TOBACCO TRANSFORMATION INDEX

Regional Company Performance

Asia Pacific

March 2022

Contents

Introduction

The Tobacco Transformation Index ("Index"), launched in September 2020, ranks the 15 largest tobacco companies across 36 countries, with company scoring calculated at the consolidated level.

Specifically, the Index assesses tobacco companies' activities concerning:

1. Phasing out high-risk tobacco products[1]
2. Developing and responsibly offering reduced-risk product[2] alternatives to support current users to move away from high-risk products
3. Preventing access and marketing of such alternatives to all non-smokers and non-users of high-risk products, especially youth
4. Ensuring consistency of tobacco harm-reduction activities across all markets of operation, within regulatory guidelines

To accompany this consolidated perspective, **the need was identified during stakeholder engagement sessions to better assess company performance at the country level**. Stakeholder engagement sessions were held before and after the publication of the first Index in 2020, and again in the summer of 2021. Stakeholders consulted were primarily from one of two groups – the investment community and researchers. Country-level regulation was a recurring theme. Stakeholders highlighted that local regulation, especially in terms of reduced-risk product (RRP – see Appendix for definitions) legality of sale and taxation, has a significant impact on tobacco company activity. Several stakeholders noted that companies should be assessed by the Index for the actions and outcomes under their control, rather than the result of external factors, while taking the country-level nicotine and tobacco regulatory context into account.

Stakeholders also noted that companies should be evaluated in terms of their activity in low-middle income countries (LMICs) versus high-income countries (HICs). Some tobacco companies are making progress toward tobacco harm reduction in HICs, where they stand to profit to a greater degree. However, they appear hesitant toward harm-reduction activities in LMICs, where the health urgency is often the greatest, but the potential financial gains are not. Others stressed that companies should be assessed based on their progress toward making RRPs available at an affordable price point to consumers in LMICs and to economically disadvantaged consumers in HICs.

[1] See Product Scope section within the Appendix (Page 35) for definition of "high-risk" products for the purposes of this report.

[2] See Product Scope section within the Appendix (Page 35) for definition of "reduced-risk" products for the purposes of this report.

Therefore, it was determined that additional analysis at the country level could spotlight specific actions by individual companies in certain markets. This report series was designed to address this stakeholder feedback.

> Companies should be assessed with the country-level context taken into consideration.

Scope

This report is the first in a series of four reports that will assess the 15 tobacco companies in the Index at a country level. For ease of reading, the analysis will be published across a series of four reports. The 36 countries assessed as part of the Index account for approximately 85% of the current global population of adult smokers. This first report will focus on the Asia Pacific region, and covers the 13 countries from the Tobacco Transformation Index from that region:

1. Australia
2. Bangladesh
3. China
4. India
5. Indonesia
6. Japan
7. Myanmar
8. Pakistan
9. Philippines
10. Singapore
11. South Korea
12. Thailand
13. Vietnam

The remaining 23 countries, which form part of the global Index, will be assessed in one of the three subsequent regional reports (Middle East & Africa, Europe, and Americas).

Report Objectives

The first section of this report **describes the nicotine and tobacco regulatory context of each country**. The Index recognizes that regulatory context varies significantly from country to country and that this variation affects individual companies' strategies, performance, and ultimate pathways to industry transformation. **This report does not generally consider non-regulatory factors as part of the country context assessment (except for a country's disposable income per capita)**. The Index is evolving, and it is envisioned that non-regulatory factors will play a greater role in future analysis and reports. In terms of trade, this and all reports in the series address products marketed and sold legally, and officially offered by companies. Products in de-facto circulation, including illicit products, are not addressed in this report series.

The second section of this report **assesses company performance** through the lens of the country-level nicotine and tobacco regulatory context. In doing so, this report builds further on the consolidated or global Index by covering the nuance of company performance at a country level.

The purpose of this report is to provide observations of company activity at a country level, within that country's nicotine and tobacco regulatory context. The report does not provide recommendations to companies but focuses rather on observations. A separate report may be developed after this series, offering recommendations for how companies can do more in individual countries to advance the harm-reduction agenda.

Executive Summary

Regulatory uncertainty correlates with a lack of reduced-risk product (RRP) presence

In countries where the regulatory status of RRP categories has been challenged by public health bodies or government departments, companies are less likely to offer RRPs, even if those product categories can technically be sold legally. This scenario is notable in Indonesia and Vietnam. Despite all six RRP categories being technically legal in these countries, various bodies have published recommendations to the governments of both countries proposing bans of some or all product categories. As a result, there is limited company activity in terms of offering RRPs. In Indonesia, British American Tobacco (BAT) offers Velo nicotine pouches, and the Philip Morris International (PMI) IQOS heated tobacco product is now available in some parts of Indonesia, despite there being no official launch[3].

Raising taxes in one category can lead to a substitution effect

Regarding high-risk product categories, an increase in taxation for one category can lead to a substitution effect in favor of another high-risk product category. In Asia Pacific, this effect was notable in Japan, when in response to increased tax rates on cigarettes, a range of companies launched cigarillos. For example, BAT launched cigarillos in Japan in 2019. On the other hand, Swisher International saw its share of cigarillos decrease in the market over the same period as it faced a range of new competitors, mostly cigarette brands extending into cigarillos.

Disposable income per capita correlates strongly with RRP presence

Across the Asia Pacific region, we observe a strong correlation between the level of disposable income per capita in a country, and company presence of RRPs. Reflective of this, the two countries in the region with the most significant RRP presence are Japan and South Korea, which rank third and fourth, respectively, in terms of highest disposable income per capita. In these markets, a range of companies, including local and multinational players, have launched RRPs, especially heated tobacco products.

On the other hand, in countries where RRPs can be sold legally, but where disposable income per capita is low, we observe limited company presence in terms of their RRP offerings. For example, in Bangladesh, all six RRP categories can be sold legally, but none of the companies under assessment as part of the Index offers RRPs in this market.

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[3] https://www.fool.com/earnings/call-transcripts/2021/07/20/philip-morris-international-inc-pm-q2-2021-earning/

Nicotine & Tobacco Regulatory Context

Purpose

When assessing a nicotine and/or tobacco company's contribution toward accelerated industry transformation, it is necessary to consider the regulatory country-level context in which that company is operating. Certain factors play a role in a company's ability to offer reduced-risk products (RRPs) to help transition smokers from combustible to noncombustible forms of nicotine consumption, as part of the long-term goal of ending smoking completely.

Criteria

The following set of metrics has been incorporated into the country context analysis:

- Nicotine and Tobacco Regulatory Context

  The Index recognizes that the context in which companies operate varies significantly from country to country and that this context affects individual companies' strategies, performance, and ultimate pathways to industry transformation. While this variation should not limit the industry in pursuing tobacco harm-reduction strategies, regulatory context should be considered when conducting a wider analysis of the context in which companies operate.

  a. RRP legality of commercialization: The legal status of RRPs is a crucial factor to consider. Ultimately, tobacco companies cannot offer RRPs in countries where the sale of those products is banned or heavily restricted. This analysis therefore considers the legal status of RRPs when assessing company performance at a country and regional level.

  b. RRP taxation: The overall tax burden applicable to RRPs in a country is another key factor to consider. This analysis considers the overall tax burden of RRPs in a country, and how this compares with the tax burden for high-risk products.

  c. Ability to market RRPs: In certain instances, despite RRP legality of commercialization, tobacco companies are unable to market, or are severely limited in the extent to which they can market, RRPs, making it challenging to transition smokers to RRPs as a means of harm reduction.

  d. Disposable income per capita: Economics is another factor for consumers to consider in transitioning to reduced-risk alternatives if they are unable to quit consumption of high-risk products. Disposable income per capita affects the ability of smokers in a country to afford RRPs. This analysis considers the average disposable income levels in a country as part of the overall country-level context.

