KPMG

Illicit cigarette consumption in the EU, UK, Norway, Switzerland, Moldova and Ukraine

2022 results

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28 June 2023

Important notice

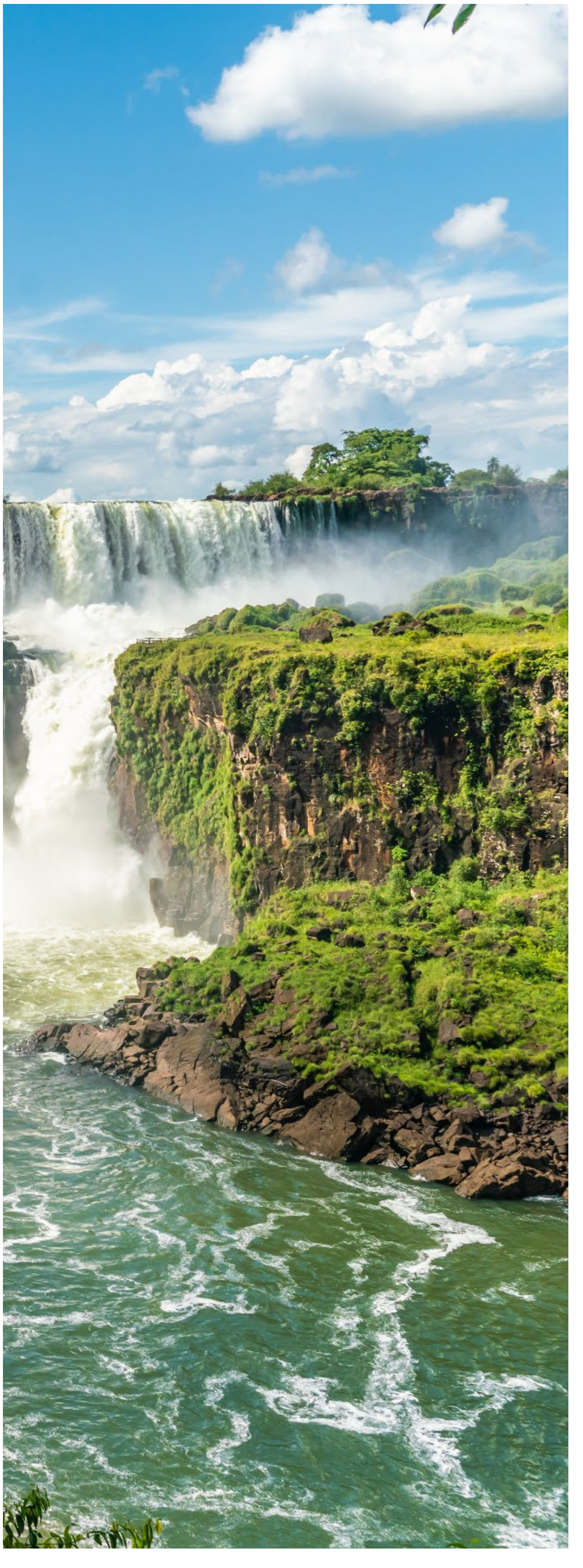
This report of key findings (the 'Report') has been prepared by KPMG LLP. The Report was commissioned by PMPSA (Philip Morris Products SA), described in this Important Notice and in this Report as the 'beneficiary', on the basis set out in a private contract agreed between the beneficiary and KPMG LLP dated 17 January 2023.

Information sources, the scope of our work, and scope and source limitations are set out in the footnotes and methodology contained within this Report. The scope of our work, information sources used, and any scope and source limitations were fixed by agreement with the beneficiary. We have satisfied ourselves, where possible, that the information presented in this Report is consistent with the information sources used, but we have not sought to establish the reliability of the information sources by reference to other evidence. We relied upon and assumed without independent verification, the accuracy and completeness of information available from public and third-party sources.

The findings contained in this Report are those of KPMG LLP. The Report does not include opinions of PMPSA.

This Report has not been designed to benefit any specific organisation other than the beneficiary. In preparing this Report we have not taken into account the interests, needs, or circumstances of any specific organisation, other than the beneficiary. This Report is not suitable to be relied on by any party (other than the beneficiary) wishing to acquire rights or assert any claims against KPMG LLP for any purpose or in any context. As such, any person or entity (other than the beneficiary) who reads this Report and chooses to rely on it (or any part of it) will do so at their own risk. To the fullest extent permitted by law, KPMG LLP does not assume any responsibility and will not accept any liability in respect of this Report to any party other than the beneficiary.

In particular, and without limiting the general statement above, although we have prepared this Report in agreement with the beneficiary, this Report has not been prepared for the benefit of any other manufacturer of tobacco products nor for any other person or entity who might have an interest in the matters discussed in this Report, including for example those who work in or monitor the tobacco or public health sectors or those who provide goods or services to those who operate in those sectors.



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Glossary

Average daily consumption	Daily average consumption by the population of the legal smoking age
BAT	British American Tobacco plc
Bn	Billion
~	Approximately
C&C	Counterfeit and Contraband, including Illicit Whites
CAGR	Compound Annual Growth Rate
Cigarette	Any factory-made product that contains tobacco and is intended to be burned under ordinary conditions of use
Consumption	Actual total consumption of cigarettes in a market, including Legal Domestic Consumption (LDC) and illicit products as well as those legally purchased overseas
Contraband (CB)	Genuine products that have been either bought in a lower-tax country and which exceed legal border limits or acquired without taxes for export purposes to be illegally re-sold (for financial profit) in a higher priced market
Counterfeit (CF)	Cigarettes that are illegally manufactured and sold by a party other than the original trademark owner. In this Report, counterfeit volumes are reported from the manufacturers (BAT, IB, JTI and PMI) participating in the empty pack surveys conducted by third party research agencies. No other counterfeit is included in the volumes reported due to lack of information
Country of origin	Country from which the packs collected are deemed to have originated. This is determined by either the tax stamp on the pack or in cases where the tax stamp is not shown, on the health warning and packaging characteristics
Duty Free	Cigarettes bought without payment of customs or excise duties. Consumers may buy Duty Free Cigarettes when travelling into or out of the EU27 (including Switzerland and Norway) by land, air or sea at legal Duty Free shops
EC	European Commission
EU/EU27	European Union
EU Flows Calculation	The primary methodology for measuring consumption in a market. The methodology has been developed by KPMG LLP on a bespoke basis for the specific purpose of measuring inflows and outflows of cigarettes in the scope of this project
IB	Imperial Brands PLC
Illegal products labelled “For Duty Free Sale”	Products marked as Duty Free or for export, but sold illegally through retail channels
Illicit Whites (IW)	Cigarettes that are usually manufactured legally in one country/market but which the evidence suggests have been smuggled across-borders during their transit to the destination market under review where they have limited or no legal distribution and are sold without payment of tax
Illicit Whites with no country-specific labelling	Packs of Illicit White Cigarettes which have “duty free” or no identifiable labelling on the packs
IMS	In Market Sales (the primary source of Legal Domestic Sales volumes)

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Glossary (cont.)

Inflows	Inflows of Non-Domestic product into a market. Refer to the methodology section for further details
JTI	JT International SA
KPMG LLP	KPMG Limited Liability Partnership, also abbreviated to KPMG
LDC	Legal Domestic Consumption is defined as Legal Domestic Sales (LDS) net of outflows
LDS	Legal Domestic Sales of genuine domestic product through legitimate, domestic channels based on In Market Sales (IMS) data
m	Million
ND	Non-Domestic product – product that originates from a different market than the one in which it is consumed
ND(L)	Non-Domestic (Legal) – product that is brought into the market legally by consumers, such as during a cross-border trip
Non-government controlled-areas	Areas in the Northern part of Cyprus, where the Government of the Republic of Cyprus does not exercise effective control. As defined by the European Commission's Green Line Regulation
OCG	Organised Crime Group
OLAF	Office Européen de Lutte Antifraude also known as the European Anti-Fraud Office
Outflows	Outflows of product from a market. For the purposes of the EU Flows Calculation, outflows are to other markets in the study. Refer to the methodology section for further details
PMI	Philip Morris International
PMPSA	Philip Morris Products SA
ppt	Percentage point
Reporting period	The period covered by this Report (2018-2022)
Smoking prevalence	The percentage of smokers in the total population of the legal smoking age
Tobacco taxes	The sum of all types of taxes levied on tobacco products, including VAT. There are two basic methods of tobacco taxation: Normal or specific taxes are based on a set amount of tax per unit (e.g. cigarette); these taxes are differentiated according to the type of tobacco. Ad valorem taxes are assessed as a percentage mark up on a determined value, usually the retail selling price or a wholesale price and includes any value added tax
Total measured consumption	Total cigarette consumption for those categories of consumption which are able to be measured. In Ukraine, pack swap research does not identify the origins markets of packs collected. Due to this limitation no estimate of ND(L) can be made.
Unspecified	Unspecified market variant refers to cigarette packs which do not bear specific market labelling or Duty Free labelling
UNWTO	United Nations World Tourism Organisation
WAP	The weighted average price for cigarettes calculated by reference to the total value of all cigarettes released for consumption, based on the retail selling price including all taxes, divided by the total quantity of cigarettes released for consumption. The WAP is provided by the European Commission Excise Duty Tables

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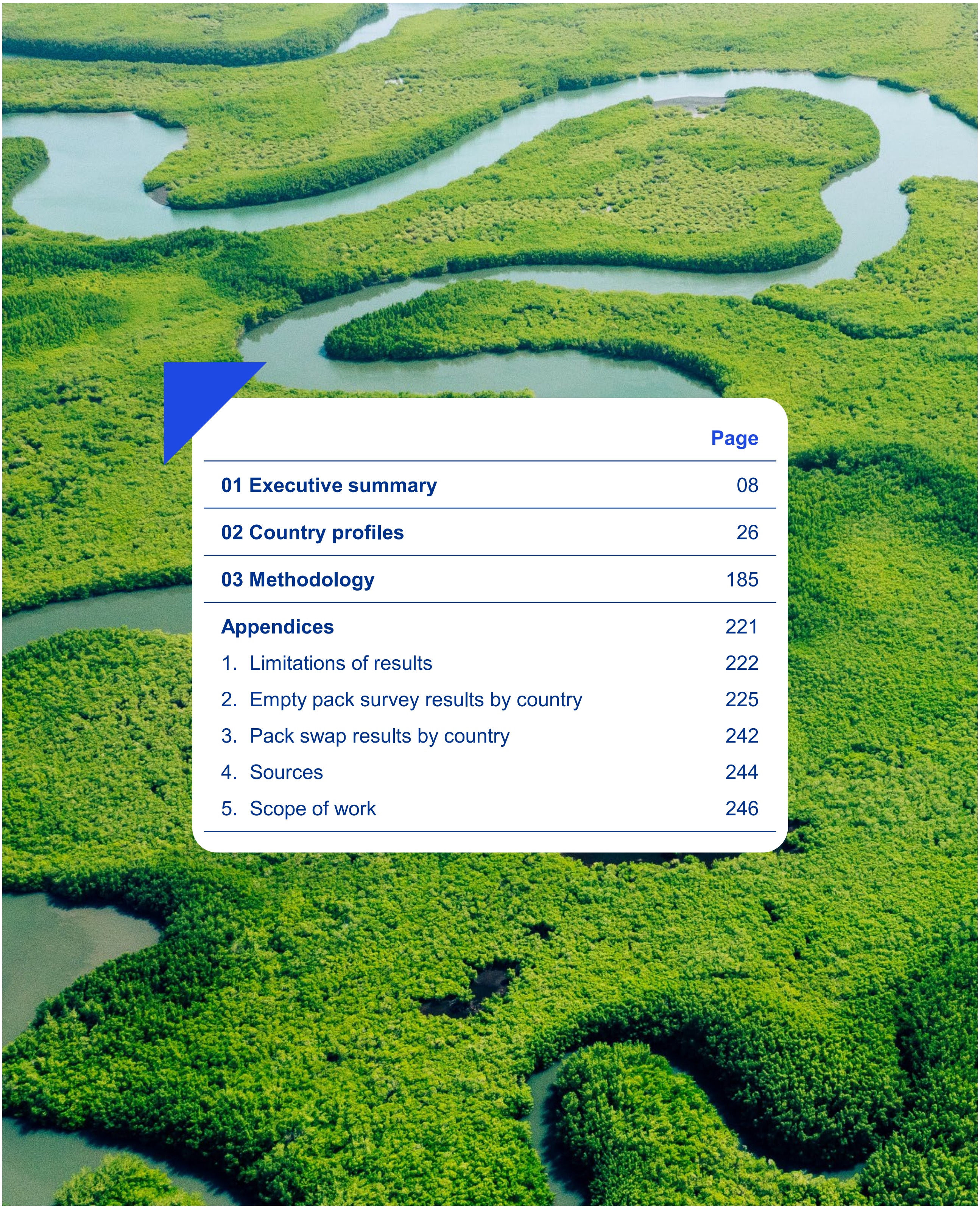

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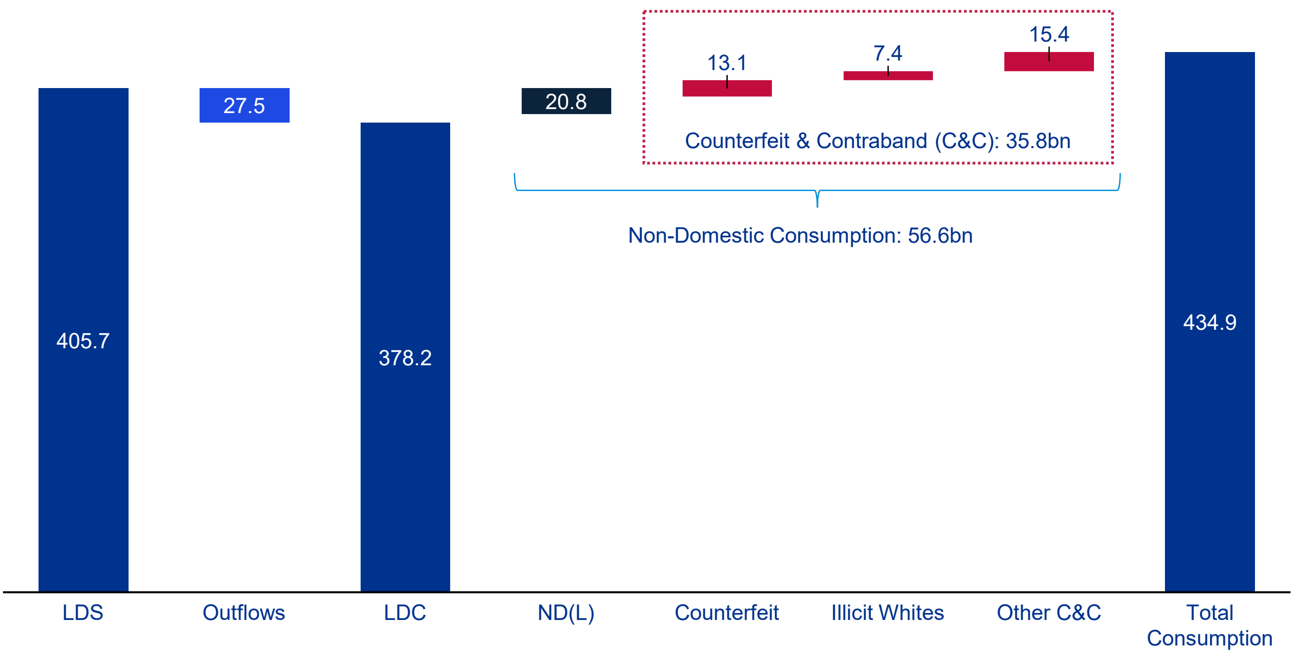
KPMG's EU Flows Calculation: An approach to categorising cigarette consumption

Estimate of total cigarette consumption in the EU27, 2022 (bn cigarettes)[1]



- The chart above illustrates KPMG's core approach to estimating the size and scale of illicit cigarette consumption, known as Counterfeit & Contraband (C&C), which includes Illicit Whites.
- KPMG's approach, using empty pack surveys (from market research agencies commissioned by tobacco manufacturers) and Legal Domestic Sales (provided by manufacturers and third party market research agencies) allows us to split total cigarette consumption into its constituent parts.
- Legal Domestic Sales, available in every country, underpin the initial volume estimate, whilst empty pack surveys enable KPMG to estimate the additional 'Non-Domestic' component of consumption, which can be further analysed depending on the source and brand of each pack.
- KPMG's flows calculation ensures that the calculation of inflows and outflows around the EU27, Moldova, Norway, Switzerland, the UK and Ukraine are all balanced, so that the overall consumption in each country can be estimated.
- Definitions for each component of cigarette consumption are available in the Methodology section.

