO Africa – Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Democratic Republic, Congo-Brazzaville, Côte d'Ivoire, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Réunion, Rwanda, Sao Tomé e Príncipe, Senegal, Seychelles, Sierra Leone, South Africa, South Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe

WHO Americas – Anguilla, Antigua and Barbuda, Argentina, Aruba, Bahamas, Barbados, Belize, Bermuda, Bolivia, Brazil, British Virgin Islands, Canada, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Curacao, Dominica, Dominican Republic, Ecuador, El Salvador, French Guiana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Sint Maarten, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, US Virgin Islands, United States of America, Venezuela

WHO Eastern Mediterranean – Afghanistan, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen

WHO Europe – Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Gibraltar, Greece, Hungary, Iceland, Ireland, Israel, Italy, Kazakhstan, Kosovo, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Monaco, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Turkey, Turkmenistan, Ukraine, United Kingdom, Uzbekistan

WHO South-East Asia – Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, North Korea, Sri Lanka, Thailand, Timor-Leste

WHO Western Pacific – American Samoa, Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Fiji, French Polynesia, Guam, Hong Kong, China, Japan, Kiribati, Laos, Macau, China, Malaysia, Marshall Islands, Micronesia, Mongolia, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, South Korea, Taiwan, Tonga, Tuvalu, Vanuatu, Vietnam

List of Sources

Altria Group Inc. (2021). Annual Report 2020.

Altria Group Inc. (2021). 2021 Second-Quarter and First-Half Results.

Bloomberg. (2021). Chinese vaping firm weighs \$500 million Hong Kong IPO. Retrieved August 25, 2021, from <https://www.bloomberg.com/news/articles/2021-08-23/chinese-vaping-firm-is-said-to-mull-500-million-hong-kong-ipo>

British American Tobacco PLC. (2021). 2020 Annual Report.

British American Tobacco PLC. (2021). Half-Year Report.

British American Tobacco PLC. (2019). Green light for Twisp acquisition to further drive BAT's strategic New Category growth. Retrieved August 25, 2021, from https://www.bat.com/group/sites/UK_9D9KCY.nsf/vwPagesWebLive/DOBF2J6G

Businesswire. (2018). Altria Makes \$12.8 billion minority investment in JUUL to accelerate harm reduction and drive growth. Retrieved August 25, 2021, from <https://www.businesswire.com/news/home/20181220005318/en/Altria-Makes-12.8-Billion-Minority-Investment-in-JUUL-to-Accelerate-Harm-Reduction-and-Drive-Growth>

Cision. (2020). Smoore, Vaporesso's parent, is the first vaping company listed in Hong Kong. Retrieved August 25, 2021, from <https://www.prnewswire.com/news-releases/smoore-vaporessos-parent-is-the-first-vaping-company-listed-in-hong-kong-301093681.html>

U.S. Food and Drug Administration. (2021). FDA denies marketing applications for about 55,000 flavored e-cigarette products for failing to provide evidence they appropriately protect public health. Retrieved September 10, 2021, from <https://www.fda.gov/news-events/press-announcements/fda-denies-marketing-applications-about-55000-flavored-e-cigarette-products-failing-provide-evidence>

Imperial Brands PLC. (2021). Half-Year Results Statement.

Imperial Brands PLC. (2021). Pulze and iD heated tobacco products launched in Czech Republic. Retrieved September 8, 2021, from <https://www.imperialbrandsPLC.com/media/news-and-features/2021/pulze-and-id-heated-tobacco-products-launched-in-czech-republic.html>

Japan Tobacco Inc. (2021). Annual Report 2021.

Japan Tobacco Inc. (2021). 2021 Second Quarter Results.

Nasdaq. (2021). Chinese vaping brand Aspire Global sets terms for \$120 million US IPO. Retrieved August 25, 2021, from <https://www.nasdaq.com/articles/chinese-vaping-brand-aspire-global-sets-terms-for-%24120-million-us-ipo-2021-07-16>

Nikkei Asia. (2021). Philip Morris aims to end its Japan cigarettes sales within 10 years. Retrieved August 25, 2021, from <https://asia.nikkei.com/Business/Companies/Philip-Morris-aims-to-end-its-Japan-cigarettes-sales-within-10-years>

Philip Morris International Inc. (2021). 2020 Annual Report.

Philip Morris International Inc. (2021). Philip Morris International launches new IQOS ILUMA in Japan to accelerate the achievement of a smoke-free future. Retrieved August 25, 2021, from <https://www.pmi.com/media-center/press-releases/press-details/?newsId=24261>

Philip Morris International Inc. (2021). 2021 Second-Quarter Results.

Poda Lifestyle and Wellness Ltd. (2021). Poda to commence PMTA Process in the USA. Retrieved August 25, 2021, from <https://podalifestyle.com/wp-content/uploads/2021/08/2021-08-24-PressRelease-Poda-to-Commence-PMTA-Process-in-the-USA.pdf>

Reuters. (2021) Chinese vaping firm RELX valued at nearly \$35 billion in U.S. market debut. Retrieved August 25, 2021, from <https://www.reuters.com/article/us-relx-technology-ipo-idUSKBN29R273>

Reuters. (2020). Smoore International raises \$918 million in Hong Kong IPO: sources. Retrieved August 25, 2021, from <https://www.reuters.com/article/us-smoore-ipo-hongkong-idUSKBN2470J6>

Tobacco Journal International. (2021). Geekvape and Paris Saint-Germain announce official partnership. Retrieved August 25, 2021, from http://www.tobaccojournal.com/Geekvape_and_Paris_Saint-Germain_announce_official_partnership.56556.0.html

WHO. (2018). Population Data by WHO Region. Retrieved August 25, 2021, from <https://apps.who.int/gho/data/view.main.POP2020>

Vaping 360, 2021 <https://vaping360.com/vape-news/110354/aspire-will-become-the-next-publicly-traded-chinese-vape-company/>