Approach

Each of the 36 countries included in the global Tobacco Transformation Index is ranked based on each of the below metrics.

- Nicotine and Tobacco Regulatory Context

  a. RRP legality of commercialization: The number of RRPs that can be legally sold, out of the six categories defined as part of the Tobacco Transformation Index (cartridges, e-liquids, heated tobacco, non-tobacco nicotine pouches, nicotine replacement therapy (NRT) products, snus).

  b. RRP taxation: The highest-taxed RRP in the market (total tax burden, as a percentage of the average retail selling price).

  c. Ability to market RRPs: The number of channels in which legal RRPs are allowed to be marketed per country. (Advertising in press and other printed media, advertising on radio, audiovisual commercials, retail product display, advertising in stores.)

  d. Disposable income per capita: Average disposable income levels.

The ability to legally sell reduced-risk products influences companies' actions at the country level.

Figure 1: Country Context – Key Nicotine & Tobacco Regulation, and Disposable Income

Asia Pacific: Country Context (Key Nicotine and Tobacco Regulation)

	RRP Legality of Commercialization (out of 6)	RRP Taxation (average overall tax burden)	Ability to Market RRPs (out of 30)	Disposable Income Per Capita (USD, 2020)
Thailand	1	7%	1	3,993.6
Singapore	1	7%	5	27,103.5
Australia	1	0%	0	31,420.1
India	3	15%	10	1,490.7
Japan	3	26%	7	23,740.5
China	4	20%	20	6,472.3
Bangladesh	6	41%	18	1,475.1
Pakistan	6	19%	2	1,010.0
Myanmar	6	5%	27	970.2
South Korea	6	23%	8	15,982.1
Philippines	6	35%	6	2,485.4
Indonesia	6	45%	21	2,381.0
Vietnam	6	9%	25	1,944.8

High Barrier | Medium Barrier | Low Barrier

Source: *Tobacco Transformation Index 2021 Country Fact Sheet*
Approach: *See Appendix – Country Context Approach, for more details*
Note: *Countries are ordered by lowest to highest number of legal reduced-risk products*

Country Context & Company Activity[4] Summary

With the above analytical framework in mind, it is important to look closely at the specific nicotine and tobacco regulatory context of each of the 13 countries[5] in the Asia Pacific region in turn, and how tobacco and nicotine companies have responded to them.

Australia

Country context

Five of six RRPs are banned in Australia. NRTs, sold under pharmaceutical legislation, are legal but face stringent restrictions in terms of advertising.

Company activity

Companies are unable to sell RRPs in the market. Philip Morris International (PMI), British American Tobacco (BAT), Imperial Brands Plc (Imperial), and Swisher International (Swisher) all sell high-risk products in Australia.

Bangladesh

Country context

Bangladesh allows the legal commercialization of all RRP categories. However, marketing of these products is restricted, and taxation on certain RRPs is very high.

Bangladesh also has among the lowest disposable income per capita levels in the region.

Company activity

No company under review offers RRPs in Bangladesh. BAT, Japan Tobacco Inc (JTI), and Swisher all sell high-risk products in Bangladesh.

China

Country context

RRPs are allowed in China, but not all are available. E-vapor products were recently brought under state tobacco monopoly law. A licensing system for e-vapor product manufacture and retail seems likely.

The State Monopoly Administration (STMA), an administrative counterpart of China National Tobacco Corp (CNTC), is responsible for market control, including access.

Company activity

RRPs are available in the market, mostly through local players such as RELX, Shenzhen IVPS Tech, ShenZhen JVE Technology Co, Yooz, and Moti.

[4] This analysis focuses on official company presence in each country at the time of this writing. Brands in de facto, and/or illicit, circulation in a country are not included, as the analysis is focused on official company activity.

[5] Countries are ordered alphabetically in this summary

India

Country context

The operating environment in India changed significantly in 2019 with the banning of e-vapor and heated tobacco products. Currently, snus and nicotine pouches are not explicitly banned but are not sold in the market either. Companies can sell NRTs in India.

Low average income levels are a key barrier.

Company activity

ITC Ltd (ITC) sells NRT products in India, although the company's sales are dominated by high-risk products (cigarettes). PMI, BAT, Imperial, JTI, and Swisher all sell high-risk products in India.

Indonesia

Country context

RRPs can be sold legally and advertised through most channels in Indonesia. However, in 2019, the Ministry of Health and the Indonesian Doctors Association (IDI – Ikatan Dokter Indonesia) recommended that the Indonesian government ban vapor products because of perceived uncertainties regarding their health effects. The National Agency of Drugs and Food Control (BPOM – Badan Pengawas Obat dan Makanan) also proposed a ban on the use of e-vapor products. However, as of the time of writing, no concrete plans to ban vapor products had been revealed.

In addition, disposable income per capita is below the regional average, acting as another key barrier.

Company activity

Of the companies under review, BAT is present in Indonesia with RRPs (Velo nicotine pouches), although high-risk products still dominate its sales. PMI's IQOS heated tobacco is now available in Indonesia, despite there being no official launch. JTI, KT&G, Djarum PT (Djarum), and Gudang Garam sell high-risk products in Indonesia.

Japan

Country context

While many RRPs, such as e-liquids containing nicotine, are banned (nicotine-free variants are permitted), Japan is among the most developed heated tobacco markets globally.

The country has the third-highest disposable income per capita in the region.

Company activity

PMI, BAT, and JTI all have a significant RRP presence in Japan through sales of heated tobacco products. Until recently, Imperial had a RRP presence with sales of e-vapor products but withdrew the products from the market in 2021[6]. PMI leads in the market through its IQOS heated tobacco brand.

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[6] https://www.investegate.co.uk/imperial-brands-plc/rns/half-year-report/202105180700029635Y/

Myanmar

Country context

Myanmar allows the sale & marketing of all RRP categories. Taxation of these categories is relatively low.

However, low disposable income per capita is a key barrier. In addition, political turmoil makes the operating environment uncertain for companies currently. BAT withdrew from Myanmar[7] in October 2021 following an assessment of the company's long-term viability in the country. BAT was one of many western-based companies across a range of industries to pull out of the country after the military coup in February 2021.

Company activity

The only RRPs sold in Myanmar are e-vapor products, primarily offered by Chinese manufacturers and sold in Myanmar's major urban centers. In terms of the 15 companies assessed as part of the Index, JTI is the only company present in the market, selling high-risk products (cigarettes). BAT was present in Myanmar (offering high-risk products) until October 2021, when it decided to withdraw from the country.

Pakistan

Country context

Pakistan allows the sale of all RRP categories, although advertising is heavily restricted.

Disposable income per capita is far lower than the regional median.

Company activity

BAT launched tobacco-free nicotine pouches (Velo) in Pakistan at the end of 2019. PMI and Imperial exclusively sell high-risk products in the country.