Source: (1) KPMG EU Flows Calculation 2022

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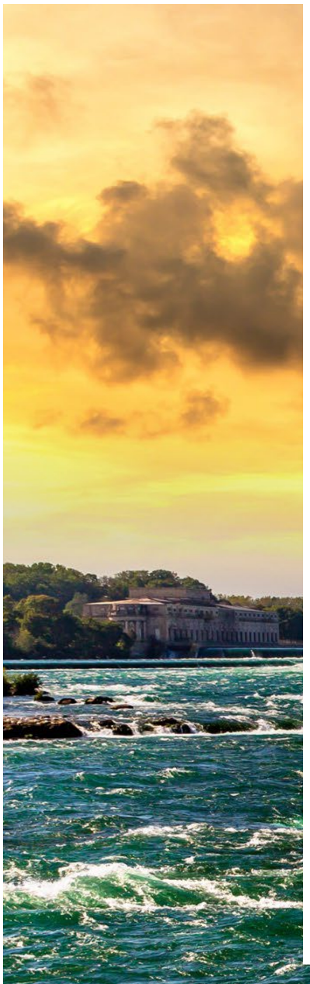
About this report



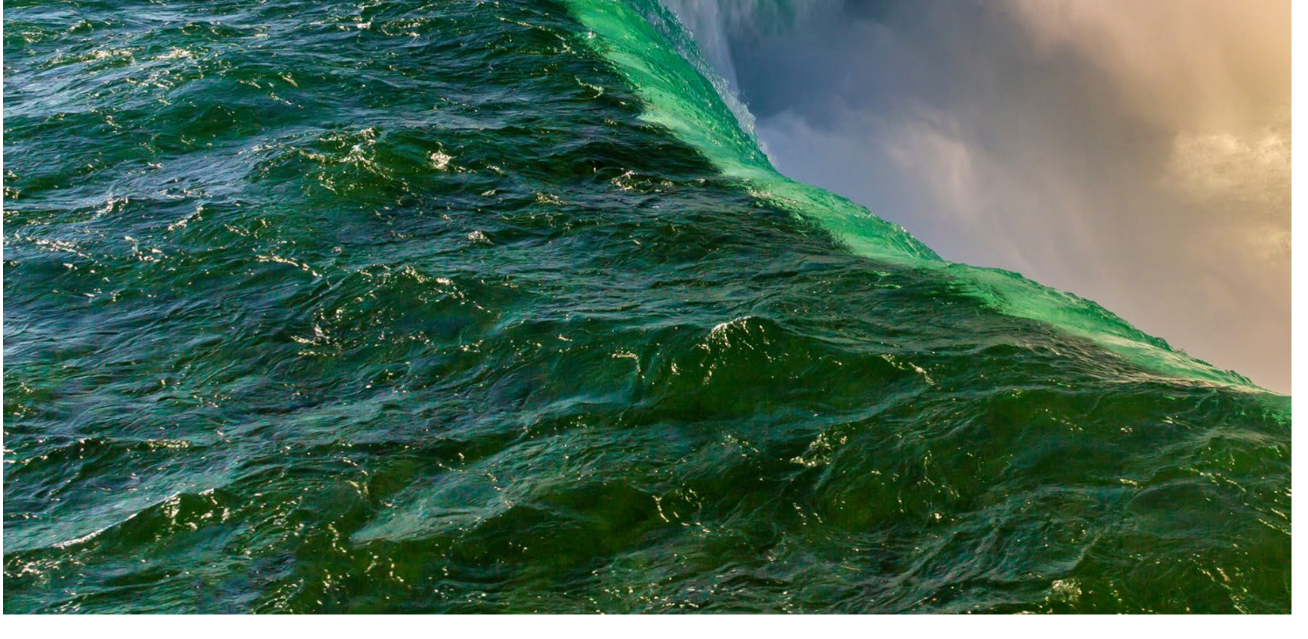
This Report is the 2023 output from an annual study estimating the scale and development of the illicit cigarette market in the EU27. This Report was commissioned by Philip Morris Products SA for data covering 2022. KPMG LLP was previously commissioned by Philip Morris Products SA to undertake this report in 2022 (resulting in a 2022 report covering 2021 data), and between 2019 and 2021.

This study covers all 27 European Union member states in 2022, with an EU27 market overview. There are also individual country reports for Norway, Switzerland, the UK and, for the first time, Moldova and Ukraine. More information on the agreed scope of work can be seen in the appendices to this Report.

It should be noted that external issues such as the COVID-19 pandemic and the ongoing war in Ukraine have impacted the results since 2020 and 2022 respectively.

The methodology used to estimate the size of the illicit cigarette market in connection with the previous annual studies has continued to be applied consistently in this Report, with the underlying data-sources remaining the same. The methodology is underpinned by a combination of hard data, such as legal sales of cigarettes within the EU27, travel data, publicly available data-points, such as smoking prevalence and average prices of cigarettes, and the empty pack surveys separately commissioned by a number of tobacco manufacturers and undertaken by independent market research agencies. KPMG's approach is to review these data-points to produce the relevant estimates. Details of the overall methodology is provided within this Report.

This Report refers to interviews with law enforcement, which took place as part of the research process for this study.



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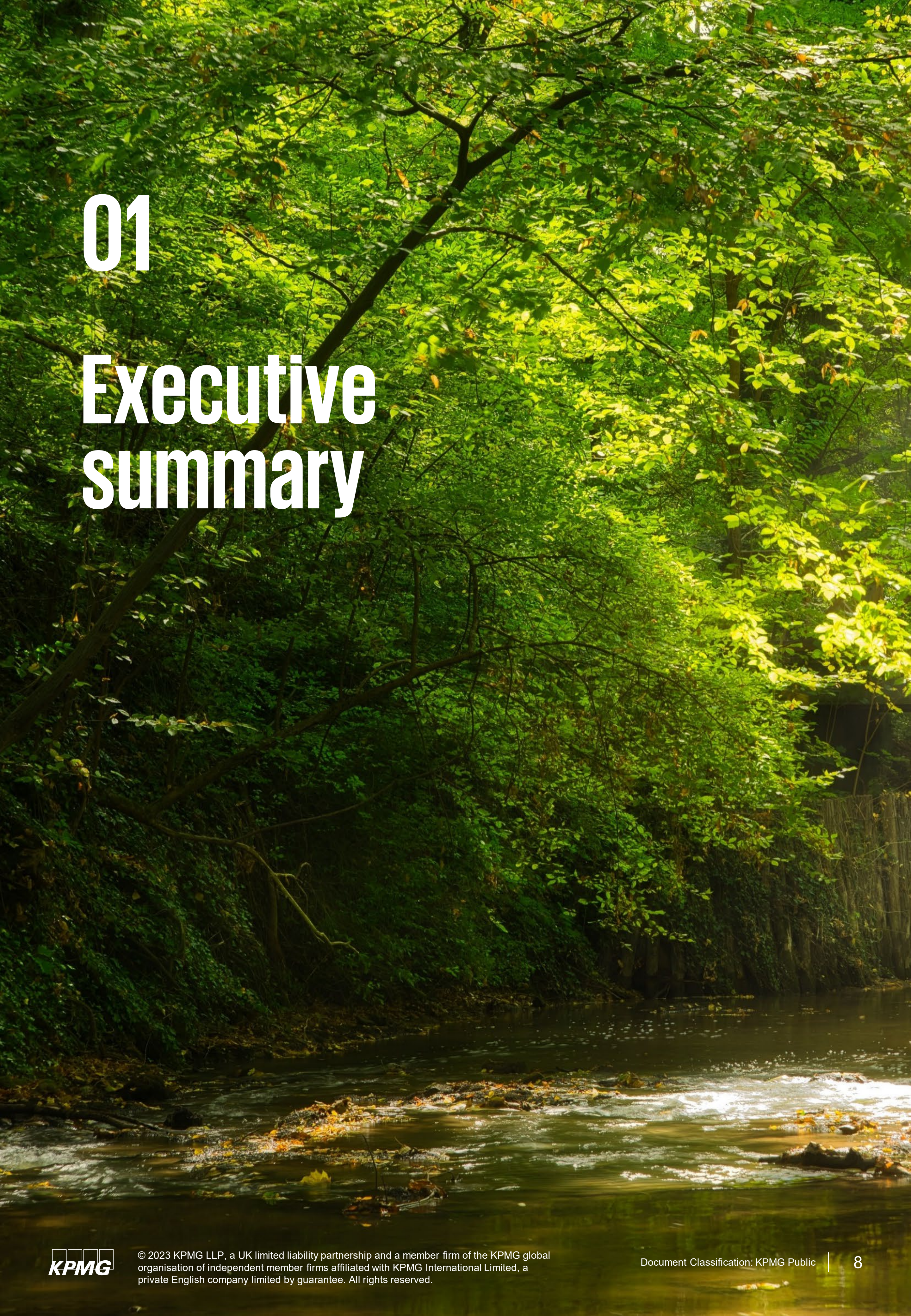

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Executive summary

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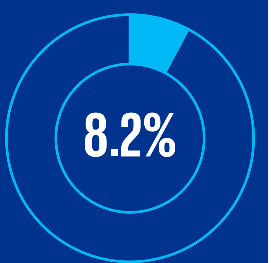
Executive summary

35.8bn

Counterfeit & Contraband cigarettes consumed

+0.3bn on 2021

+0.7% on 2021



8.2%

Of total consumption was C&C

+0.1ppt on 2021

€11.3bn

Estimated tax revenue lost[a]

+€0.9bn on 2021

+8.5% on 2021

Total cigarette consumption in the EU27 continued its long-term declining trend

- Total cigarette consumption declined by 0.3% or 1.4bn cigarettes, a similar rate as seen between 2020 and 2021, albeit more slowly than that seen prior to 2020. The decline was mostly due to a fall in legal domestic consumption of 1.3%
- This rate of total consumption decline has been slowed by the growth of Non-Domestic consumption (legal and illicit inflows combined) which increased by 7.0% as border restrictions eased post-COVID. Much of the increase in Non-Domestic consumption came from Non-Domestic Legal (ND(L)) (20% growth) which grew in the majority of EU27 markets (22 out of 27) but remains below pre-COVID levels

Contraband & Counterfeit (C&C) grew, continuing the trend seen in recent years

- Illicit consumption in the EU27 continued to increase, growing by 0.7% or 0.3bn cigarettes in 2022, a lower rate than seen in 2021 (3.9% or 1.3bn cigarettes)
- Had these cigarettes been legally purchased in the countries in which they were consumed, an additional ~€11.3bn in taxes would have been raised in the EU27
- The increase in EU27 illicit consumption was predominantly due to France (+1.8 bn), which now accounts for almost half (47%) of EU27 illicit consumption. Despite the overall increase, the majority of EU27 markets (i.e. 21 out of the EU27 markets) experienced a stable or declining consumption share of Illicit cigarettes in 2022
- Excluding the increase in illicit consumption in France, overall illicit consumption in the remaining EU27 markets declined by 7.5%, largely due to decreases in The Netherlands (-0.9bn cigarettes, partly reversing a 1.5bn increase observed in 2021), Greece (-0.5bn), Portugal (-0.5bn) and Romania (-0.4 bn). A number of EU27 markets recorded the lowest volumes of C&C observed in the reporting period. These markets were Croatia, Germany, Greece, Latvia, Lithuania, Luxembourg, Poland, Portugal, Romania and Slovenia

Recent historic trends demonstrated in illicit tobacco consumption have continued, with a decline in Illicit Whites whilst Counterfeit and Other C&C increased

- Illicit Whites volumes continued the decline seen since 2019, decreasing by 1.2bn cigarettes or 14.3% to 7.4bn, representing 20.6% of EU27 illicit consumption. Increased controls at the EU27 border with Belarus[2] and the war in Ukraine may have impacted historical Illicit Whites transit routes[3]
- Counterfeit increased by 6.2% or 0.8bn cigarettes to 13.1bn and accounted for 36.5% of EU27 illicit consumption, the highest share recorded (34.6% in 2021). Whilst France remains the largest end market for Counterfeit (61.5% of all Counterfeit consumption in the EU27), for the first time since 2019, Counterfeit consumption was driven by countries other than France. Volume growth came mostly from Germany, Spain and a number of smaller markets. The fastest rates of growth were in Ireland, Belgium and Croatia
- Other C&C, which excludes Counterfeit and Illicit Whites, remains the largest category of illicit consumption, and increased by 5.0% to 15.4bn. It now represents 42.9% of EU27 illicit consumption (41.2% in 2021)

Law enforcement interviews[3] highlighted that the nature of illicit cigarette consumption in the EU27, and law enforcement efforts to tackle it, are evolving

- EU27-based illicit production is increasing, with a greater share of illicit production destined for export to other EU27 markets
- Organised Crime Groups (OCGs) are focusing on increasing profit margins by producing Counterfeits of premium brands targeted for sale in higher-priced Western EU27 markets
- As a result, EU27 law enforcement agencies are continuing to collaborate to tackle an increasingly trans-national issue
- Selling directly to the consumer is an increasingly important channel for the illicit cigarette trade

Note: (a) Counterfeit can only be identified by manufacturers forensically examining their brands collected via empty pack surveys. As only BAT, IB, JTI and PMI participate in the empty pack surveys used in this Report, Counterfeit can only be identified from these manufacturers

Sources: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report (2) Context of the ongoing Belarus-EU migration crisis, Office of the United Nations High Commissioner for Human Rights (3) KPMG & European law enforcement interviews

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Law enforcement discussions

Discussions with EU27 law enforcement(1) highlighted a number of trends, namely:

EU27-based illicit production is increasing, with a greater share of illicit production destined for export to other EU27 markets

- Intra EU27 illicit production appears to be increasing in 2022, with post pandemic and geopolitical drivers re-shaping the way OCGs operate:
  - Given barriers to sourcing and importing finished goods put in place during the pandemic period, OCGs have continued the trend of locating production facilities within the EU27 bloc despite the relaxation of border controls
  - The ongoing war in Ukraine is also making imports from traditional illicit cigarette source markets such as Ukraine and Belarus more difficult, with OCGs in turn opting to set up production facilities nearer to end markets
- Raided factories were increasingly making products intended for export to other EU27 markets (based on labelling of the products seized)

Organised Crime Groups (OCGs) are focusing on increasing profit margins

- Prices of illicit cigarettes increased in some markets during the COVID-19 pandemic, as travel and import restrictions reduced supply in some markets against a backdrop of ongoing demand
  - Following the easing of travel restrictions, prices have not returned to pre-pandemic levels, indicating a normalisation of these new higher prices for OCGs
- OCGs are increasingly focusing on manufacturing Counterfeits of premium brands targeted for sale in higher-priced Western European markets
  - These premium brand Counterfeits are also replacing historically lower-priced brands produced for consumption in illicit manufacturing source markets, increasing prices of illicit cigarettes in the source markets and further bolstering OCG margins

EU27 law enforcement agencies are continuing to collaborate to tackle an increasingly trans-national issue

- Given the increasing trend towards EU27-based illicit production and export to higher-priced Western EU27 markets, interviewees stressed the increasing importance of collaboration with national and pan-EU27 law enforcement agencies. These initiatives include ‘double declaration’, i.e. source and destination markets notifying each other when declared exports are sent and received respectively, and the tracking of imports of precursor materials to identify potential supplies for illicit manufacturing entering a member state
- This collaboration has, and continues to, pay dividends, with a number of law enforcement agencies noting record seizure volumes in 2022

Direct to consumer is an increasingly important channel for the illicit cigarette trade

- Selling directly to consumers via various channels and online platforms saw relatively strong growth in 2020 and 2021 during the COVID-19 pandemic across both legal and illicit products, and continues to grow
- OCGs are leveraging online and social media marketplaces to engage consumers, as well as de-risking supply by reducing the number of intermediaries in the supply chain
- Although platforms are taking active steps to disrupt illicit trade, OCGs are exploiting loopholes to evade detection, and are able to quickly fulfil orders using their own distribution networks or leveraging third party courier and delivery services

Source: (1) Interviews with eight EU27 law enforcement agencies, and three European law enforcement agencies

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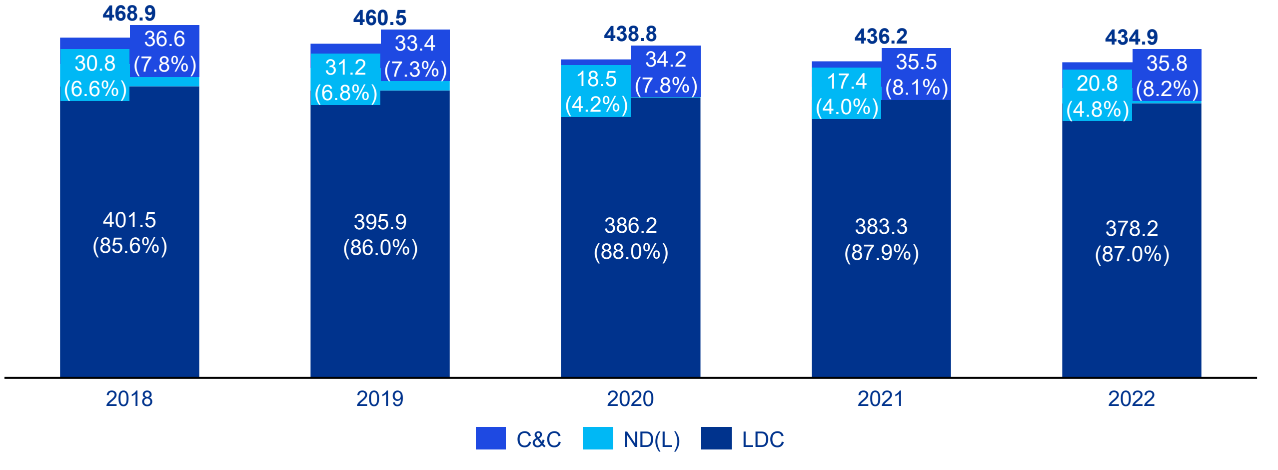
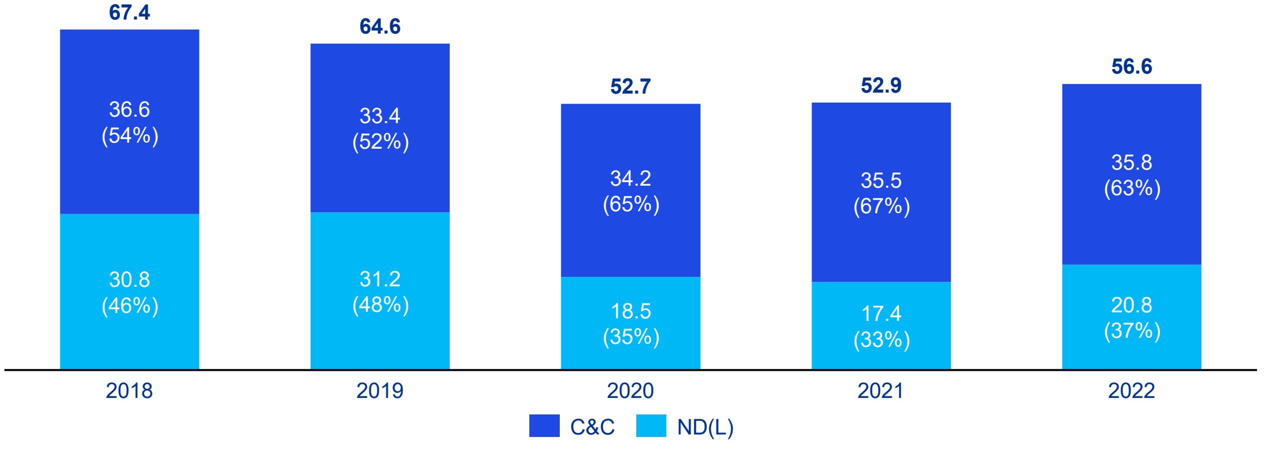
EU27 cigarette consumption trend

- Total cigarette consumption declined by 0.3% or 1.4bn cigarettes in 2022[a], a similar rate as seen between 2020 and 2021, albeit more slowly than that seen prior to 2020
- The decline in total consumption, mostly due to a fall in legal domestic consumption of 1.3%, has been slowed by growth of Non-Domestic consumption (legal and illicit inflows combined) which increased by 3.7bn cigarettes[a] or 7.0%. Whilst it is not possible to draw conclusions on causality we observe that some Eastern markets that experienced a slowing in the decline in total consumption compared to previous years or growing consumption also saw large refugee flows from Ukraine
- Increased Non-Domestic volumes are primarily driven by legal flows (ND(L)), which increased by 3.4bn to 20.8bn cigarettes as travel volumes started to recover following the easing of COVID-19 travel restrictions[2][3]
- Illicit consumption (C&C) volumes increased by 0.3bn cigarettes to 35.8bn cigarettes, forming 63% of Non-Domestic consumption in 2022 compared to 67% in 2021