Philippines

Country context

RRPs can be sold legally in the Philippines, although advertising is heavily restricted, and taxation is high. In January 2022, a bill to regulate the sale, manufacture, and marketing of e-cigarettes and heated tobacco was approved by the Congressional Committee. The new law aims to support safer alternatives while prohibiting sales to minors and ensuring e-vapor products are not marketed as a desirable lifestyle choice.

Disposable income per capita is in line with the regional median.

Company activity

PMI is present with RRPs in the Philippines since its 2020 IQOS launch. Meanwhile, BAT, JTI, and Swisher are all present in the market with high-risk products only.

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[7] https://www.reuters.com/world/asia-pacific/british-american-tobacco-pulls-out-army-ruled-myanmar-2021-10-12/

Singapore

Country context

All RRPs are banned in Singapore. NRTs can be sold (governed by pharmaceutical legislation).

Company activity

Companies are unable to sell RRPs in the market. PMI, BAT, Imperial, and JTI all sell high-risk products in Singapore.

South Korea

Country context

RRPs can be legally sold, although advertising is heavily restricted, and taxation is high.

Disposable income per capita is among the highest in the region.

Company activity

PMI, BAT, and KT&G Corp (KT&G) all sell RRPs in South Korea. Meanwhile, JTI, Imperial, and Swisher sell high-risk products in the country.

Thailand

Country context

Five of six RRP categories are banned in Thailand. NRTs, sold under pharmaceutical legislation, face severe restrictions in terms of advertising.

Company activity

Companies are unable to sell RRPs. in the market. PMI, JTI, and Tobacco Authority of Thailand (TOAT) all sell high-risk products in the market.

Vietnam

Country context

RRPs can be sold legally and advertised through most channels in Vietnam. However, the country has announced plans to ban e-vapor and heated tobacco products in the future.

In addition, disposable income per capita is below the regional average.

Company activity

Companies are limited by the fact that they are required to distribute products through the state-run company Vinataba, which does not currently sell RRPs. As such, no RRPs are currently sold in the market. In addition to Vinataba, BAT, JTI, KT&G, and PMI are present in Vietnam, offering high-risk products only.

Company Performance at Country Level

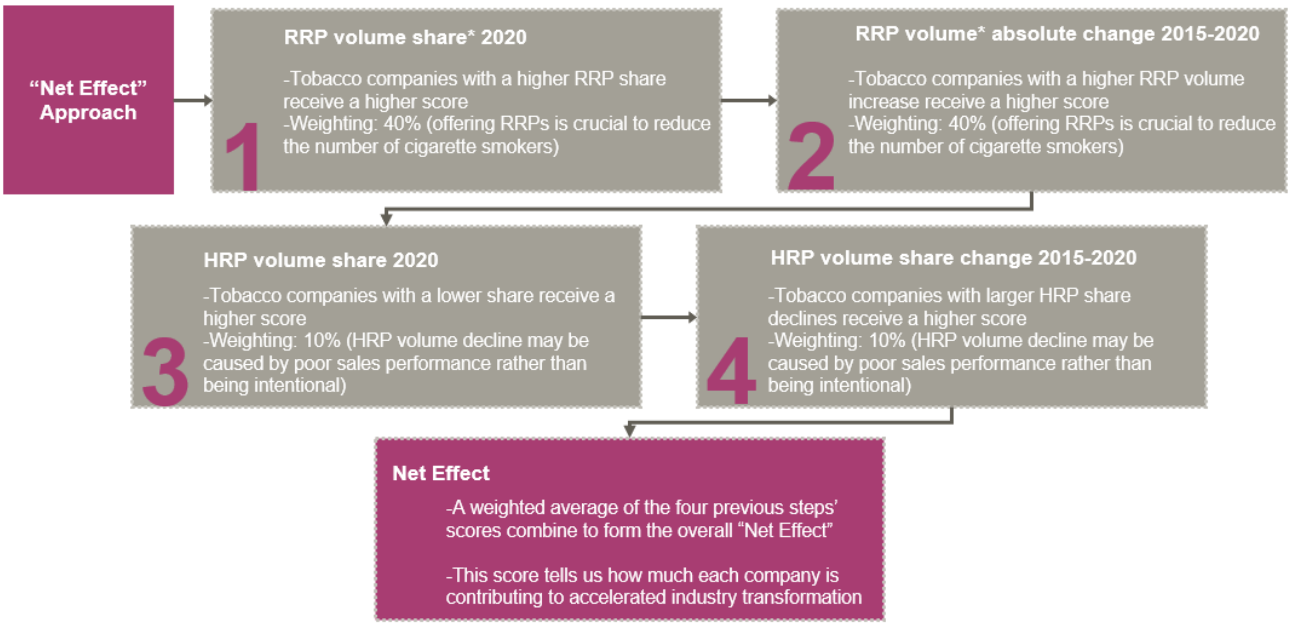
Purpose

An analysis of company performance at the country level relative to peers gives an indication of a company's proactive harm-reduction strategies, as it enables a comparison within the same operating environment. This analysis strategy mitigates to a certain degree (although does not fully eliminate) the impact of circumstance and historic geographic footprints, compared to analysis aggregated at a global level. The analysis allows us to understand what types of RRPs (if any) companies are offering, in markets where those products can be sold legally.

Note that this report does not generally consider non-regulatory factors as part of the country context assessment (except for a country's disposable income per capita).

To achieve a direct comparison across companies, a "Net Effect" score is calculated from a set of criteria (see below) that measures a company's impact on harm reduction.

Criteria and Scoring Approach – Net Effect



RRP = Reduced-risk product / HRP = High-risk product. See appendix for category definitions.
Source of data used: Tobacco Transformation Index / Euromonitor Passport May 2021, data to end 2020
**RRP/HRP Volume: Per Stick Equivalent conversion and Risk Spectrum weighting applied to sales figures taken from Euromonitor Passport. See appendix for further details.*

See Appendix for further detail on approach to scoring.

Company Performance Summary

Of the 10 countries[8] under review in which **British American Tobacco** (**BAT**)[9] has a presence, the company sells RRPs in four. Through its portfolio of RRPs (e-vapor products, heated tobacco, nicotine pouches, and NRT products), BAT has the potential to offer RRPs legally in Bangladesh, India, the Philippines, and Vietnam, although significant non-regulatory barriers exist, as discussed in detail below.

China National Tobacco Corp (**CNTC**) sells high-risk products only in China. Four RRP categories could be sold legally in China.

Djarum PT and **Gudang Garam** both operate exclusively in one market in the region (Indonesia). Although RRPs are legal in the market, neither company offers them, instead exclusively selling high-risk products.

Until recently, **Imperial Brands Plc** (**Imperial**) had a RRP presence in the Asia Pacific region through its sales of MyBlu cartridges (nicotine-free) in Japan. However, the overall category is very small in Japan compared to heated tobacco (the leading RRP category in the market). Imperial was the market leader in the e-vapor products category. However, in 2021 Imperial announced the decision to exit[10] some of its RRP markets, including Japan. Other than Japan, of the six markets where Imperial sells high-risk products, three of those markets allow the sale of cartridges, so Imperial has the potential to offer RRPs legally in those markets.

ITC Ltd (**ITC**), present only in India, offers RRPs in the market through its KwikNic NRT gum (regulated under pharmaceutical legislation).

While **Japan Tobacco** Inc (**JTI**) has a strong presence with RRPs in Japan, it does not have a reduced-risk presence in nine of the ten Asia Pacific markets in which it is present. Of those nine markets, Singapore and Thailand ban all RRPs, and India bans several RRPs, but in Bangladesh, Indonesia, Myanmar, the Philippines, South Korea, and Vietnam, all RRPs could be legally commercialized (although each market offers specific challenges to companies).

KT&G Corp (**KT&G**) is present in four countries in the region and offers RRPs (heated tobacco) in two (South Korea and Japan). In the other two markets in which it is present (Vietnam and Indonesia), heated tobacco products are legal, but KT&G does not currently offer them.

Philip Morris International (**PMI**)'s primary RRP is heated tobacco (IQOS). Of the countries under review in the Asia Pacific region, PMI sells high-risk products in 11. Of those, eight allow the sale of heated tobacco. At the time of this writing, PMI had a significant heated tobacco presence and market share in two of these eight markets (Japan and South Korea), along with recent launches in the Philippines and Indonesia.

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[8] BAT pulled out of Myanmar in October 2021 following the military coup of February 2021.

[9] Companies are ordered alphabetically in this summary

[10] https://www.investegate.co.uk/imperial-brands-plc/rns/half-year-report/202105180700029635Y/

Swisher International Group Inc (**Swisher**) is present in five markets in the region. In those markets it sells only high-risk products (cigars and cigarillos). Swisher offers RRPs (non-tobacco nicotine pouches) in its domestic market of the United States but does not currently offer RRPs in any of the five markets in the Asia Pacific region in which it has a high-risk presence, despite nicotine pouches being legal in four of those five markets.
Tobacco Authority of Thailand (**TOAT**) operates exclusively in Thailand, where it offers only high-risk products (cigarettes). Apart from NRT products, RRPs are banned in Thailand.

Vietnam National Tobacco Corp (**Vinataba**), currently present in only one market in the region (Vietnam), sells only high-risk products. RRP categories could be sold legally in Vietnam.

Company Assessment[11]: British American Tobacco Plc (BAT)

Asia Pacific Harm Reduction Summary: British American Tobacco (BAT)

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
Indonesia	Yes	Yes	#1 (of 6)	6
Japan	Yes	Yes	#2 (of 5)	3
South Korea	Yes	Yes	#3 (of 6)	6
Australia	Yes	No	#2 (of 3)	1
Singapore	Yes	No	#2 (of 4)	1
India	Yes	No	-	3
Philippines	Yes	No	-	6
Vietnam	Yes	No	-	6
Pakistan	Yes	Recently launched	-	6
Bangladesh	Yes	No	-	6
Myanmar*	Yes (before withdrawal October 2021)	No	-	6

***Source**: Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
**BAT withdrew completely from Myanmar in October 2021.*
***Net Effect Ranking:** Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).
***Recent Product Launches:** BAT's nicotine pouch brand Velo was launched at the end of 2019 in Pakistan, but sales were not yet significant enough and have not been considered for the Net Effect scores.*

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

Extending its harm-reduction category presence in certain countries in the region

In Asia Pacific, BAT has the leading Net Effect score in one country – Indonesia. In 2020, BAT launched Velo, its non-tobacco nicotine pouches brand, which contributed to this position. BAT is the first mover in this category. However, actual sales of 3.7 million units in non-tobacco nicotine pouches remain negligible compared to the 12,813 million cigarettes the company sold in Indonesia during 2020. BAT's cigarette volume sales did, however, drop significantly (–38%) in 2020 versus the previous year, which also contributed to its Net Effect score in the market. This decrease was primarily because of wider market influences, namely COVID-19 and an increase in excise duty in January 2020, leading to cheaper cigarettes becoming more popular, which favored local manufacturers rather than the multinational players.

BAT's largest market for RRPs is Japan, a country in which it has the second highest Net Effect score, behind PMI. This ranking is driven by its second position in heated tobacco, where it records an 18.5% share, equating to 7,174 million sticks. Its share in the last 2 years has posted marginal decline, but it has maintained volume growth in the category. In 2020, BAT launched

[11] Companies assessed in alphabetical order.

its Velo brand, which is a snus[12] product in Japan, due to the ban on nicotine products which do not contain tobacco in the market. The Velo brand has established a share of 2.9% of the snus category in Japan, although sales are marginal compared to BAT's other categories in that country.

In South Korea, BAT has the third-highest Net Effect score, which mirrors its share of heated tobacco, behind PMI and KT&G. In 2019, BAT was able to reverse its previous share decline by aggressively discounting its Glo Pro brand by 90%, which was launched only the year before. Offering RRPs at affordable prices versus high-risk products can be an important mechanism in encouraging consumers to switch. Companies, however, should have strict protocols in place to ensure such promotions target only existing smokers rather than attracting new consumers. Separate research focused on marketing practices, due to be published after this report, suggests that companies need to do more to ensure their marketing of RRPs is not wide-ranging in appeal, but rather that it is focused only on existing smokers and existing users of RRPs.

BAT also sells RRPs, in the form of tobacco-free nicotine pouches (Velo), in Pakistan. Launched in the market at the end of 2019, the brand's sales are currently unclear, but BAT has put significant effort into marketing the brand in Pakistan and its evolution will be monitored by the Index.

Opportunities to do more in several countries in the region

Of the ten countries[13] under review in which BAT has a presence, the company sells RRPs in four, although it could also sell them legally in Bangladesh, India, the Philippines, and Vietnam. Certain markets, notably India, pose significant non-regulatory barriers to companies seeking to offer RRPs. In India, it is possible to sell snus, NRT products (albeit governed under pharmaceutical legislation and with approval processes and other Intellectual Property-related barriers), and non-tobacco nicotine pouches, with advertising prohibited only for snus. Foreign companies are likely to face challenges entering the market. BAT's 2020 launch of non-tobacco nicotine pouches in Indonesia, and its 2019 launch of the same product in Pakistan, is a step in the direction toward harm reduction. BAT is well placed to offer RRPs in more countries in the region, given it has globally established brands in heated tobacco, e-liquids, and non-tobacco nicotine pouches.

BAT's Net Effect score was also negatively affected by increased high-risk product sales in certain markets. In the declining Japanese cigarette market, BAT has consistently increased market share, and in response to higher taxes on cigarettes in 2019, BAT entered the cigarillo market, with brand extensions to its Kool, Lucky Strike, and Kent ranges. In South Korea, BAT launched Kent Double Fresh in early 2021, a capsule brand with its low tar attribute and fruitful flavors.

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[12] Japan's Pharmaceutical Affairs Law prohibits the sale of products containing nicotine which do not contain tobacco. Therefore, while Velo is a nicotine pouch product in all other markets, in Japan it contains tobacco and is therefore classified as snus.

[13] BAT pulled out of Myanmar in October 2021 following the military coup of February 2021.

Company Assessment: China National Tobacco Corp (CNTC)

Asia Pacific Harm Reduction Summary: China National Tobacco Corp (CNTC)

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
China	Yes	No	-	4

Source: *Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
Net Effect Ranking: *Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

China's biggest cigarette manufacturer has no domestic reduced-risk presence

CNTC is a state-owned monopoly operating primarily in China where it accounts for 99% of cigarette sales. Its volume sales have increased each year from 2016 to 2020, and CNTC now accounts for approximately 46% of global cigarette volume sales. CNTC does not sell any RRPs domestically.