Total manufactured cigarette consumption in the EU27, 2018-2022 (bn cigarettes)[1]



Non-Domestic cigarette consumption in the EU27, 2018-2022 (bn cigarettes)[1]



Notes: (a) Due to rounding, the difference between 2021 and 2022 totals shown in the chart or commentary may vary from the actuals

Sources: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report; (2) UNWTO; (3) Euromonitor

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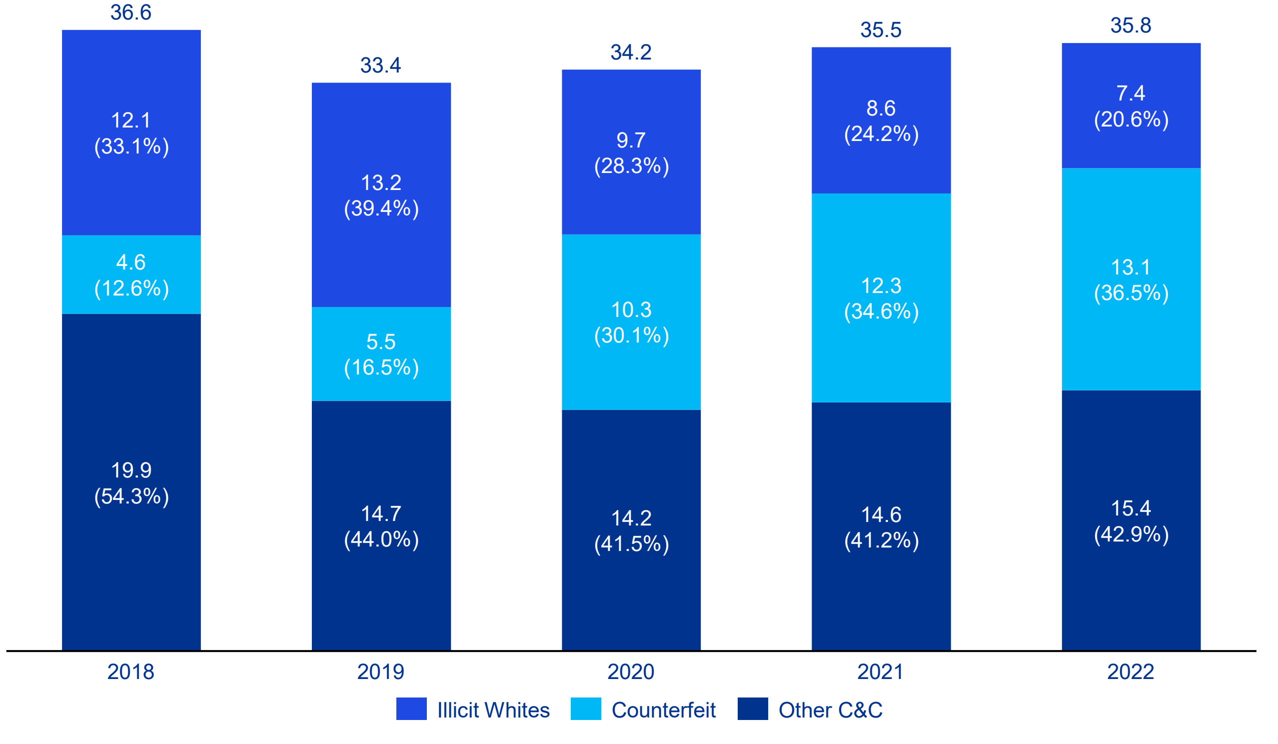
C&C trend by type

- Whilst there has been a relatively modest increase in C&C consumption in 2022 (+0.7% or 0.3bn cigarettes), there is an ongoing underlying mix change with an increase in Counterfeit and Other C&C partly offset by a decline in Illicit Whites
- Counterfeit consumption increased by 0.8bn (6.2%) with the largest growth in Germany (+0.2bn)
- Other C&C volumes increased by 0.7bn (5.0%) with the largest growth in France (+1.6bn)
- Illicit Whites consumption continued to decline (-1.2bn cigarettes or 14.3%) in 2022, continuing the declining trend observed since 2019 and reaching the lowest level observed in the reporting period

C&C trend by type in the EU27, 2018-2022 (bn cigarettes)[1]



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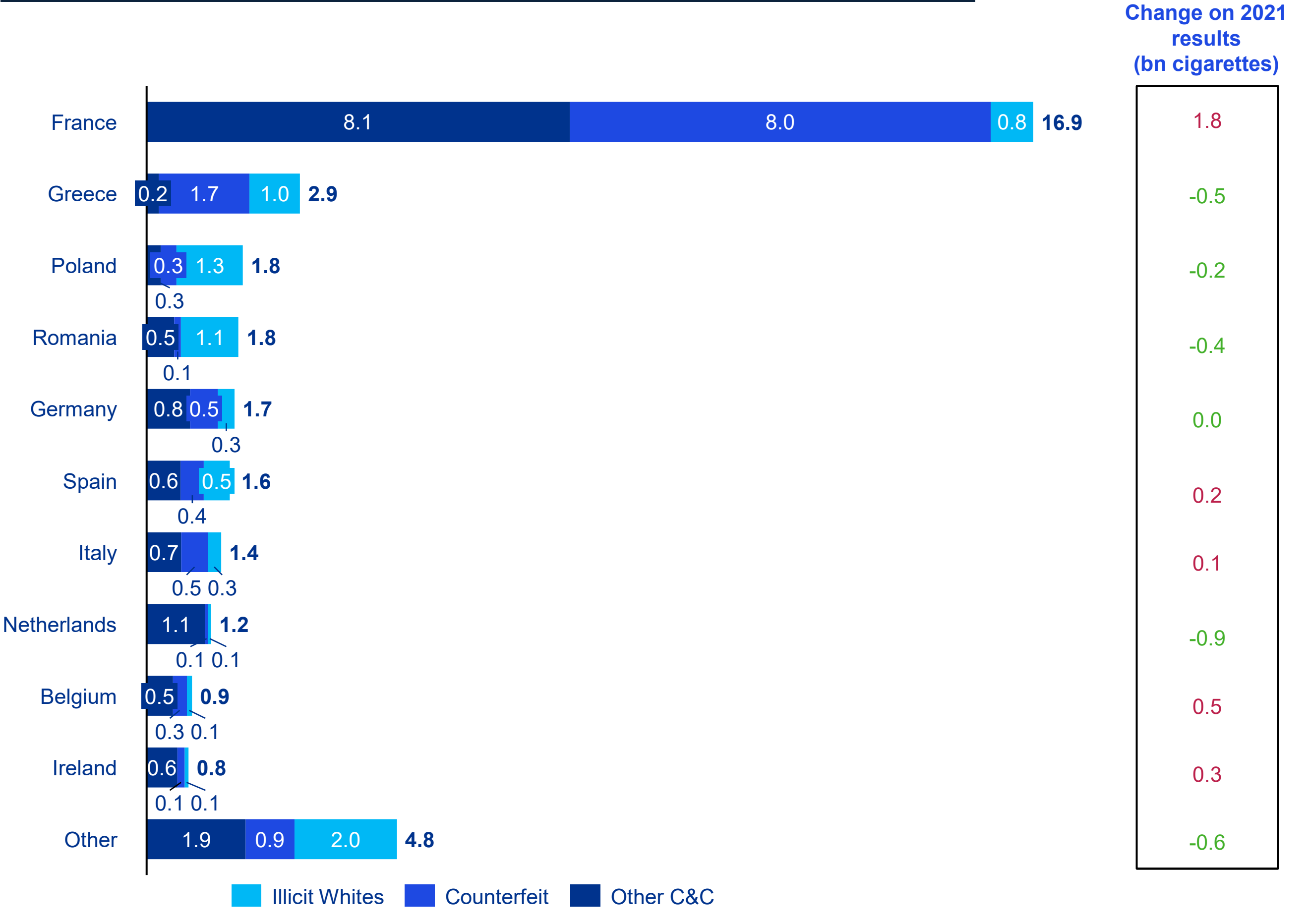
C&C key markets

- Increased EU27 illicit cigarette consumption was primarily driven by an increase in C&C in France and, to a lesser extent, Belgium
- France continues to remain the largest market for illicit cigarettes in the EU27, with Other C&C (8.1bn cigarettes) and Counterfeit (8.0bn) accounting for the majority of illicit consumption. In 2022 illicit cigarette consumption increased by 1.8bn cigarettes. This was primarily driven by a 1.6bn or 25% increase in Other C&C, and a 0.1bn increase in both Counterfeit and Illicit Whites
- Belgium's C&C volumes increased by 0.5bn in 2022, driven by a 0.2bn cigarette increase in Other C&C, a 0.2bn increase in Counterfeit, and a 0.1bn increase in Illicit Whites. This brings Belgium into the top 10 EU27 C&C consumption countries
- The Netherlands saw the largest decline in C&C volumes in 2022, declining by 0.9bn cigarettes (partly reversing a 1.5bn increase observed in 2021), followed by Greece (-0.5bn) and Romania (-0.4bn)
- For context, Ukraine, which was included in this report for the first time in 2022, was the second largest illicit cigarette consumption market in this study with C&C of 7.4bn cigarettes, a decline of 0.2bn over 2021. The UK, which left the EU in 2020, was the third largest, with C&C of 5.9bn cigarettes, an increase of 0.5bn over 2021

Top 10 EU27 C&C countries by volume, 2022 (bn cigarettes)(1)



Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report

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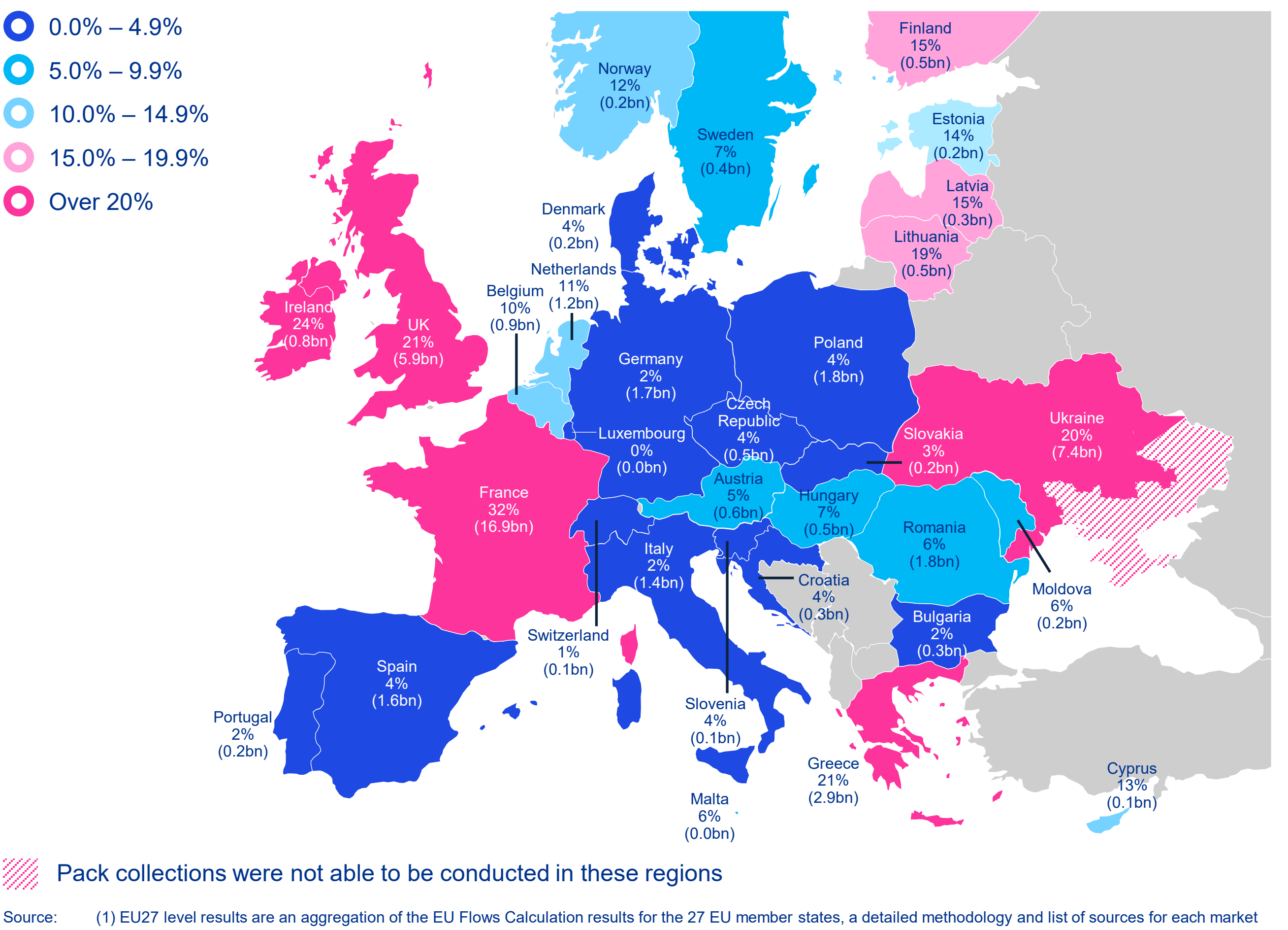
C&C consumption trend

- Eighteen of the EU27 markets had illicit consumption shares of less than 10%
- The highest illicit consumption shares in the EU27 were in France (32%), Ireland (24%), and Greece (21%)
- A number of EU27 markets recorded the lowest share of C&C in the reporting period in 2022, these markets were Croatia, Luxembourg, Poland, Portugal, Romania and Slovenia

C&C as a percentage of total consumption, 2022 (%)[1]



Pack collections were not able to be conducted in these regions

Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report

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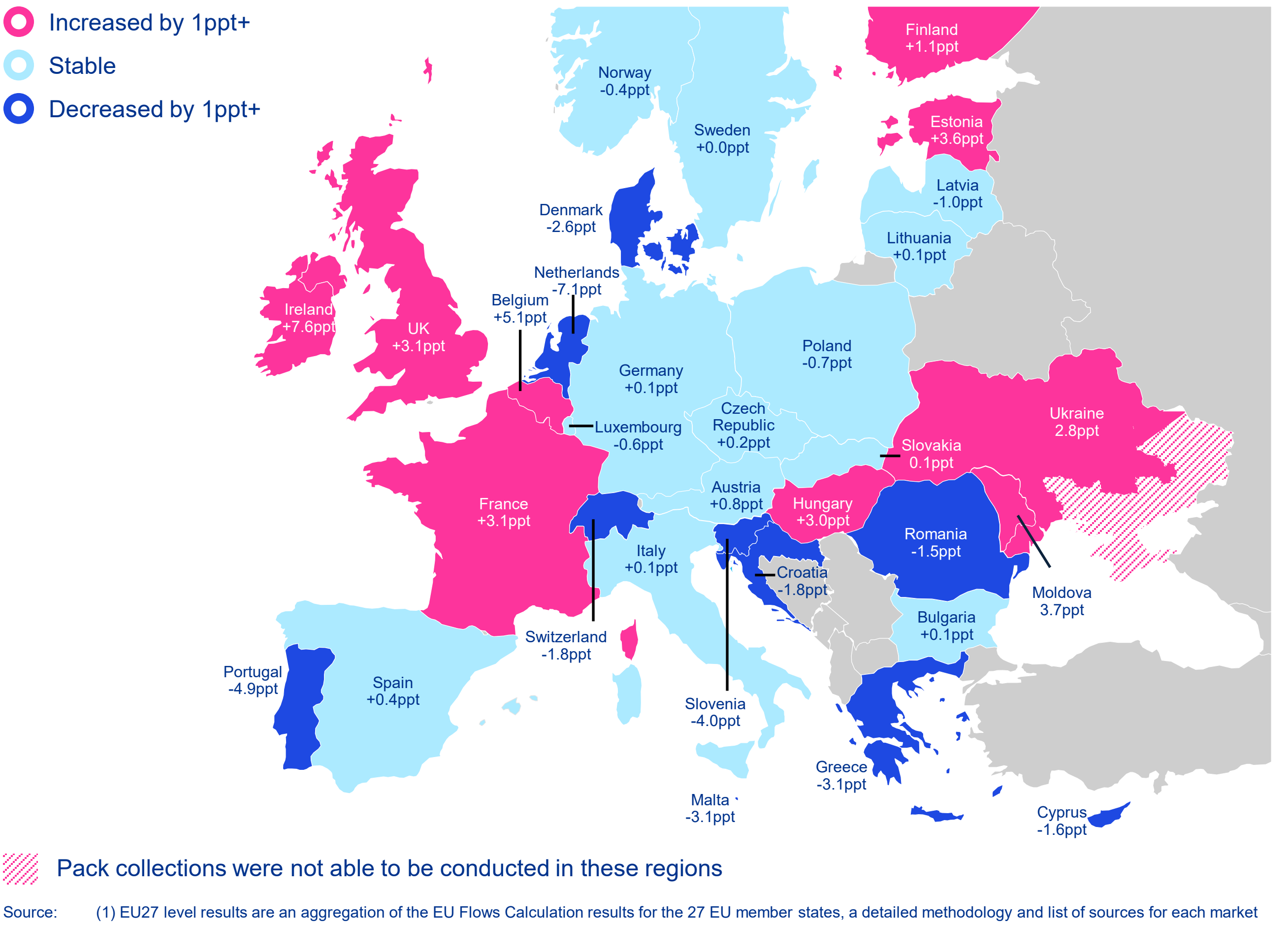
C&C consumption trend (cont.)