Currently, only snus and heated tobacco are unavailable in the Chinese market, and as such there are a range of other products that the State Tobacco Monopoly Administration (STMA) could give permission to bring to market if it chose to do so. Other companies, notably RELX, have created a foothold in categories such as e-vapor products, and several provincial Chinese Tobacco Industrial Groups such as Yunnan CTI, Sichuan CTI, and Hubei CTI have established presence in other countries. This has even occurred in heated tobacco, currently not allowed in China, with, for example, China Tobacco Sichuan Industry Corp launching its Kuanzhai series in South Korea.

In November 2021, it was announced that e-cigarettes were to be brought under state tobacco monopoly law. A licensing system for e-vapor product manufacture and retail seems likely.

Company Assessment: Djarum PT (Djarum)

Asia Pacific Harm Reduction Summary: Djarum PT

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
Indonesia	Yes	No	-	6

Source: *Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
Net Effect Ranking: *Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

Lacks reduced-risk presence

Djarum does not sell any RRPs in Indonesia, and as such registers a Net Effect score of zero. While Indonesia has no current restrictions on the sale of RRPs, there have been proclamations from government ministries recommending that RRPs be banned. Taxation rates are also high, with, for example, a total tax burden of 49% on e-liquids in 2020.

In high-risk products, Djarum is the third largest player in cigarettes in Indonesia, maintaining a volume share of 13%. Its volumes have declined in recent years.

Company Assessment: Gudang Garam Tbk PT (Gudang Garam)

Asia Pacific Harm Reduction Summary: Gudang Garam Tbk PT

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
Indonesia	Yes	No	-	6

Source: *Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
Net Effect Ranking: *Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

No evidence of harm reduction in Indonesia

Gudang Garam's operations are limited to Indonesia, where it is the largest cigarettes player with a volume share of 31%, a share that has increased year-on-year since 2015. Indonesia is the second largest cigarettes market globally, so the country could in theory play a key role in global harm reduction.

Indonesia's reduced-risk regulatory context is uncertain

While there are no restrictions on the legal commercialization of RRPs in Indonesia, the regulatory situation is uncertain, which could discourage investment. In 2019, the Ministry of Health and the Indonesian Doctors Association (IDI – Ikatan Dokter Indonesia) recommended that the Indonesian government ban vapor products because of perceived uncertainties regarding their health effects. The National Agency of Drugs and Food Control (BPOM – Badan Pengawas Obat dan Makena) also proposed a ban on the use of e-vapor products. However, as of the time of writing this report, no concrete plans to ban vapor products had been revealed.

Company Assessment: Imperial Brands Plc (Imperial)

Asia Pacific Harm Reduction Summary: Imperial Brands Plc

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
Singapore	Yes	No	#1 (of 4)	1
Japan	Yes	Yes*	#4 (of 5)	6
Australia	Yes	No	-	1
South Korea	Yes	No	-	6
India	Yes	No	-	3
Pakistan	Yes	No	-	6
Vietnam	Yes	No	-	6

Source*: Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
Net Effect Ranking: *Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).
***Note**: Imperial withdrew its reduced-risk products from certain markets, including Japan, in 2021. The above analysis is based on data accurate to end 2020.

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

Limited reduced-risk presence for Imperial in Asia Pacific

Until recently, Imperial had a RRP presence in the Asia Pacific region through its sales of MyBlu cartridges (nicotine-free) in Japan. MyBlu was the market leader in the e-vapor products category in the country with an 81% share, although the overall category is very small in Japan compared to heated tobacco (the leading RRP category in the market). However, in 2021, Imperial announced the decision to exit[14] some of its RRP markets, including Japan.

Despite being the fifth largest cigarette player in the world, with widespread international distribution, Imperial's sales of cigarettes in Asia Pacific are limited compared to its competitors. However, Imperial does account for 7.3% of cigarette sales in Vietnam, a market where all RRPs could be legally commercialized. The country offers challenges for companies seeking to offer RRPs, however, given the backdrop of potential future bans on e-cigarettes and the difficulty of entering the market due to the dominance of state-run Vinataba.

Australia is Imperial's biggest market in the region, where reduced-risk alternatives are illegal except for NRT products. Since 2015, Imperial's share in cigarettes has increased, although volume sales have declined, while the opposite has happened in fine-cut tobacco volumes. Underlying the Australian market has been more stringent anti-smoking regulation and increasing taxation, which has led to smokers seeking more economical offers. This resulted in Imperial's volume sales of fine cut tobacco increasing, while through its JPS cigarette brand it has a product targeted at the price-conscious end of the market. The trend of consumers

[14] https://www.investegate.co.uk/imperial-brands-plc/rns/half-year-report/202105180700029635Y/

switching to fine-cut tobacco as a more economical alternative to cigarettes is also present in Japan. In this category, Imperial increased its market share from 13.6% in 2016 to 19.4% in 2020.

In India, Imperial is the market leader in cigars and cigarillos with a share of 51%, although the category is very small compared to cigarettes. India has restrictions on RRPs, and significant non-regulatory barriers do exist. Snus can be commercialized legally, and Imperial does have established brands in this category in other markets through Skruf and Knox.

Company Assessment: ITC Ltd (ITC)

Asia Pacific Harm Reduction Summary: ITC Ltd

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
India	Yes	Yes	#1 (of 6)	3

Source: *Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
Net Effect Ranking: *Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

Limited RRPs in its domestic market

ITC is a publicly traded company in which the Indian state holds a 24.2% stake. ITC's tobacco/nicotine product sales are restricted to India, where it is the only company under review to register a positive Net Effect score given its presence in NRT gum, where it posts a 13% market share. However, the total size of the NRT gum market in stick equivalent terms in 2020 was 240 million sticks, compared to the total size of cigarettes being 73,800 million sticks.

India has restrictions on the sale of RRPs, following the ban on all e-vapor and heated tobacco products in 2019. Prior to this, ITC's sales in the e-vapor category were marginal at 0.76%. Additionally, snus and non-tobacco nicotine pouches remain legal, although it is not unreasonable to suspect that snus and non-tobacco nicotine pouches might potentially be blocked by the Tobacco Board of India if companies applied to sell them there.

ITC had a 77.8% volume share of the cigarettes market in 2020 in India, compared to 77.0% in 2015. While volume sales suffered in 2020 due to COVID-19, the company continues to implement product changes. It released several flavors and filtration for its premium brands, with examples including Gold Flake Indie Mint and Capstan Fresh. It also carried out launches across its mass brands, such as Wave Boss and Flake Nova. Additionally, ITC initiated new packaging for its Gold Flake Excel, Wills Navy Cut Filter, and Berkeley Hero brands.

Company Assessment: Japan Tobacco Inc (JTI)

Asia Pacific Harm Reduction Summary: Japan Tobacco Inc (JTI)

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
Thailand	Yes	No	#1 (of 3)	1
Japan	Yes	Yes	#3 (of 5)	3
Singapore	Yes	No	#4 (of 4)	1
South Korea	Yes	No	-	6
India	Yes	No	-	3
Indonesia	Yes	No	-	6
Philippines	Yes	No	-	6
Vietnam	Yes	No	-	6
Bangladesh	Yes	No	-	6
Myanmar	Yes	No	-	6

Source: *Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
Net Effect Ranking: *Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

Growing reduced-risk presence in its domestic market

JTI has presence in RRPs in Japan. These sales helped JTI register the third-highest Net Effect score in Japan, behind PMI and BAT. Heated tobacco is its largest reduced-risk category where JTI has gradually been gaining market share, accounting for 9% of Japanese volume sales in 2020, although it still lags well behind BAT (19%) and PMI (73%).[15] JTI's sales have been achieved through its Ploom brand and initiatives such as its subscription model, which includes the free exchange of new devices (up to twice, if damaged), as well as providing redeemable coupons.