- The majority of markets (i.e. 21 out of the EU27 markets) experienced a stable or declining consumption share of Illicit cigarettes in 2022
- Ireland and Belgium had the largest increase in share of C&C, with C&C share increasing by 7.6ppt in Ireland and 5.1ppt in Belgium
- The Netherlands and Portugal had the largest decrease in share of C&C, with C&C share decreasing by 7.1ppt in the Netherlands and 4.9ppt in Portugal

Change in share of C&C consumption vs prior year, 2022 (ppt)(1)



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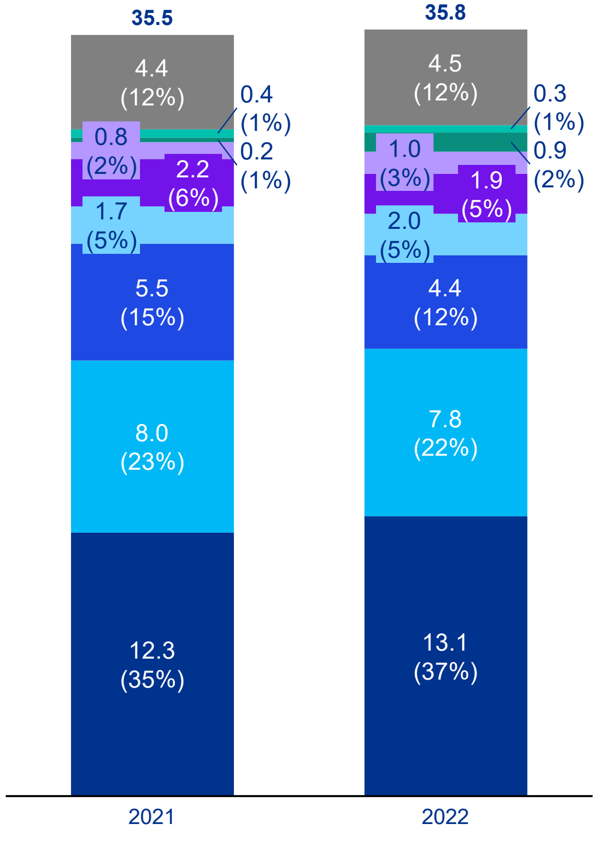
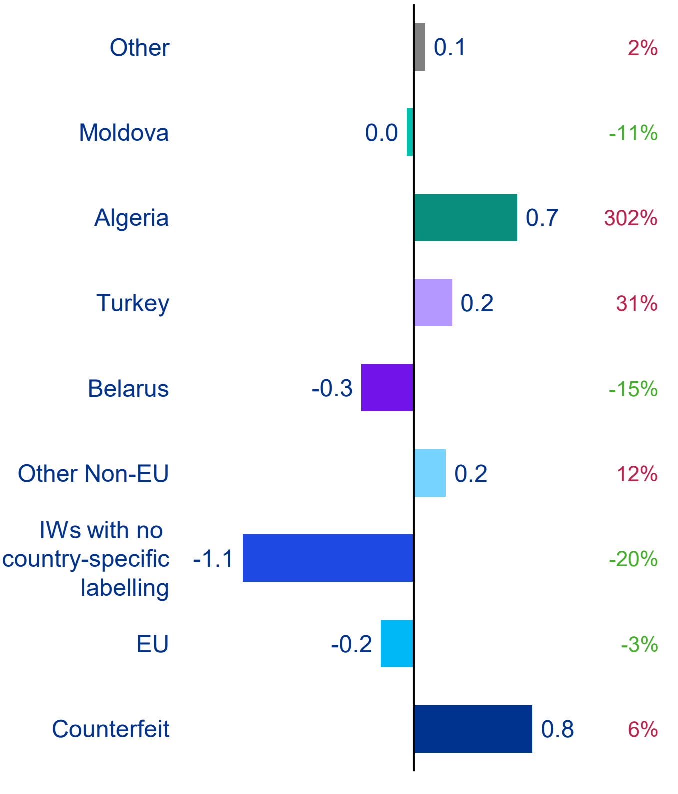
C&C source countries

- Despite a relatively modest increase in overall C&C consumption in the EU27, there are larger movements at a source market level
- Counterfeit consumption in the EU27 increased by 0.8bn in 2022, accounting for 37% of illicit cigarette consumption (35% in 2021)
- Illicit cigarettes that can be identified as flowing from one EU27 country to another decreased by 0.2bn, reversing the growth trend observed in 2021 (0.7bn increase), and accounted for 22% of illicit consumption (23% in 2021)
- Illicit Whites with no country-specific labelling decreased by 1.1bn in 2022, compared to a 0.2bn increase in 2021
- Against a backdrop of increased EU27-Belarus border restrictions and crossing point closures beginning in July 2021, Belarusian C&C inflows declined by 0.3bn (1.0bn in 2021)[2]
- C&C inflows from Turkey increased by 0.2bn in 2022 to the highest level seen in the reporting period, with the majority of these volumes observed in France and Belgium
- C&C Inflows from Algeria increased by 0.7bn in 2022 to the highest level seen in the reporting period

Sources of C&C in the EU27, 2021-2022 (bn cigarettes)[1]



Change on 2021 results (bn cigarettes, %)



Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report, (2) Context of the ongoing Belarus-EU migration crisis, Office of the United Nations High Commissioner for Human Rights

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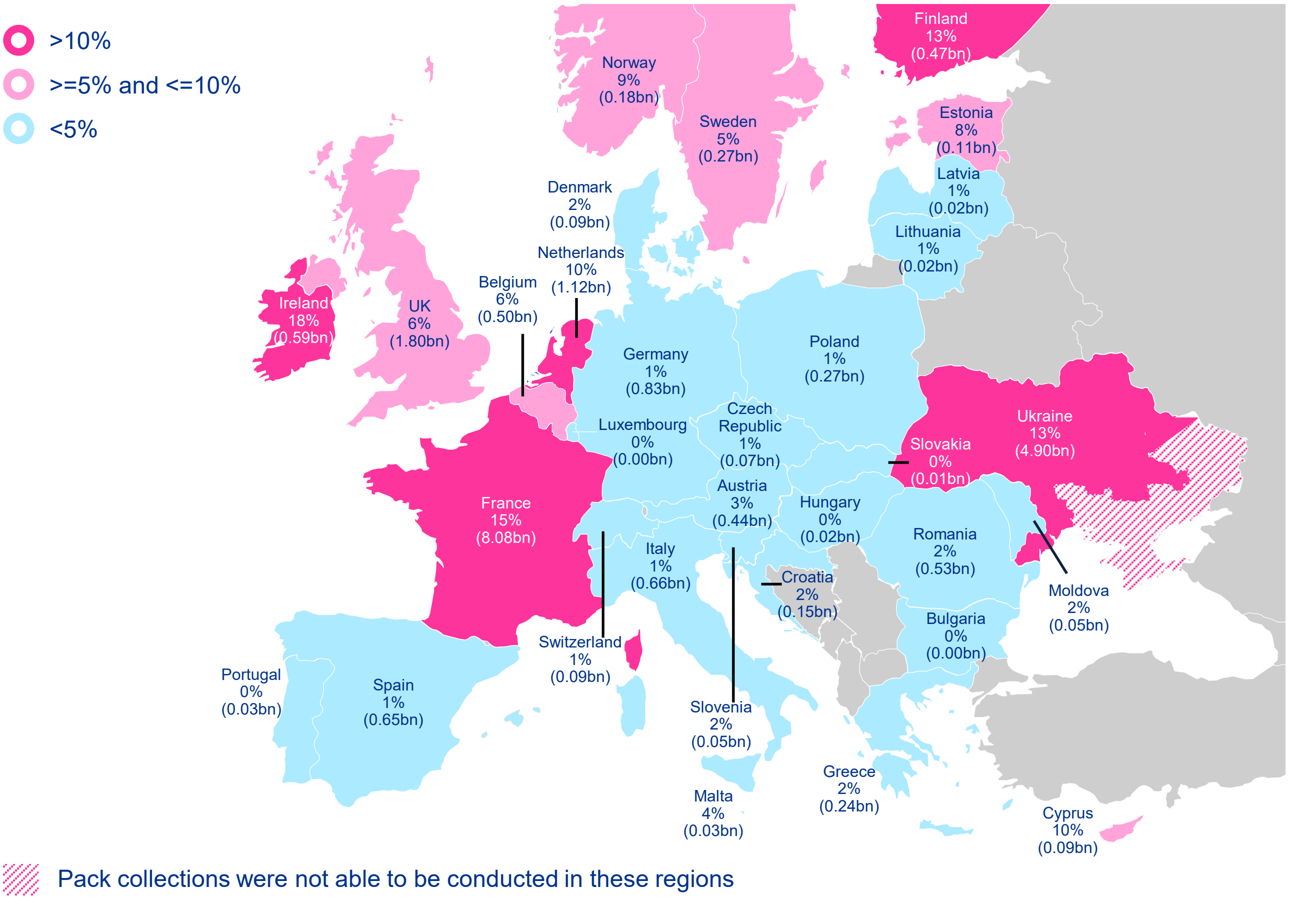
Focus on Other C&C

- Other C&C volumes increased by 0.7bn to 15.4bn cigarettes in 2022, or 3.5% of EU27 cigarette consumption (3.4% in 2021)
- At a market level, the highest EU27 Other C&C shares were observed in Ireland (18%), France (15%) and Finland (13%)
- France is the largest consumer of Other C&C in volume terms in the EU27, accounting for approximately half of all Other C&C consumed in the EU27 bloc

Other C&C as a percentage of total consumption, 2022 (%)(1)



Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report

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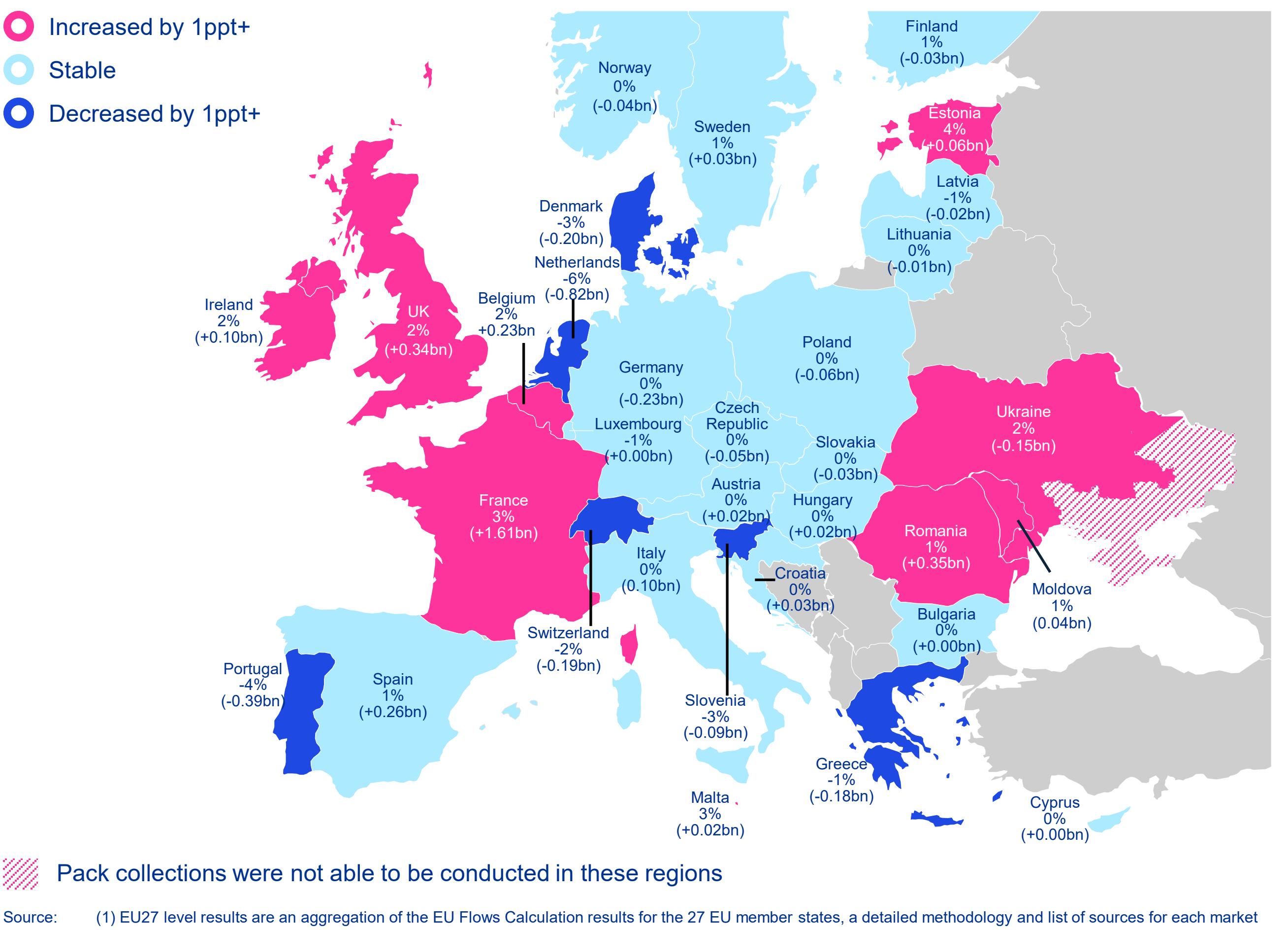
Focus on Other C&C (cont.)

- The largest increases in share of Other C&C were observed in Estonia (+4%), Malta (+3%) and France (+3%). In volume terms the largest increases were in France (+1.61bn cigarettes), Romania (+0.35bn) and Spain (+0.26bn)
- The largest declines in Other C&C share were observed in the Netherlands (-6%), Portugal (-4%), Denmark (-3%) and Slovenia (-3%). In volume terms the largest declines were in The Netherlands (-0.82bn cigarettes), Portugal (-0.39bn), Germany (-0.22bn) and Greece (-0.18bn)

Change in share of Other C&C consumption vs prior year, 2022 (ppt)[(1)]



Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report

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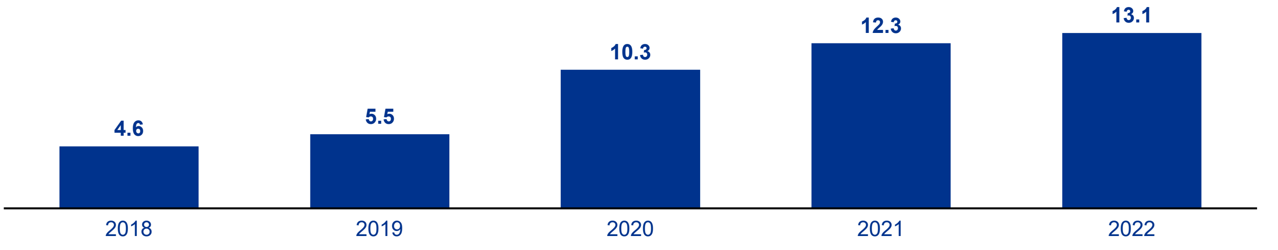
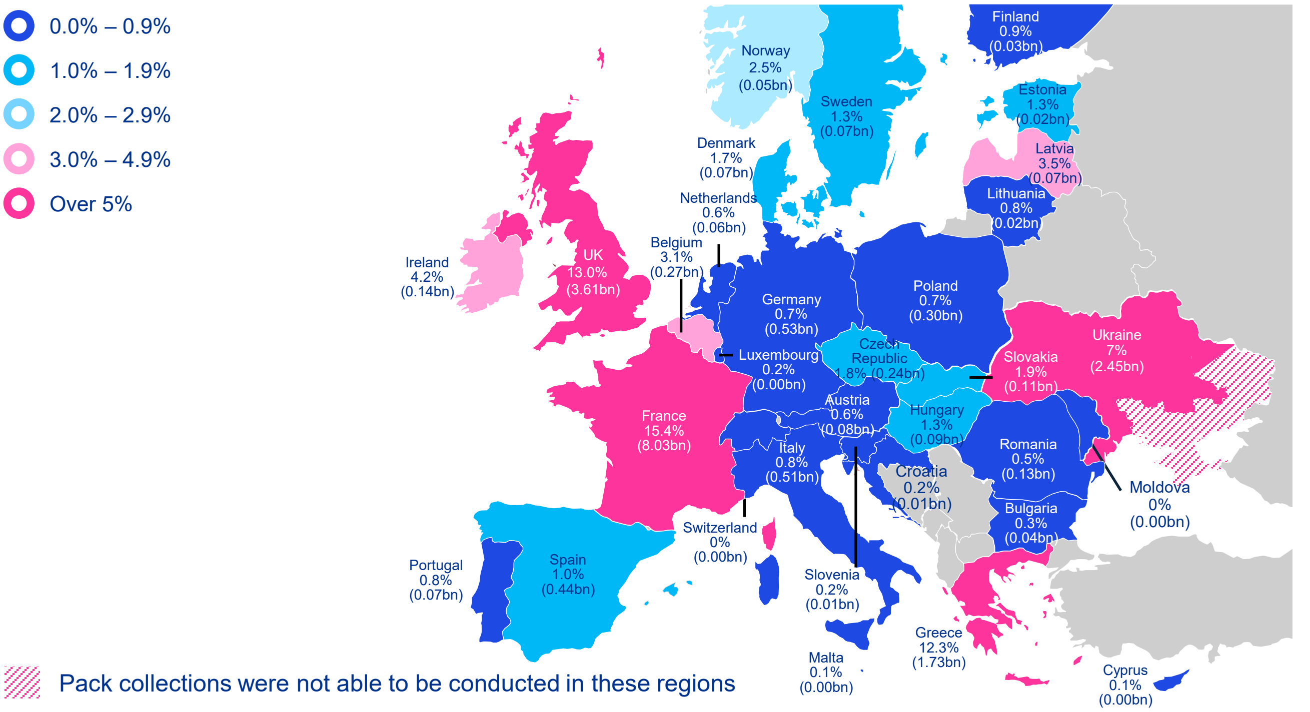
Focus on Counterfeit

- Counterfeit volumes continued to increase in 2022 (+0.8 bn cigarettes or 6.2%), albeit at a lower level than seen between 2020 and 2021 (+2.0bn or 19%)
- Counterfeit now represents 3.0% of total cigarette consumption in the EU27 (up from 2.8% in 2021 and 1.0% in 2018)
- EU27 Counterfeit consumption was highest in France (15% share or 8.0bn) and Greece (12% or 1.7bn)
- Interviews with law enforcement[2] indicate that significant volumes of the Counterfeit detected in this study could be manufactured in illegal factories within the EU27. Furthermore, as only participating manufacturers[a] forensically examine the packs collected in the empty pack survey to identify Counterfeit, actual Counterfeit volumes in the EU27 may be even higher than shown in this Report

Counterfeit volumes in the EU27, 2018-2022 (bn cigarettes)[1]



Counterfeit as a percentage of total consumption, 2022 (%)[1][b]



Note: (a) PMI, JTI, BAT and IB. Refer to methodology section for further details (b) Due to rounding, the difference between colour and label may vary

Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report; (2) Law enforcement interviews, refer to page 10 for further details

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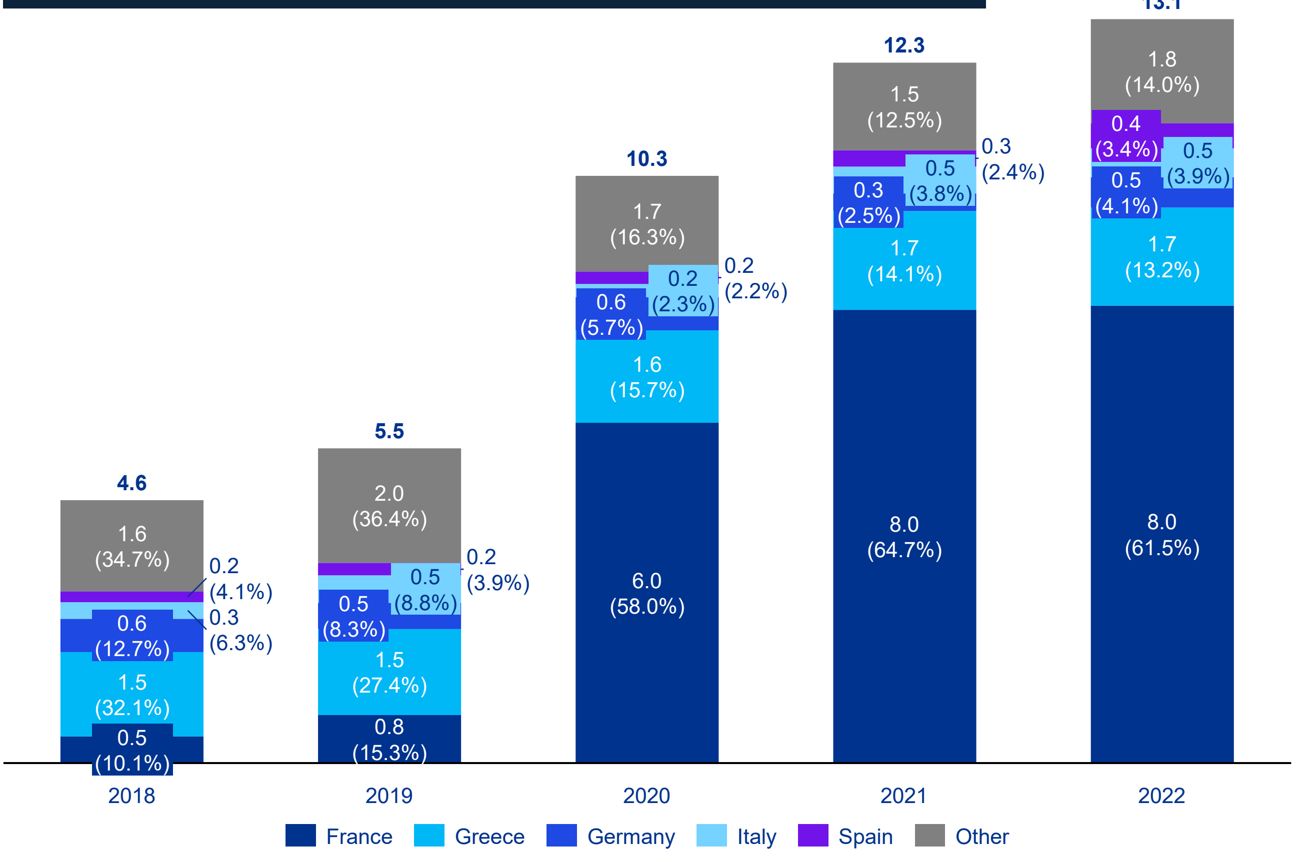
Focus on Counterfeit (cont.)

- In 2022, and for the first time since 2019, Counterfeit consumption in the EU27 was driven by countries other than France, albeit France continues to be the largest consumption market and accounted for 61.5% of all EU27 Counterfeit consumption
- Increased Counterfeit volumes in Germany (0.2bn), Spain (0.2bn) and smaller markets grouped together under the 'Other' category (0.3bn) were the primary drivers of increased EU27 Counterfeit consumption[b]

Counterfeit volumes in the EU27, 2018-2022 (bn cigarettes)[(1)(a)]



Note: (a) Counterfeit can only be identified by manufacturers forensically examining their brands collected via empty pack surveys. As only BAT, IB, JTI and PMI participate in the empty pack surveys used in this Report, Counterfeit can only be identified from these manufacturers (b) Due to rounding, the difference between 2021 and 2022 totals shown in the chart or commentary may vary from the actuals

Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report

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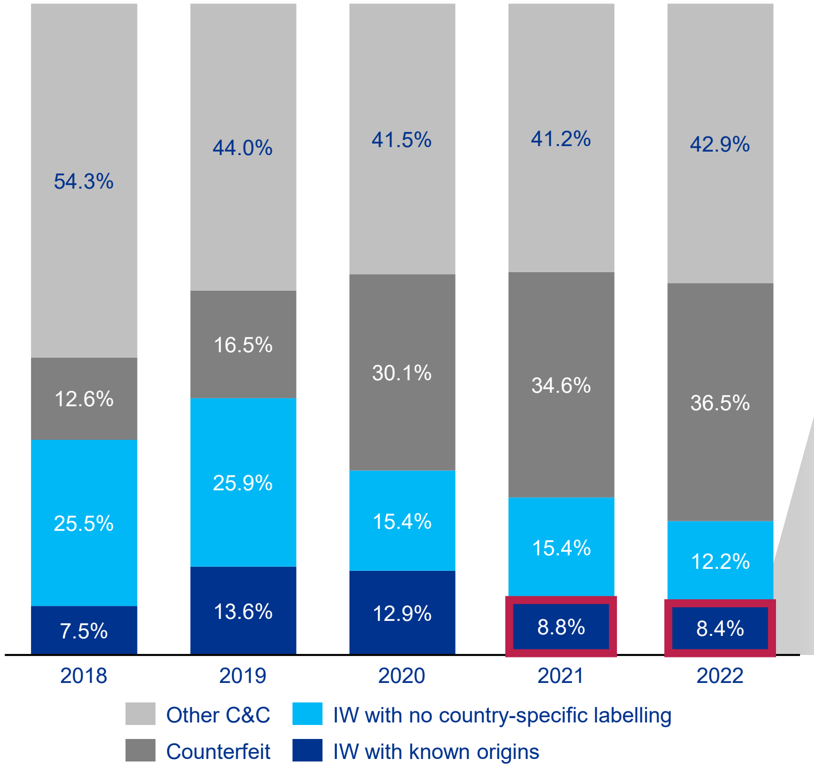
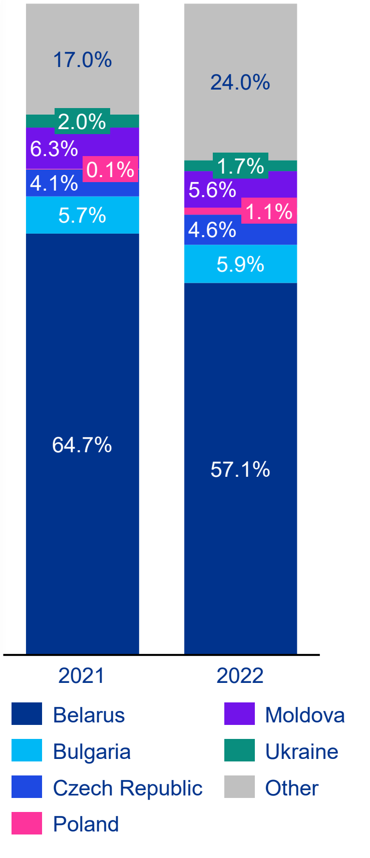
Focus on Illicit Whites

- Illicit Whites' share of illicit consumption in the EU27 (both those with known origins and those with no country specific labelling) decreased further in 2022, accounting for 21% or 7.4bn of EU27 illicit consumption in 2022 (24% or 8.6bn in 2021)
- This decline was principally observed in Romania (0.5bn), Greece (0.3bn) and Spain (0.2bn).
- Illicit Whites with no country-specific labelling were the largest driver of the overall decline, decreasing by 1.1bn to 4.4bn cigarettes in 2022, and representing 12.2% of total illicit consumption (15.4% in 2021). These Illicit Whites either have no health warnings or are labelled as Duty Free. This generic labelling makes identification of the source market difficult
- The volume of Illicit Whites with known origins remained relatively stable, declining by 0.1bn to 3.0bn cigarettes, representing 8.4% of total illicit consumption (8.8% in 2021).
- Interviews with law enforcement[2] indicate that whilst overall Illicit Whites volumes are declining, some of these Illicit Whites are being manufactured within the EU27, and this manufacturing is moving closer to the intended EU27 end-consumption markets

Illicit Whites as a percentage of total C&C in the EU27, 2018-2022[1]



Share of Illicit Whites by origin, 2021-22 (%)



Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report (2) Law enforcement interviews, refer to page 10 for further details

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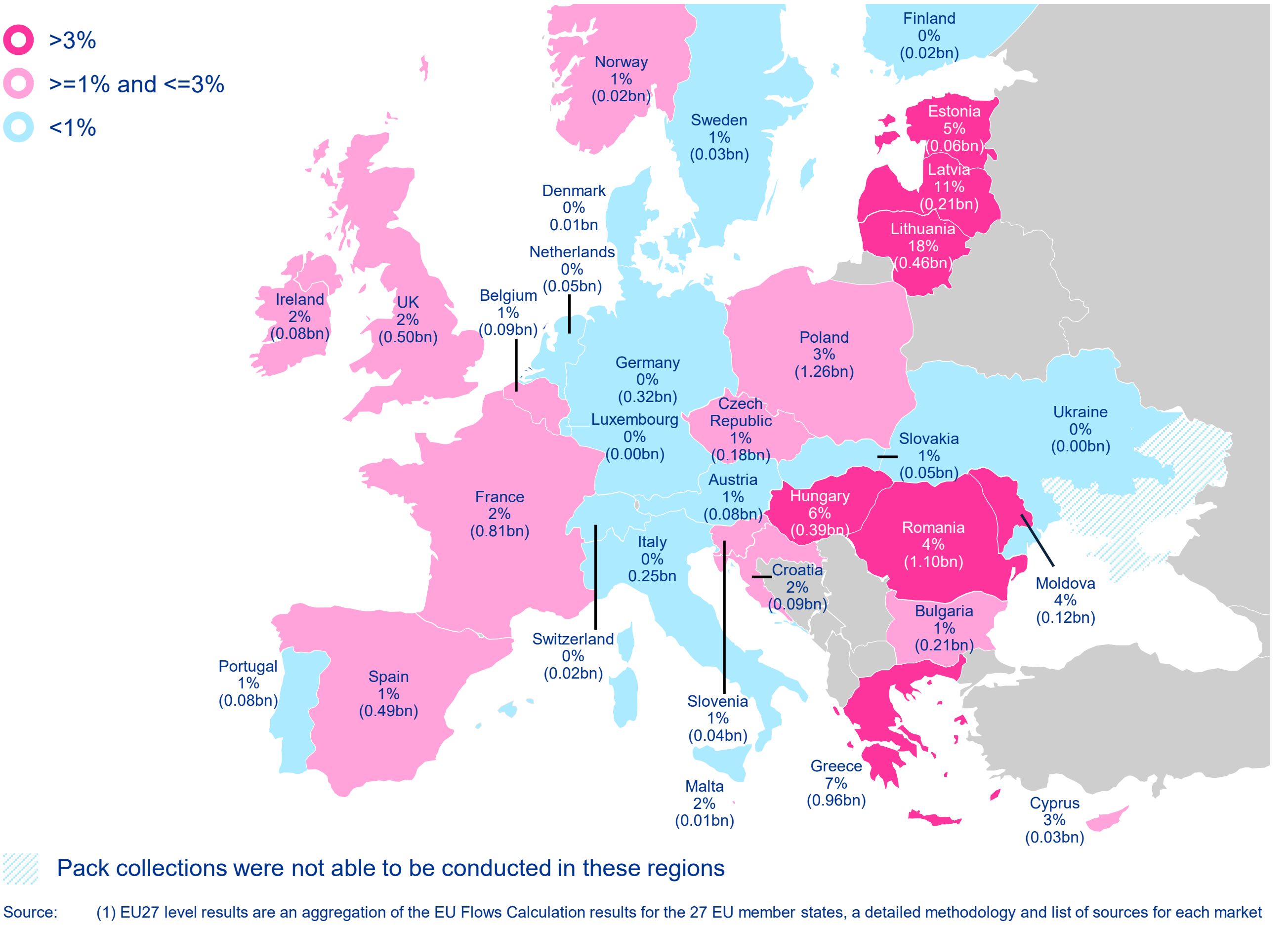
Focus on Illicit Whites (cont.)

- Those markets with the highest Illicit Whites shares were located in the Eastern part of the EU27, close to source markets such as Belarus and Moldova
- The highest volume flows of Illicit Whites were measured in Poland (1.3bn), Romania (1.1bn), Greece (1.0bn) and France (0.8bn), with these four markets accounting for 56% of the total Illicit Whites flows in the EU27
- The overall EU27 Illicit Whites volume decline of 1.2bn was predominantly driven by declines in Romania (0.5bn), Greece (0.3bn) and Spain (0.2bn)

Illicit Whites as a percentage of total consumption, 2022 (%)[1]



Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report

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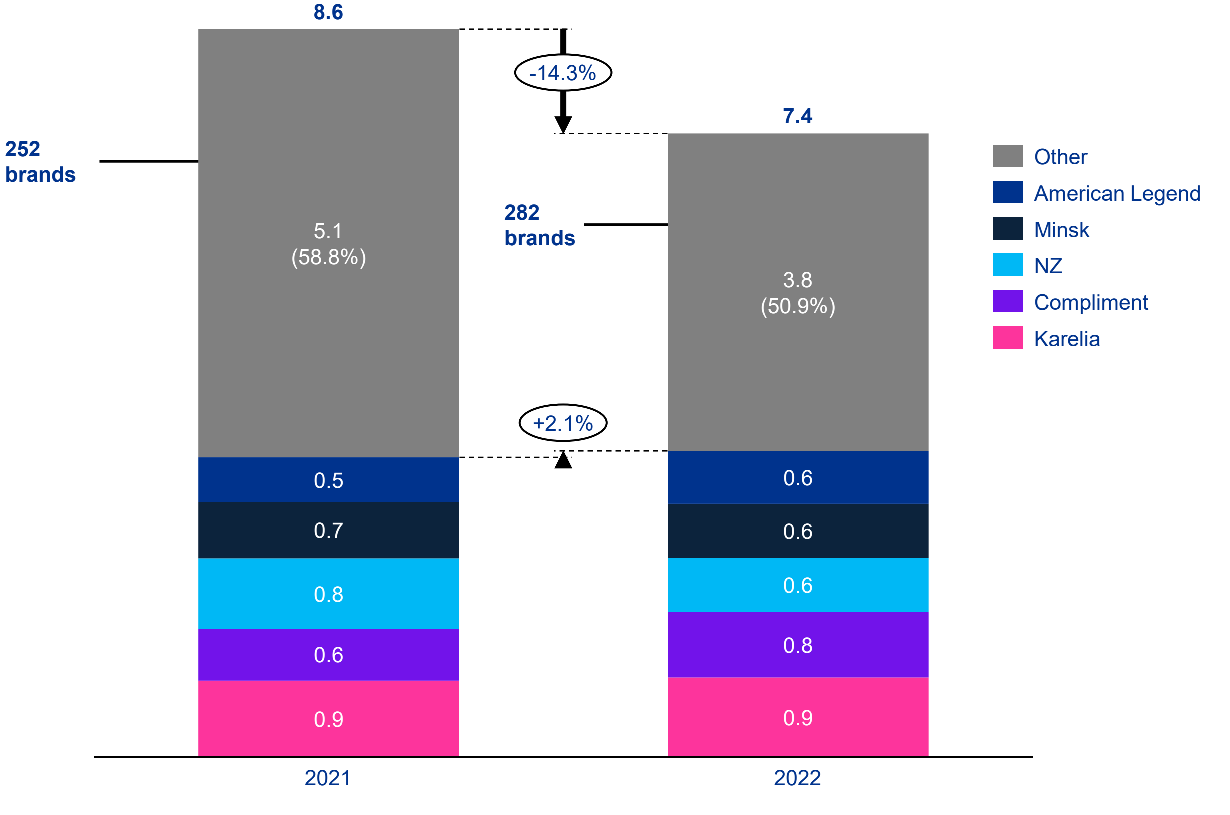
Focus on Illicit Whites (cont.)