JTI's other reduced-risk category in Japan is snus, having entered the market in 2013 where it is now the second largest player with a 47% volume share, behind market leader Raa S AB. Through its Zero Style snus brand, JTI has continued to launch new variants such as matcha latte and ume (Japanese sour plum) in 2020. These flavors are helping to develop the category in Japan.

In the region, JTI does not offer RRPs outside of its domestic market

JTI does not have a reduced-risk presence in nine of the ten Asia Pacific markets in which it is present. Of those nine markets, Singapore and Thailand ban all RRPs, and India bans several RRPs, but in Bangladesh, Indonesia, Myanmar, the Philippines, South Korea, and Vietnam, all

[15] Market share figures rounded to the nearest whole number and therefore do not sum exactly to 100%.

RRPs can be legally commercialized. As discussed in detail above, each market offers specific challenges to companies. This is especially the case in Myanmar where, following the military coup of early 2021, a range of foreign companies completely withdrew from the market, including JTI's rival BAT in October 2021. JTI is the second largest cigarette player in each of Bangladesh, Myanmar, the Philippines, and Singapore, so its contribution to high-risk product sales is significant. In India, several RRPs are illegal, and there are significant non-regulatory barriers to entry for companies trying to offer RRPs in the market. However, snus is not currently banned in India, meaning it could be a market for JTI's Zero Style brand.

Company Assessment: KT&G Corp (KT&G)

Asia Pacific Harm Reduction Summary: KT&G Corp

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
South Korea	Yes	Yes	#2 (of 6)	6
Indonesia	Yes	No	-	6
Vietnam	Yes	No	-	6
Japan	No	Recently launched	-	3

Source: *Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
Net Effect Ranking: *Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).
Recent Product Launches: *At the time of research KT&G's heated tobacco brand Lil Hybrid had been launched in Japan, but sales were not yet significant enough and have not been considered for the Net Effect scores.*

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

KT&G is investing in RRPs

KT&G records the second highest Net Effect score in its domestic market, South Korea, behind PMI. This is a result of its heated tobacco sales, in which KT&G is ranked second in the market with a 34% volume share. PMI was the first mover with its IQOS brand and still holds a 58% share. KT&G has, however, been closing the gap rapidly, by launching a wide range of devices. In 2020, KT&G introduced Lil Solid 2.0 and Lil Hybrid 2.0 – second-generation models with improved functions. Its reduced-risk activities in Asia Pacific were restricted to South Korea, but in October 2020 it launched Lil Hybrid in Japan, to be distributed by PMI. KT&G does not sell high-risk products in Japan. However, KT&G has expanded geographically through high-risk products in other markets.

KT&G continues to grow high-risk sales

In its domestic market, KT&G increased its share of cigarettes from 56% in 2015 to 65% in 2020. Actions undertaken included increasing its product ranges in flavored cigarettes and introducing new cigarette varieties. Its launches included multiple flavored capsule cigarettes such as The One Sky, Esse Change Frozen, and This Africa Ice Cooler. KT&G increased its volume share of the Indonesian cigarette market from 0.2% in 2015 to 1.45% in 2020. In actual sales, KT&G remains a relatively minor player and saw a slight drop in sales due to COVID-19 in 2020, but over the last 5 years it has been the most dynamic player in the market. KT&G achieved this through new product launches under its Esse brand. These included Esse Honey Pop, the first honey-flavored cigarette to be launched in Indonesia. It also launched Equs Bold in two variants, Banana Capsule and JuaraTeh Manis, the latter being the first sweet tea–flavored cigarette on the market. KT&G does not sell RRPs in Indonesia. Similarly, it does not offer them in Vietnam, where it has a very small share of the cigarettes market. In both markets all RRPs are allowed.

Company Assessment: Philip Morris International (PMI)

Asia Pacific Harm Reduction Summary: Philip Morris International (PMI)

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
Japan	Yes	Yes	#1 (of 5)	3
South Korea	Yes	Yes	#1 (of 6)	6
Australia	Yes	No	#1 (of 3)	1
Thailand	Yes	No	#3 (of 3)	1
Singapore	Yes	No	#3 (of 4)	1
Philippines	Yes	Recently launched	-	6
Indonesia	Yes	Recently launched	-	6
India	Yes	No	-	3
Vietnam	Yes	No	-	6
China	Yes	No	-	4
Pakistan	Yes	No	-	6

Source: *Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
Net Effect Ranking: *Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).
Recent Product Launches: *At the time of research PMI's IQOS heated tobacco brand had just been launched in the Philippines and Indonesia, but sales were not yet significant enough and have not been considered for the Net Effect scores.*

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

Harm-reduction progress has been made in specific markets in Asia Pacific

PMI leads harm reduction in two of the Asia Pacific countries under review in which it has a presence, namely Japan and South Korea. In these two countries, PMI achieves these positions through the heated tobacco category and its IQOS umbrella brand.

In Japan, PMI is the market leader in heated tobacco, accounting for 72.5% of the market in 2020, which saw it establish a leading Net Effect score in the country. Notably, PMI's volume sales of heated tobacco sticks overtook those of its cigarette brands in 2019, with cigarettes having been in continuous decline over the last 10 years, both in terms of actual sales and market share. Conversely, volumes sales of its heated tobacco products have continued to grow, although because it was the first mover and market leader its share has eroded. PMI has, however, maintained volume growth through its IQOS platform and its key brand variants: Marlboro HeatSticks and HEETS. IQOS launched a subscription model as well as IQOS ILUMA in 2021, an induction-heating technology, which does not use a blade or require any cleaning.

PMI also achieves a leading Net Effect score in South Korea, through its IQOS HEETS brand, which has a 57.6% share of the heated tobacco market. It is the market leader, although since 2017 its sales have declined with increased competition from the domestic company KT&G and its Fiit brand. The decline in PMI's heated tobacco sales, however, is marginal compared with the decrease in its cigarette sales. Its volume sales in the cigarette category have declined by 35%

since 2016, so that its market share is now below 15% having previously been over 20%. However, its cigarette sales remain overall double those of its heated tobacco sales.

Further opportunities to drive harm reduction in other Asia Pacific countries exist

In nine out of the 11 Asia Pacific markets in which PMI operates, it is losing market share in high-risk products. However, in terms of offering RRPs, in the Asia Pacific countries under review it does so in four of the 11 countries in which it is present with high-risk products. Of the remaining seven countries, there are restrictions preventing RRP activity in three, but PMI could launch products in others, notably Pakistan. In Pakistan, affordability is a barrier, given the low average consumer disposable income. In India, Vietnam, and China, PMI is limited by factors including state-owned monopolies blocking access to foreign companies, as well as significant restrictions in terms of product legality of commercialization or ability to market. PMI launched IQOS in the Philippines in September 2020, which is perhaps indicative of the company looking to extend its RRP presence. At the time of this writing, PMI had launched IQOS in Indonesia, where there is significant potential for harm reduction, as explained in the first part of this report. In countries such as Indonesia, such activity is not without uncertainty, because although heated tobacco can currently be legally commercialized, government departments have released statements recommending banning them and other RRPs. PMI also faces certain restrictions in the market in terms of advertising, as it does in the Philippines and would in Pakistan if it launched there. In Vietnam, PMI could in theory market heated tobacco products, although similarly to Indonesia there is the threat of future bans, given recommendations from government departments, as well as market entry restrictions due to the state-run company Vinataba.