- The top 5 Illicit Whites brands accounted for approximately 49% of EU27 Illicit Whites consumption in 2022, an increase from 41% in 2022, indicating that in volume terms Illicit Whites consumption is consolidating at a brand level
- Since our analysis cannot identify whether Illicit Whites are Counterfeit or not, it is possible that we may be overstating the Illicit Whites issue and understating the Counterfeit issue, especially given the growth seen in Counterfeit

Illicit Whites by brand in the EU27, 2021-2022 (bn cigarettes)[1]



Note: We cannot identify Counterfeit Illicit White volumes in this Report as the manufacturers do not participate in the empty pack surveys and therefore do not analyse if the packs collected are genuine

Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report

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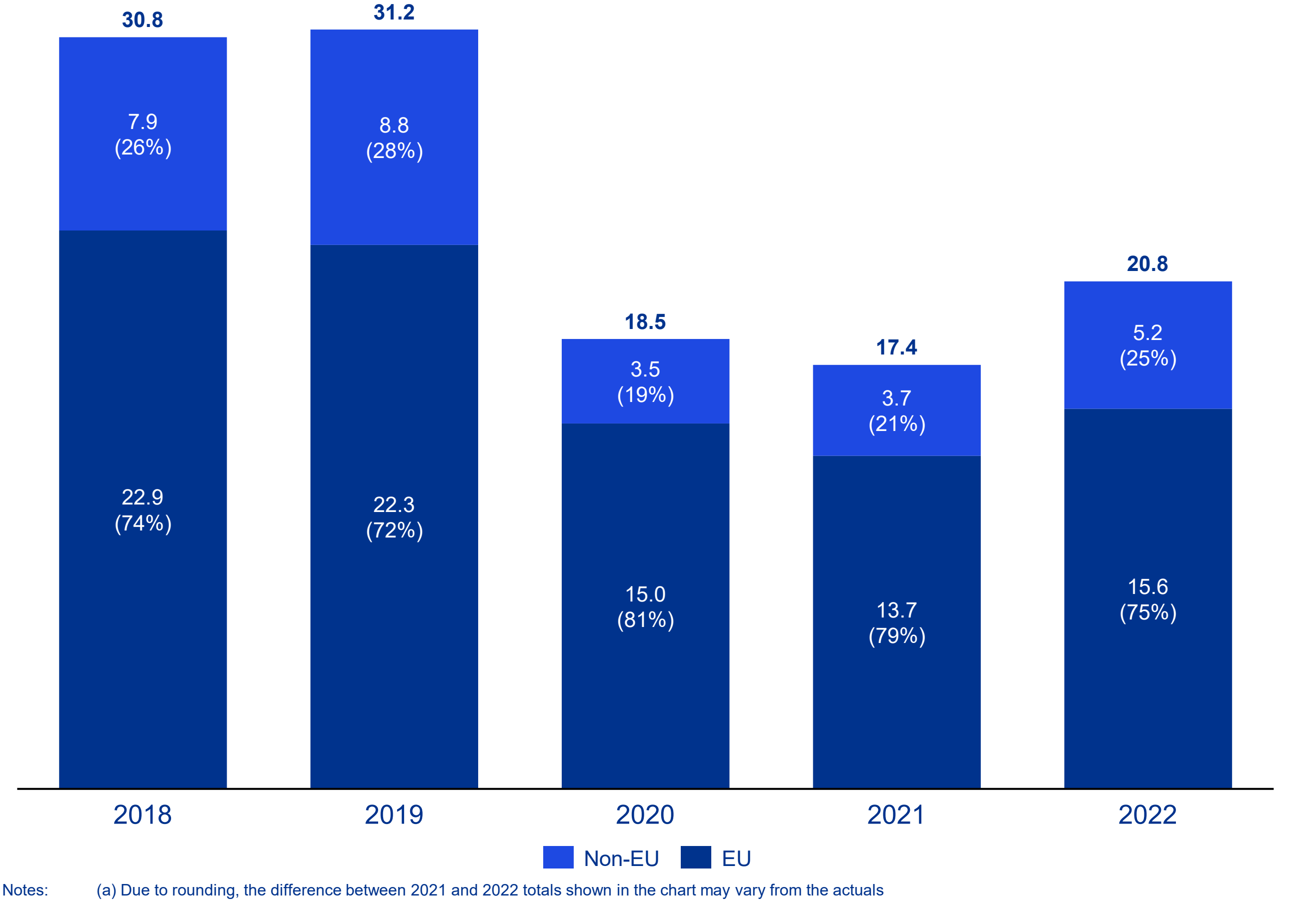
Non-Domestic Legal trend (ND(L))

- ND(L) consumed in the EU27 increased by 3.4bn (20%) in 2022 after a decline between 2019 and 2021, reflecting the lifting of travel restrictions and border controls put in place in 2020 and 2021 due to COVID-19. However, ND(L) volumes still remain below pre-pandemic levels

Source of ND(L) in the EU27, 2018-2022 (bn cigarettes)[(1)(a)]



Notes: (a) Due to rounding, the difference between 2021 and 2022 totals shown in the chart may vary from the actuals

Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report

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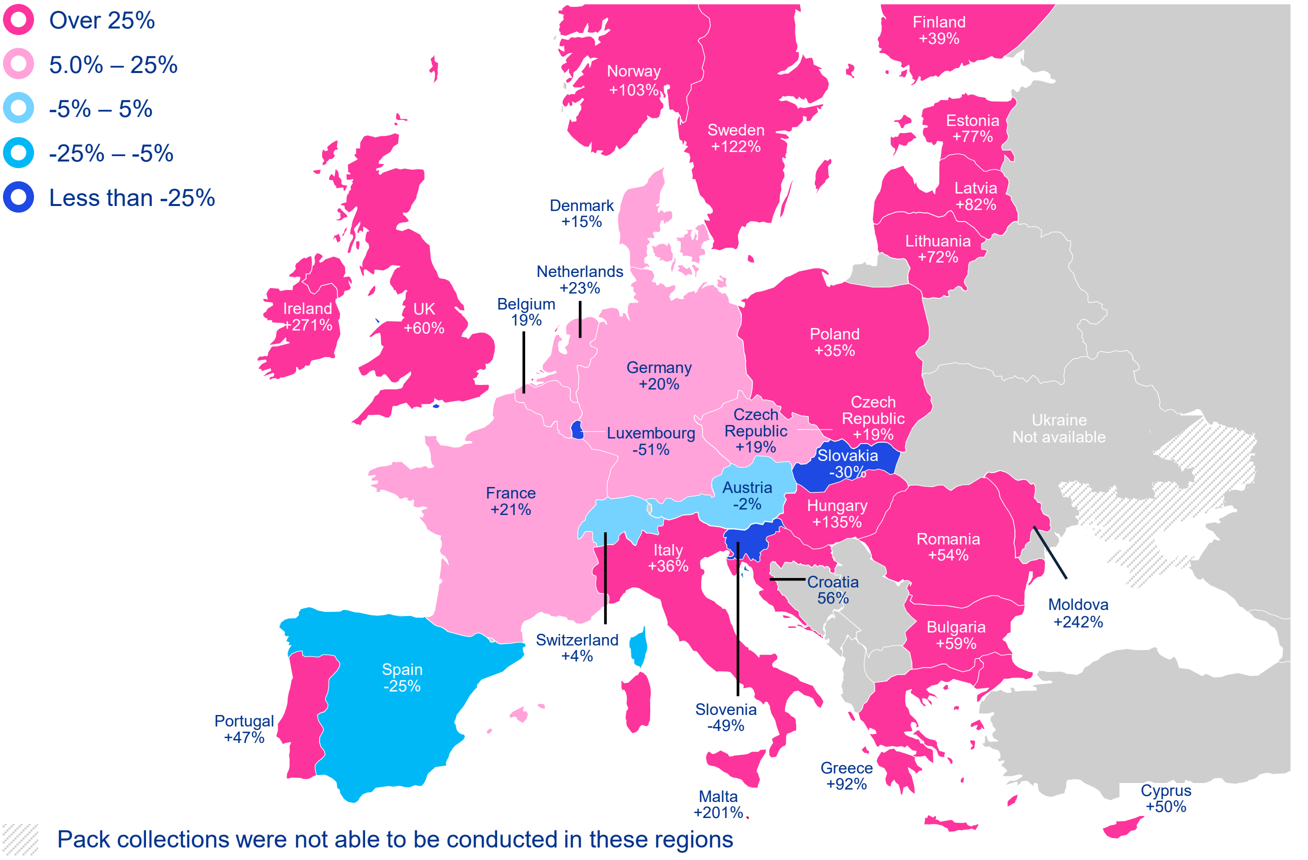
Non-Domestic Legal trend (ND(L)) (cont.)

- Overall ND(L) volumes increased across the EU27, with 22 of 27 member states showing an increase. However, the rate of change varied across the member states
- Ireland showed the highest growth, with ND(L) volumes increasing by 271%, albeit this growth was not sufficient to return volumes to 2019 levels after a large decline in 2020. A similar pattern of high ND(L) growth was also apparent in Malta and a number of other EU27 markets, indicating that in some member states demand for cross-border purchases is returning
- Only a handful of markets, Luxembourg, Slovenia, Slovakia and Spain, showed ND(L) volume declines of greater than 5%

Rate of ND(L) change, 2022 (%)(1)(a)



Source: (1) EU27 level results are an aggregation of the EU Flows Calculation results for the 27 EU member states, a detailed methodology and list of sources for each market is available in the methodology section of this Report

Note: (a) Pack swap survey data for Ukraine does not contain information regarding the origin of packs collected. Therefore, inflows to Ukraine have not been broken down by origin and consequently ND(L) inflows cannot be estimated

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02

Country profiles

KPMG

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Austria

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C&C cigarette consumption and total consumption

12.7bn
Cigarettes consumed

-0.3bn on 2021

0.6bn
C&C cigarettes consumed

+0.1bn on 2021

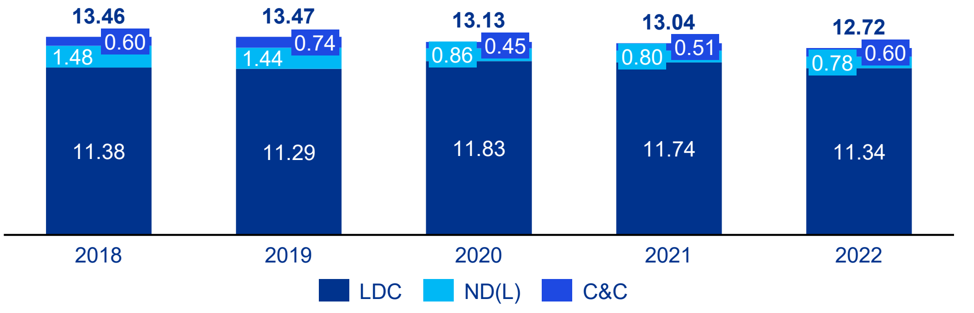
4.7%
Of total consumption was C&C

+0.8ppt on 2021

€123m
Total tax revenue lost from C&C

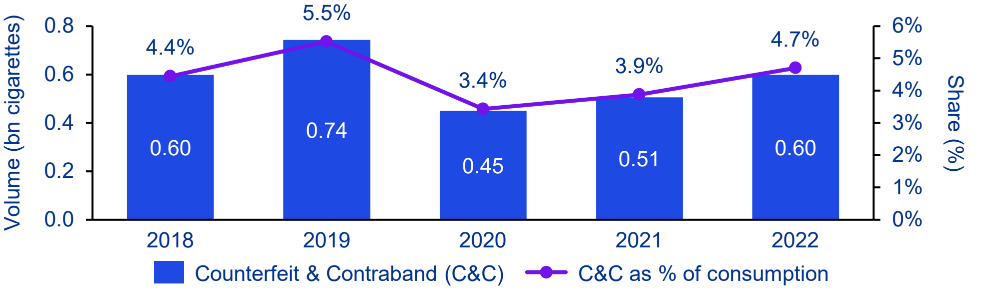
+€22m on 2021

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

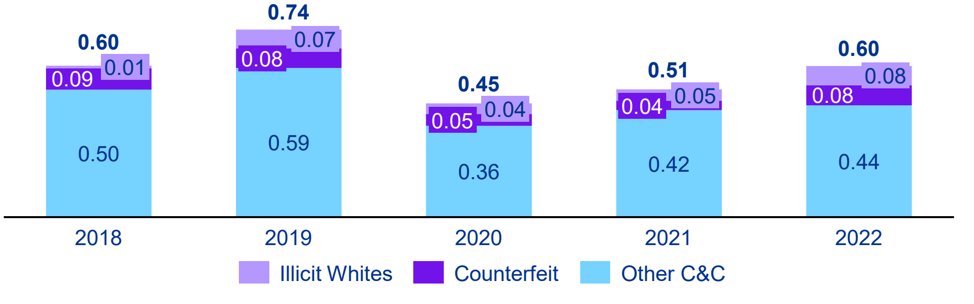


- C&C as a share of total consumption increased by 0.8ppt to 4.7% in 2022, with an increase in all components of illicit consumption

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Austria Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	11.83	11.73	12.23	12.12	11.72	(3%)
Outflows	(0.45)	(0.44)	(0.40)	(0.38)	(0.38)	1%
Legal Domestic Consumption (LDC)	11.38	11.29	11.83	11.74	11.34	(3%)
Non-Domestic Legal (ND(L))	1.48	1.44	0.86	0.80	0.78	(2%)
Counterfeit and Contraband (C&C)	0.60	0.74	0.45	0.51	0.60	18%
Total Non-Domestic	2.08	2.18	1.31	1.30	1.38	6%
Total Consumption	**13.46**	**13.47**	**13.13**	**13.04**	**12.72**	**(2%)**

- Total cigarette consumption declined by 2% in 2022, primarily due to lower Legal Domestic Sales
- The neighbouring lower-priced markets of Slovenia, Poland and Slovakia remained the main source of Non-Domestic inflows in 2022, with Slovenia continuing to remain the largest inflow market
- Germany remained the largest destination for outflows, accounting for 62% of all outflows from Austria

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Austria					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Slovenia	0.39	0.20	0.11	0.24	0.20
Poland	0.04	0.06	0.08	0.08	0.13
Slovakia	0.18	0.28	0.15	0.13	0.12
Hungary	0.24	0.23	0.14	0.06	0.11
Duty Free Labelled	0.12	0.12	0.08	0.07	0.10
Other	1.12	1.28	0.74	0.72	0.72
Total Inflows	**2.08**	**2.18**	**1.31**	**1.30**	**1.38**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from Austria					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Germany	(0.20)	(0.25)	(0.27)	(0.25)	(0.24)
Hungary	(0.02)	(0.01)	(0.01)	(0.01)	(0.03)
Switzerland	(0.05)	(0.03)	(0.05)	(0.04)	(0.03)
Other	(0.18)	(0.15)	(0.07)	(0.08)	(0.09)
Total Outflows	**(0.45)**	**(0.44)**	**(0.40)**	**(0.38)**	**(0.38)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data;

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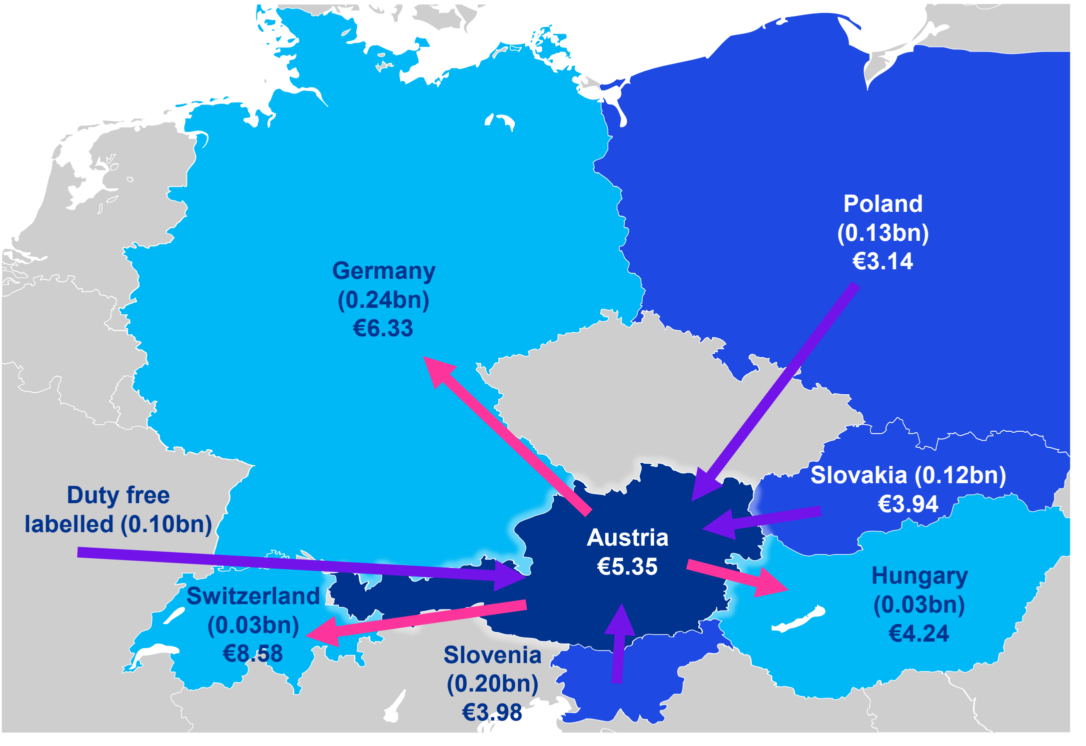
Key flows and C&C consumption patterns

Key inflows and outflows[(1)(a)]

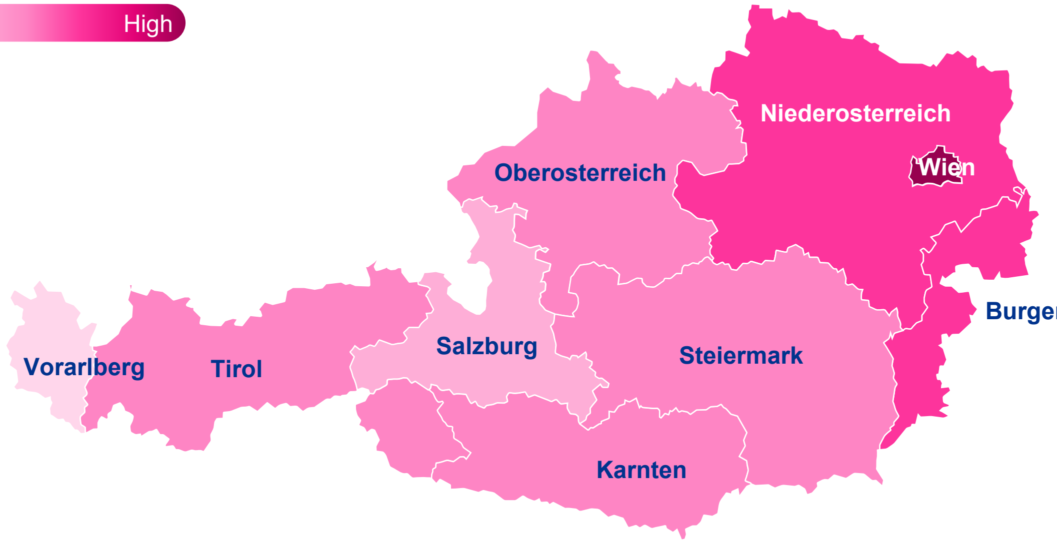
Austria
Source
Destination
Inflow
Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



C&C % by region[(1)(b)(c)]

Low High



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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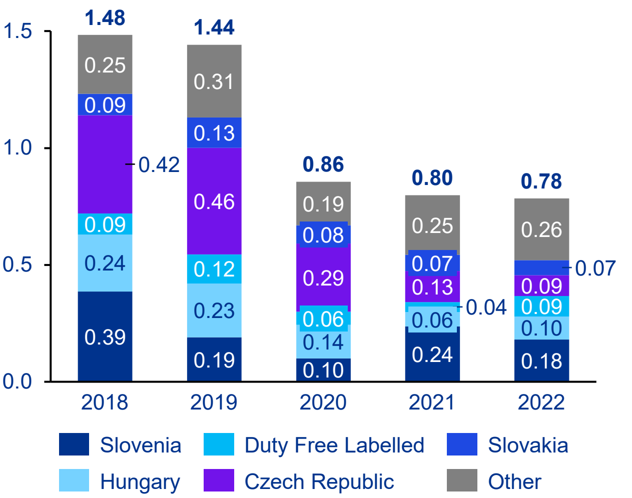
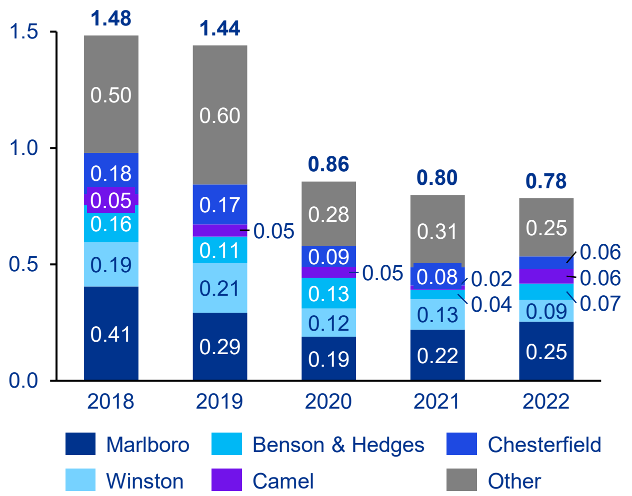
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)(1)

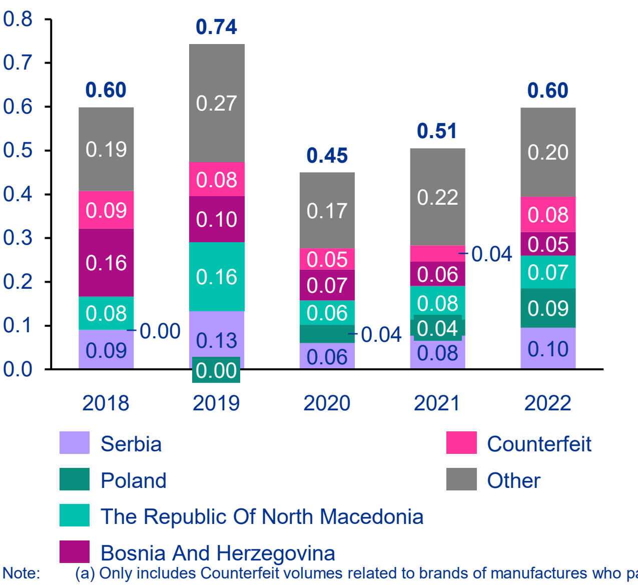


ND(L) by brand – 2018-2022 (bn cigarettes)(1)

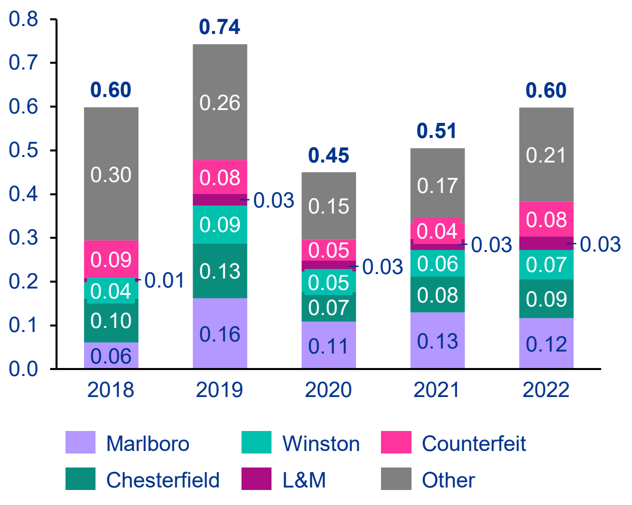


- Legal inflows (ND(L)) declined by 2% in 2022, as a decline in flows from Slovenia and the Czech Republic were partly offset by an increase in Hungary and Duty Free Labelled inflows
- We consider flows from the Czech Republic and Slovenia to be predominantly legal due to their proximity and the large number of cross-border workers and shoppers
- A 0.09bn increase in C&C was mainly driven by an increase in inflows of Serbian, Polish and Counterfeit cigarettes

C&C by country of origin – 2018-2022 (bn cigarettes)(1)(a)



C&C by brand – 2018-2022 (bn cigarettes)(1)(a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Belgium

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C&C cigarette consumption and total consumption

Belgium

8.9bn

Cigarettes consumed

+0.7bn on 2021

0.9bn

C&C cigarettes consumed

+0.5bn on 2021

9.8%

Of total consumption was C&C

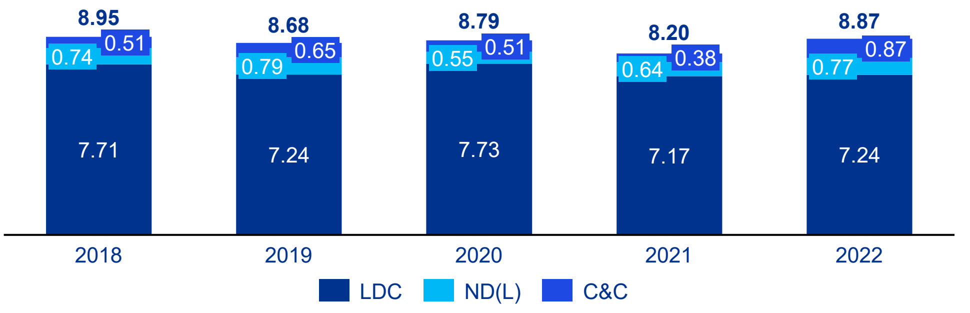
+5.1ppt on 2021

€250m

Total tax revenue lost from C&C

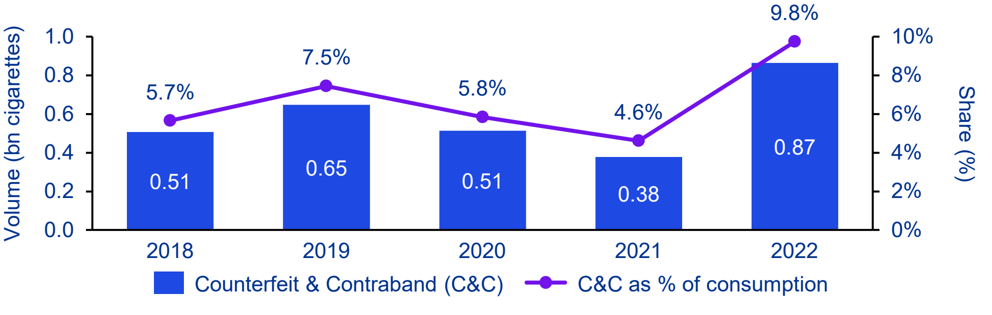
+€150m on 2021

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

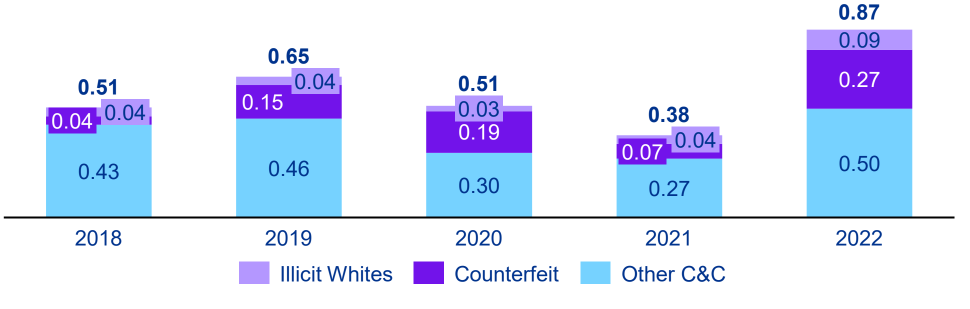


- C&C as a share of total cigarette consumption increased by 5.2ppt to 9.8% in 2022, reaching the highest level observed during the reporting period
- All components of illicit consumption increased in 2022, with Counterfeit and Other C&C the primary drivers of growth

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2]

Total Belgium Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	9.43	9.47	9.23	8.91	8.62	(3%)
Outflows	(1.72)	(2.23)	(1.50)	(1.74)	(1.38)	(20%)
Legal Domestic Consumption (LDC)	7.71	7.24	7.73	7.17	7.24	1%
Non-Domestic Legal (ND(L))	0.74	0.79	0.55	0.64	0.77	19%
Counterfeit and Contraband (C&C)	0.51	0.65	0.51	0.38	0.87	129%
Total Non-Domestic	1.24	1.44	1.06	1.02	1.63	59%
Total Consumption	**8.95**	**8.68**	**8.79**	**8.20**	**8.87**	**8%**

- Total cigarette consumption increased by 0.67bn (or 8%) in 2022, as outflows declined and inflows to Belgium increased, returning to similar levels as seen prior to 2021
- While inflows from Luxembourg remained stable, inflows from other main source markets, and smaller markets grouped together under 'Other', increased in 2022
- Outflows declined by 20% to 1.38bn cigarettes, with Netherlands and France remaining the largest outflow destinations

Total inflows by country of origin – 2018-2022[1][a]

Inflows to Belgium					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Luxembourg	0.10	0.18	0.26	0.43	0.43
Bulgaria	0.09	0.20	0.21	0.18	0.33
Counterfeit	0.04	0.15	0.19	0.07	0.27
Turkey	0.03	0.03	0.04	0.03	0.11
Poland	0.07	0.02	0.05	0.03	0.08
Other	0.92	0.85	0.31	0.29	0.41
Total Inflows	**1.24**	**1.44**	**1.06**	**1.02**	**1.63**

Total outflows by destination – 2018-2022[1][a]

Outflows from Belgium					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Netherlands	(0.18)	(0.21)	(0.34)	(0.91)	(0.73)
France	(1.42)	(1.89)	(1.05)	(0.70)	(0.60)
Other	(0.11)	(0.12)	(0.10)	(0.13)	(0.05)
Total Outflows	**(1.72)**	**(2.23)**	**(1.50)**	**(1.74)**	**(1.38)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data;

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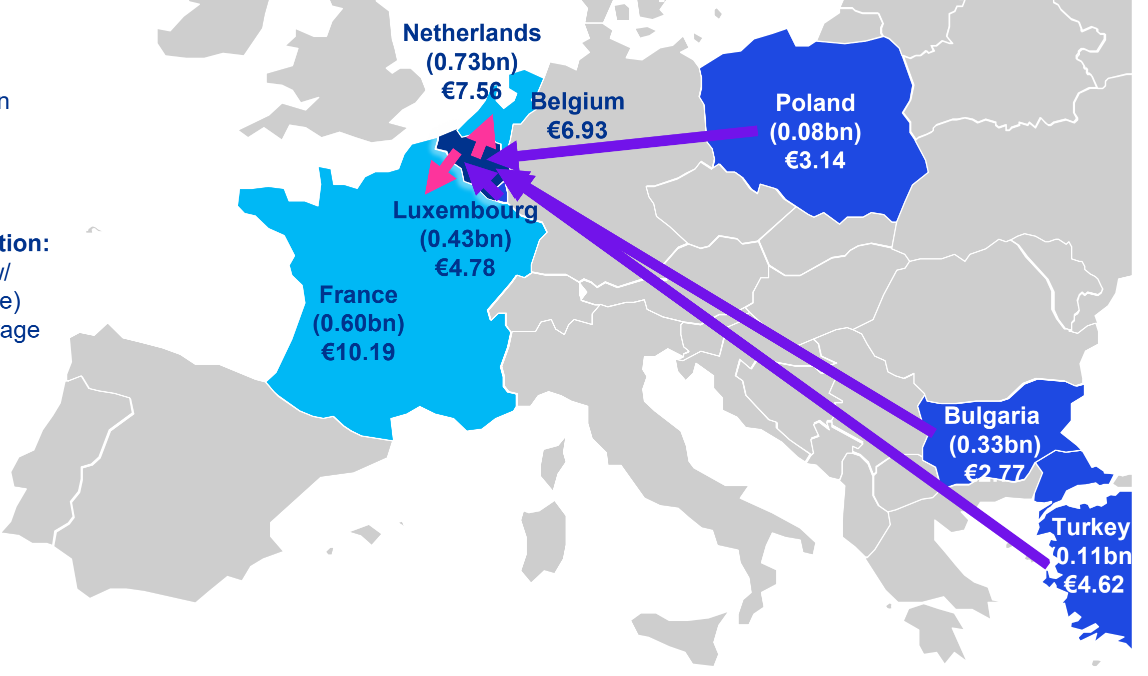
Key flows and C&C consumption patterns

Key inflows and outflows(1)(a)

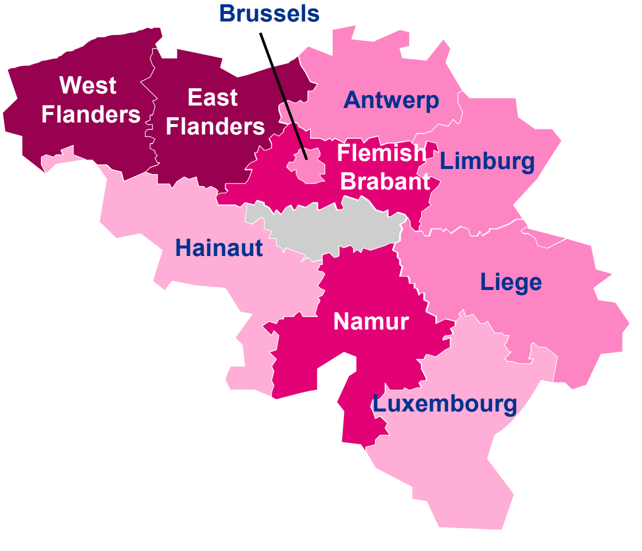
- Belgium
- Source
- Destination
- Inflow
- Outflow

Label description:
Country (Inflow/ Outflow Volume) Weighted Average Price



C&C % by region(1)(b)(c)

Low — High



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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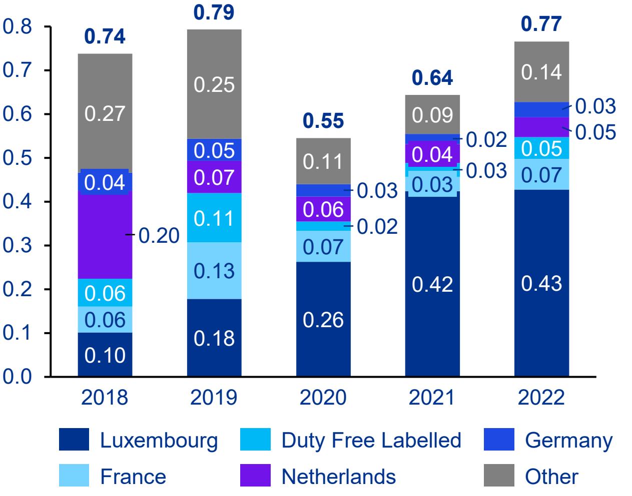
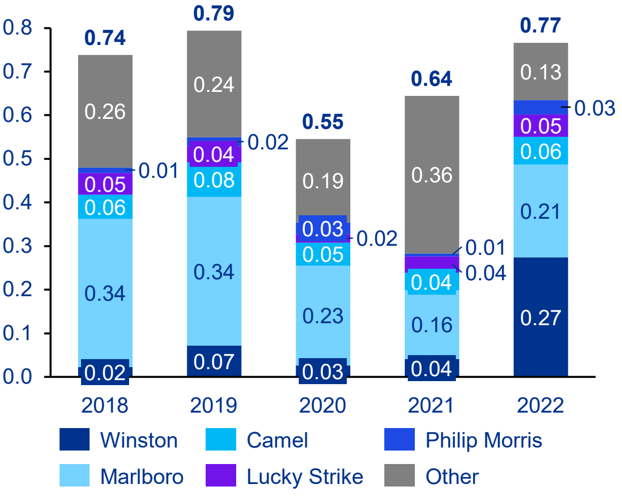
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

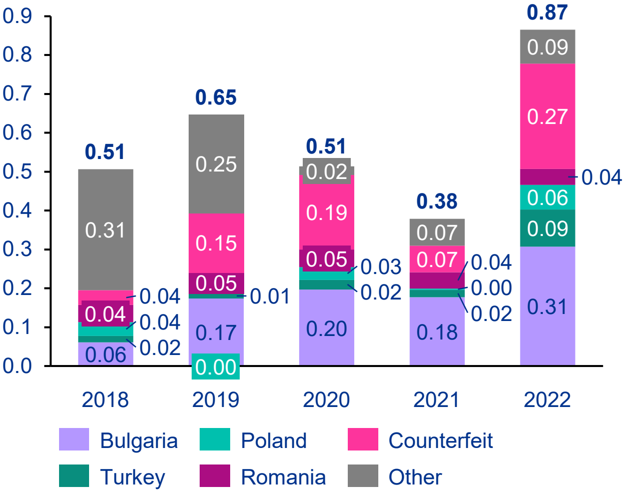


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

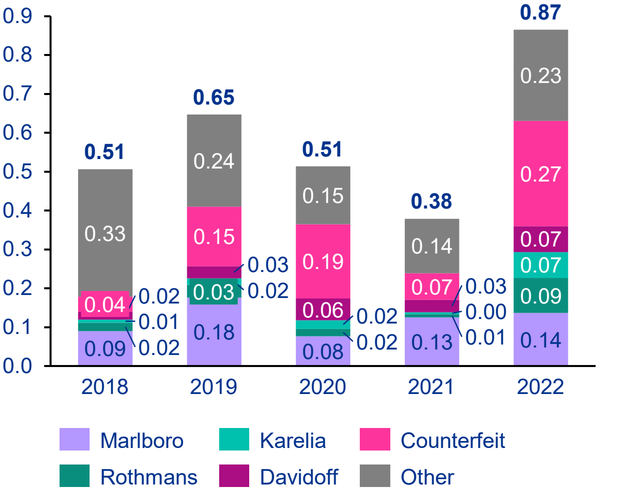


- ND(L) inflows increased by 19% in 2022 with Luxembourg remaining the largest source
- C&C increased by 129% in 2022 driven by an increase in Counterfeit inflows and illicit inflows from Bulgaria, Turkey and Poland

C&C by country of origin – 2018-2022 (bn cigarettes)[1][a]



C&C by brand – 2018-2022 (bn cigarettes)[1][a]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Bulgaria

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Bulgaria

14.7bn

Cigarettes consumed

+1.3bn on 2021

0.3bn

C&C cigarettes consumed

+0.04bn on 2021

1.8%

Of total consumption was C&C

+0.2ppt on 2021

€29m

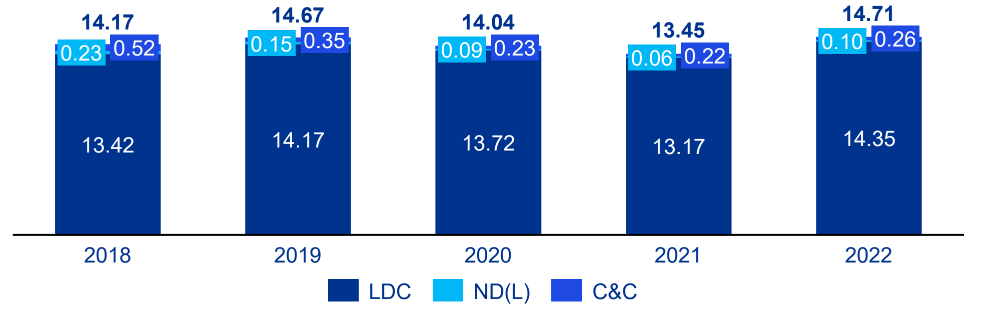
(BGN57m)[3]