Heated tobacco is PMI's main RRP category. Although heated tobacco is banned in China and India, other RRPs can be legally commercialized. In India, it is possible to sell snus, NRT products (albeit governed under pharmaceutical legislation and with lengthy approval processes and other Intellectual Property-related barriers), and non-tobacco nicotine pouches, with advertising prohibited only for snus. Again, foreign companies such as PMI are likely to face challenges entering the market.

In Thailand, none of the five main RRPs (excluding NRTs) can be legally commercialized. In terms of PMI's high-risk products in Thailand, between 2015 and 2020, PMI's market share of cigarettes increased from 29.7% to 52.3%. Furthermore, since 2017 the overall Thai cigarette market has been in decline, following an increase in excise duty, but PMI has still managed to post volume growth.

Company Assessment: Swisher International Group Inc (Swisher)

Asia Pacific Harm Reduction Summary: Swisher International Group Inc

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
Japan	Yes	No	-	3
South Korea	Yes	No	-	6
India	Yes	No	-	3
Philippines	Yes	No	-	6
Bangladesh	Yes	No	-	6

Source: *Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
Net Effect Ranking: *Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

Swisher has limited presence in Asia Pacific

Through cigars and cigarillos Swisher is present in five of the Asia Pacific countries under review: Bangladesh, India, Japan, the Philippines, and South Korea. While cigars and cigarillos are smaller categories, they are still high-risk products and contribute to tobacco-related harm. They can also be substitutional products for cigarettes. In certain markets if the tax situation is favorable, as was the case for cigarillos in Japan, manufacturers will promote them accordingly. There is, however, no evidence of Swisher doing this, and indeed it has lost share significantly in Japan in recent years, from 7.8% in 2015 to 0.2% in 2020, as cigarette brand owners launched cigarillo extensions to take advantage of lower tax rates. Elsewhere, Swisher has also lost share in South Korea, while broadly maintaining share in the Philippines, India, and Bangladesh.

The company has not launched RRPs in the region

Swisher is a relatively small player in Asia Pacific region. In the United States, its domestic market, Swisher sells nicotine pouches. The products could be launched in the five markets in which Swisher is present in Asia Pacific, the five markets where nicotine pouches can be legally sold. Of those markets, only India has bans on certain RRPs, notably e-vapor products. Swisher also has a partnership in the United States with E-Alternative Solutions, to support the marketing, sales, and distribution of the company's disposable vaping products.

Company Assessment: Tobacco Authority of Thailand (TOAT)

Asia Pacific Harm Reduction Summary: Tobacco Authority of Thailand (TOAT)

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
Thailand	Yes	No	#2 (of 3)	1

Source: *Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
Net Effect Ranking: *Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

One-country company faces restrictions

TOAT is a state-owned enterprise with its sales dependent on its domestic market, Thailand. Sales of RRPs are illegal in Thailand and, as such, the company has no presence in the category. TOAT saw its sales and volume share of high-risk products decline between 2015 and 2018. However, TOAT remains the second largest player in cigarettes in Thailand, accounting for 45.5% of volumes.

The key determining factor influencing Thailand's cigarette environment has been the increase in excise duty to 40% on packs of 20 cigarettes priced above THB60. Given the costs of local production, TOAT was unable to follow PMI's approach of focusing on cheaper economy brands, and consequently lost market share. In response, TOAT has been trying to develop lower-priced variants such as Wonder S. TOAT also launched a new fine-cut tobacco range including E-Taen, E-Taen2, and LINE (MYO), which retail at THB10-15 per pack and therefore fall outside of the higher tax rate.

TOAT's harm-reduction performance is limited by the fact that RRPs are illegal in the market in which it operates.

Company Assessment: Vietnam National Tobacco Corp (Vinataba)

Asia Pacific Harm Reduction Summary: Vietnam National Tobacco Corp (Vinataba)

Country	Company HRP Presence	Company RRP Presence	Net Effect Ranking	Legal RRP Categories
Vietnam	Yes	No	--	6

Source: *Tobacco Transformation Index 2021 Country Fact Sheet, and Euromonitor Passport (published May 2021, data to end 2020).*
Net Effect Ranking: *Ranking of company at a country level, versus the other 14 companies assessed as part of the analysis. A company will not register a positive Net Effect score if it does not sell RRPs in a country where at least two RRP categories are legal. See Appendix – Company Assessment for more details on Net Effect scoring.*
Legal RRP Categories: Reflects the number of legal RRP categories in the country (out of a total of 6).

Note: The above table focuses on regulatory factors but does not include non-regulatory factors that may limit a company's actions in a market. Some, but not all, of these factors are assessed in the analysis below.

The company lacks a reduced-risk presence

Vinataba is a state-owned company with sales limited to high-risk products in Vietnam, and as such it registers a Net Effect score of zero. Vinataba currently accounts for a 56.9% cigarette volume share, which has declined since 2018, given an increase in demand for premium imported brands. However, all companies selling tobacco in Vietnam are required to work with Vinataba to distribute their products, so the company has some responsibility for, and influence over, all high-risk product sales in the market.

Lack of regulatory clarity in the market

At present, there is no regulation specifically prohibiting reduced-risk categories, so RRPs are not illegal, but the lack of clarity creates a barrier to sales. Officially, imports are required to go through the same process as cigarettes, and should be distributed through Vinataba, but as the company does not currently distribute e-vapor products or heated tobacco, the products on the market could be regarded as illicit.

In 2019, Vietnam's Ministry of Health proposed a ban on e-cigarettes and shisha, while at a meeting in March 2020 an official from the Health Ministry's legal department confirmed that Vietnam will introduce a ban on the sale, production, and import of e-vapor products and heated tobacco. However, as of the time of this writing, the ban had not been confirmed.

Companies Not Present in the Asia Pacific Region

Three of the companies covered by the Tobacco Transformation Index do not have a presence in Asia Pacific: Altria Group Inc, Eastern Co SAE, and Swedish Match AB.

Appendix

Country Context Approach

In Figure 1 above, four metrics were used to provide country context:

- RRP legality of commercialization (out of six) – This metric represents the number of RRP categories that can be legally commercialized in each market.
  - Cartridges
  - E-liquids
  - Heated tobacco
  - Non-tobacco nicotine pouches
  - NRT products (regulated under pharmaceutical legislation)
  - Swedish-Style snus (see page 35 "Product Scope" for full list of product definitions)
- RRP taxation (average overall tax burden) - The taxation rates represent the share of taxes as a percentage of the final price of each tobacco product. Taxes include tobacco-specific excise taxes, ad valorem taxes, retail taxes, and other taxes, but exclude import tariffs. To calculate this figure, each country's national tax rates are applied to the median price for each category of products. Median prices are ascertained during store audits, where product availability and pricing information is gathered during visits to various point-of-sale locations in each country, conducted between June and August 2021. For this specific metric, the tax burden of each (legal) RRP was taken and an average created across all RRPs.
- Ability to market RRPs (out of 30) – This metric represents the number of channels through which RRPs can be advertised legally in the market. The maximum is 30 because there are six total possible RRP categories, and five advertising channels:
  - Advertising in press and other printed media
  - Advertising on radio
  - Audiovisual commercials (e.g., cinema, YouTube, TV)
  - Retail product display
  - Advertising in stores
- Disposable income per capita – The average level of disposable income across the population of a country in USD, for 2020.

Company Assessment Approach

Each company was assessed and given a "Net Effect" score per country, calculated as follows:

- RRP volume share 2020 (40% weighting)
- RRP volume absolute change 2015-2020 (40% weighting)
- High-risk product volume share 2020 (10% weighting)
- High-risk product volume share change 2015-2020 (10% weighting)

Risk Classification

"Reduced-risk products" is an aggregate category that includes sales of cartridges, e-liquids, heated tobacco, snus, nicotine pouches, and NRT products.

"High-risk products" is an aggregate category that includes sales of cigarettes, cigars, cigarillos, fine-cut tobacco, pipe tobacco, shisha, moist snuff, and chewing tobacco.

Each product's position on the risk spectrum[16] was considered and volume sales adjusted accordingly. Volume sales were also converted into per-stick equivalents to sum up all categories to create the aggregates.

Normalization

Given the disparate nature of the four data points that are considered in the Net Effect score, a normalization process was implemented. Company scores across the four metrics were aggregated according to the respective weighting and normalized on a scale of 0 to 5.

A Net Effect score of 0 means that a company is not making any harm-reduction progress in that market, relative to competitors. A Net Effect score of 5 means that a company is making the most progress toward harm reduction in that market, relative to competitors.

Country Context

If a company sells high-risk products in a market but does not sell any RRPs, it registers a Net Effect score of zero, as the company is regarded as not contributing to harm-reduction efforts. The exception to this is in markets where no RRPs are legal or if the only ones that are legal are NRT products, because in such markets it is not regarded as viable for tobacco companies to sell RRPs. The reason for not taking into account the legality of NRT products is that they are commonly regarded as operating in the pharmaceutical sector, to which most tobacco companies have limited access. ITC is the only company under review to register a share in this category, but it is very small and reflects the company's status as a multi-industry conglomerate.

[16] Reduced-risk product definition based on Relative Risk Hierarchy (RRH) produced by Rachel Murkett et al, October 2020, based on a systematic review of the scientific literature and analysis of the best available evidence.

No markets under review ban all RRPs, but in Thailand, Singapore, and Australia, the only RRPs that are available are NRT products. As such, no companies sell RRPs and the Net Effect scores in these markets are calculated based on high-risk product market shares and how they changed between 2015 and 2020.

Net Effect Calculation: Example

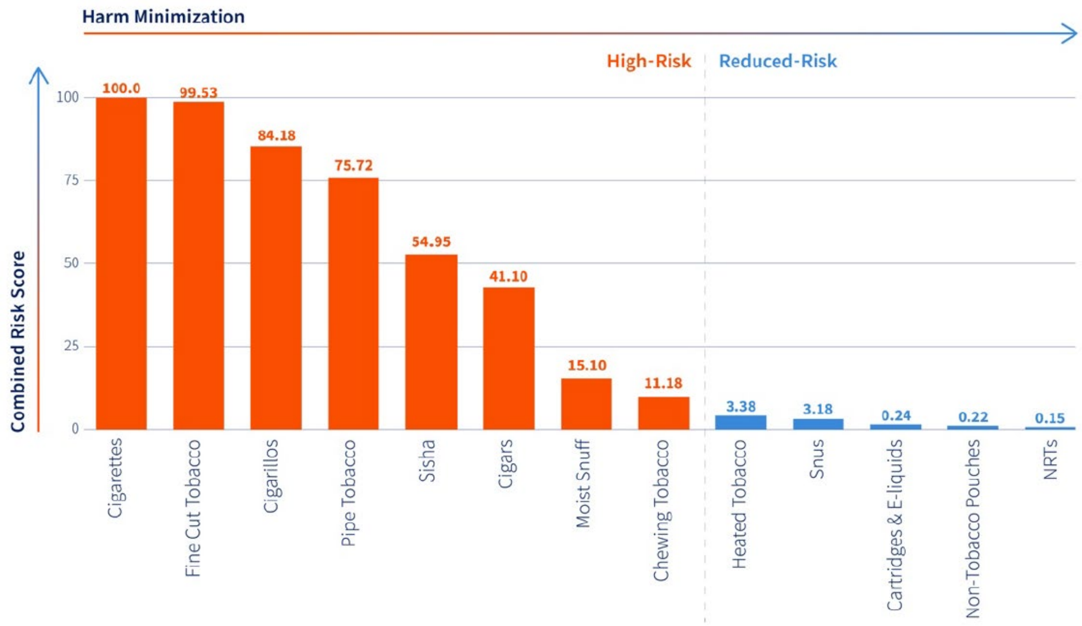
Japan		RRP Volume Share 2020 (%)	RRP Volume Absolute Change 2020 vs 2015 (Millions Sticks)	HRP Volume Share 2020 (%)	HRP Volume Share Change 2020 vs 2015 (Percentage Points)	Net Effect (Normalized, 0-5)
Philip Morris International Inc		72.4%	+26,557.65	14.7%	-10.5	4.9
British American Tobacco Plc		18.5%	+6,931.40	19.2%	+6.5	1.4
Japan Tobacco Inc		9.0%	+3,366.58	57.3%	-2.4	0.8
Imperial Brands Plc		0.2%	+88.19	0.0%	0.0	0.7
Swisher		n.a.	n.a.	0.0%	0.0	0.0 (No RRP Presence)

Note: *Showing companies included in the Index only. Excludes other tobacco companies present in the market which are not included in the Index.*
"N.A" means company does not offer any products in category

Product Scope

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

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



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

Product	Type	Definition	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	

Product	Type	Definition	Per-Stick Conversion
		cigarettes as recognized in the United States 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, 6 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 cigars, 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.	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	Smokeless 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; snus 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

Product	Type	Definition	Per-Stick Conversion
Reduced-Risk Products			
Cartridges	Vapor products	This product category consists entirely of the sales of prefilled pods or capsules for use with a non–cig-a-like closed system device. Currently, these are universally proprietary in nature (pods are usable exclusively with a single specific hardware device).	1 ml = 13 cigarettes
E-liquids	Vapor products	E-liquids include nicotine and non-nicotine bottled e-liquids that 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. They also include nicotine-based products sold as capsules, micro-tabs, or sprays.	1 unit = 10 cigarettes (patches) 1 unit = 1 cigarette (non-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); moist snuff is fermented.	1 gram = 1.4 cigarettes

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

Abbreviations

BAT – British American Tobacco Plc

CNTC – China National Tobacco Corp

HIC – high-income country

ITC – ITC Limited

JTI – Japan Tobacco Inc

KT&G – KT&G Corp

LMIC – low-middle income country

NRT – nicotine replacement therapy

PMI – Philip Morris International Inc

RRP – reduced-risk product

STMA - State Tobacco Monopoly Administration

TOAT – Tobacco Authority of Thailand

Vinataba – Vietnam National Tobacco Corp

Sources

Tobacco Transformation Index Country Fact Sheets (compiled June-November 2021).

Euromonitor’s Passport Tobacco database (last updated in May 2021).