Total tax revenue lost from C&C

+€5m on 2021

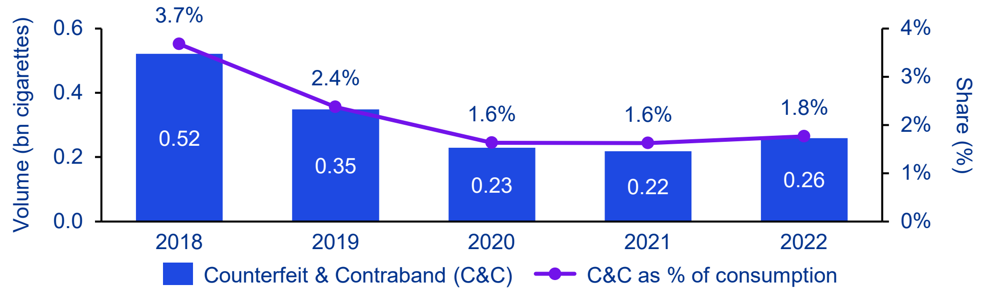
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)[1][2]

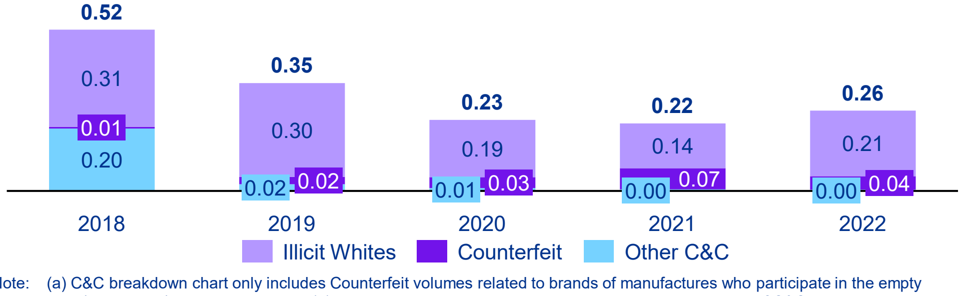


- C&C as a percentage of total cigarette consumption increased by 0.2ppt to 1.8% in 2022, but remained below pre-pandemic levels
- The increase in C&C was primarily due to an increase in Illicit Whites inflows, but was partly offset by a decline in Counterfeit consumption
- Illicit Whites was the largest category of illicit consumption, accounting for ~82% of total C&C

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[1][2]



C&C consumption by type – 2018-2022 (bn cigarettes)[1][2][a]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Bulgarian LDS has been calculated using customs data for 2021-22. For 2017-19, it is based on IMS data. In 2022, Bulgarian IMS was 15.764bn vs customs data of 15.90bn ; (d) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data (3) EUR 1 = лв1.956, InforEuro, European Commission, December 2022

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Bulgaria Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	14.34	15.31	14.77	15.21	15.90	5%
Outflows	(0.93)	(1.14)	(1.05)	(2.04)	(1.55)	(24%)
Legal Domestic Consumption (LDC)	13.42	14.17	13.72	13.17	14.35	9%
Non-Domestic Legal (ND(L))	0.23	0.15	0.09	0.06	0.10	59%
Counterfeit and Contraband (C&C)	0.52	0.35	0.23	0.22	0.26	19%
Total Non-Domestic	0.75	0.50	0.32	0.28	0.36	28%
Total Consumption	**14.17**	**14.67**	**14.04**	**13.45**	**14.71**	**9%**

- Total consumption increased by 9% in 2022 to return to pre-pandemic levels
- An increase in Non-Domestic inflows was driven by an increase in flows of Illicit Whites with no country-specific labelling, which continued to remain the largest source of inflows in 2022
- Outflows declined by 24% in 2022, with the largest decreases in outflows to the Netherlands (0.61bn) and France (0.21bn) partly offset by increases in outflows to Belgium and Germany

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Bulgaria					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
IWs with no country-specific labelling	0.40	0.26	0.17	0.14	0.21
Duty Free Labelled	0.16	0.07	0.06	0.03	0.04
Counterfeit	0.01	0.02	0.03	0.07	0.04
Other	0.19	0.14	0.06	0.05	0.06
Total Inflows	**0.75**	**0.50**	**0.32**	**0.28**	**0.36**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from Bulgaria					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Belgium	(0.09)	(0.20)	(0.21)	(0.18)	(0.33)
Germany	(0.14)	(0.18)	(0.21)	(0.25)	(0.32)
France	(0.28)	(0.26)	(0.25)	(0.46)	(0.25)
Netherlands	(0.05)	(0.05)	(0.10)	(0.76)	(0.15)
Other	(0.37)	(0.44)	(0.28)	(0.38)	(0.49)
Total Outflows	**(0.93)**	**(1.14)**	**(1.05)**	**(2.04)**	**(1.55)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data;

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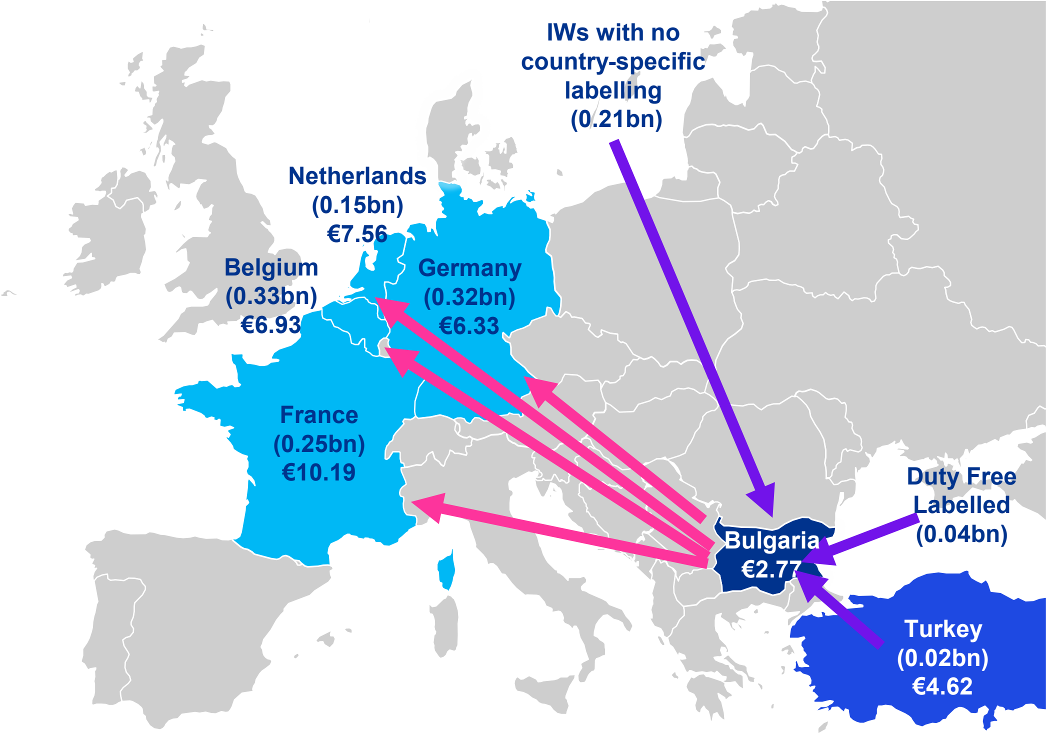
Key flows and C&C consumption patterns

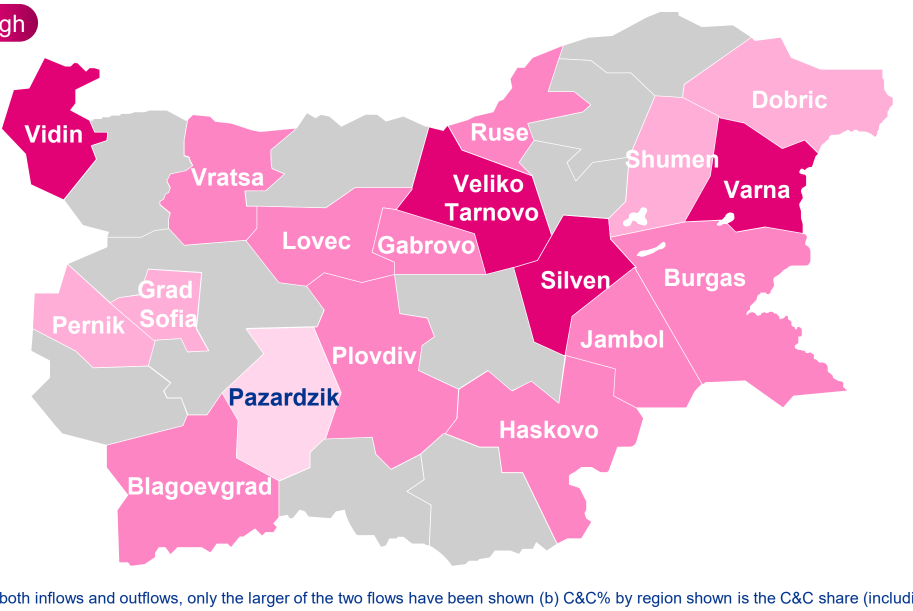
Key inflows and outflows[1](a)

Bulgaria
Source
Destination
Inflow
Outflow

Label description:
Country (Inflow/ Outflow Volume) Weighted Average Price



C&C % by region[1](b)(c)



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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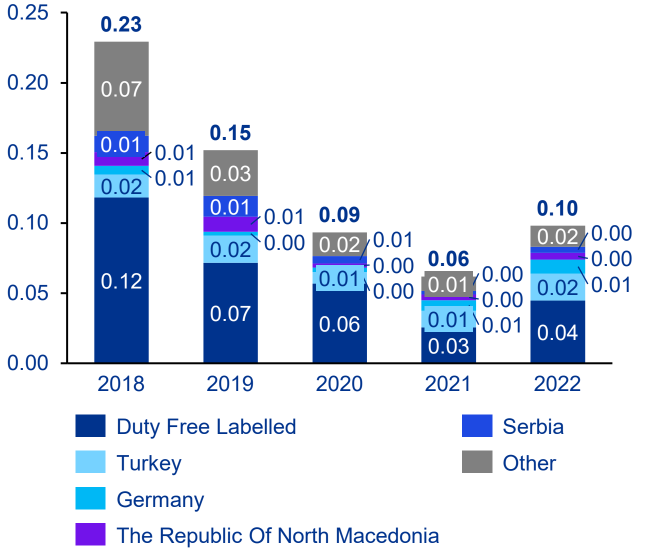
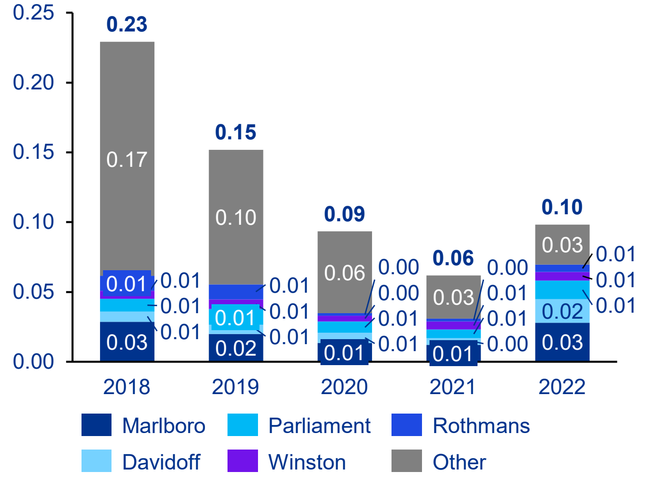
Document Classification: KPMG Public

ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[(1)]

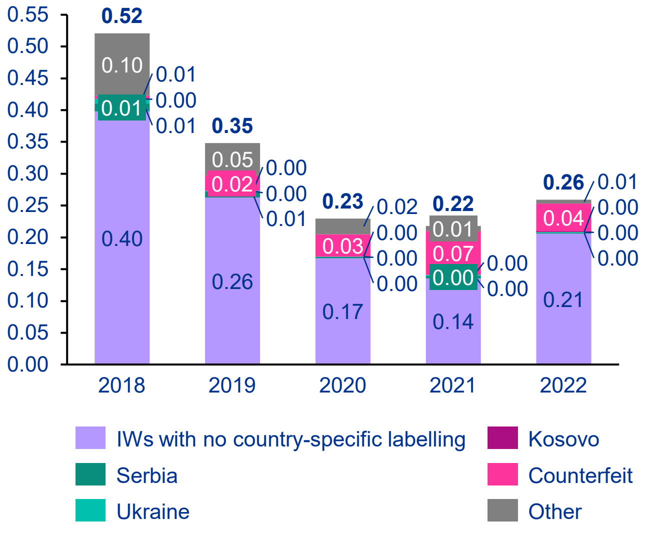


ND(L) by brand – 2018-2022 (bn cigarettes)[(1)]

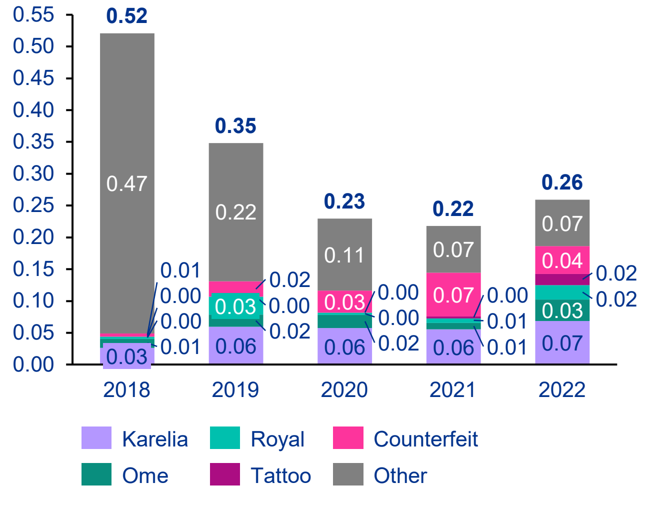


- ND(L) flows increased in 2022, but remained below pre-pandemic levels
  - The increase in ND(L) was primarily driven by higher inflows from Duty Free Labelled and Turkey
- C&C consumption increased in 2022, driven by an increase in IWs with no country-specific labelling, but partly offset by declining counterfeit volumes
  - Illicit flows of IWs with no country-specific labelling accounted for ~79% of the total illicit flows

C&C by country of origin – 2018-2022 (bn cigarettes)[(1)(a)]



C&C by brand – 2018-2022 (bn cigarettes)[(1)(a)]



Note: (a) Bulgarian LDS has been calculated using customs data for 2020-21. For 2017-19, it is based on IMS data. In 2021, Bulgarian IMS was 15.112bn vs customs data of 15.2053bn; (b) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Croatia

KPMG

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Croatia

C&C cigarette consumption and total consumption

6.1bn

Cigarettes consumed

+0.2bn on 2021

0.3bn

C&C cigarettes consumed

-0.1bn on 2021

4.2%

Of total consumption was C&C

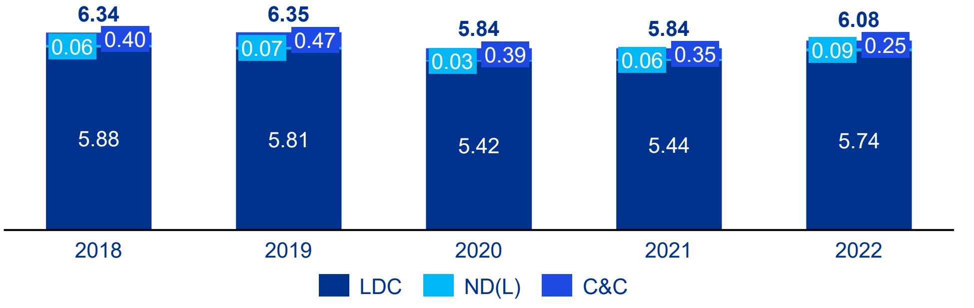
-1.8ppt on 2021

€42m

Total tax revenue lost from C&C

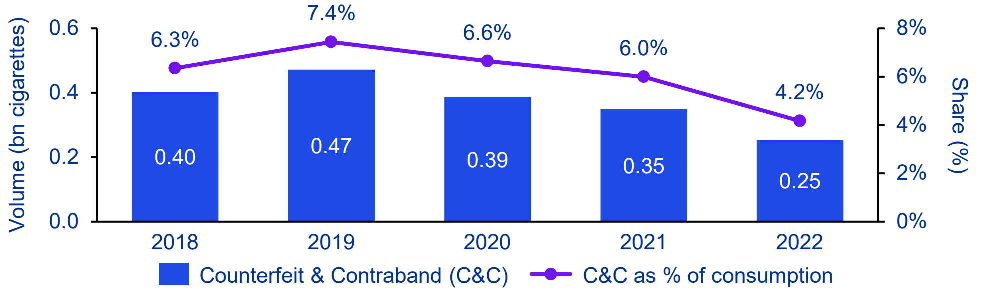
-€12m on 2021

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

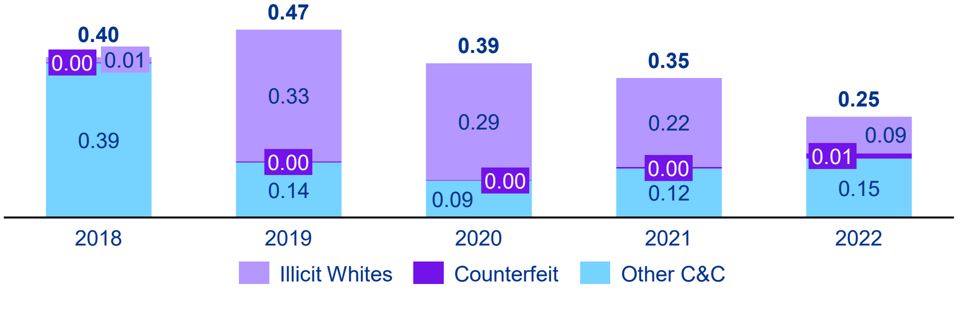


- C&C as a share of total consumption declined by 1.8ppt to 4.2% in 2022, the lowest level in the reporting period. This was primarily driven by a decrease in consumption of Illicit Whites

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Croatia Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	6.27	6.22	5.69	5.74	6.03	5%
Outflows	(0.39)	(0.40)	(0.26)	(0.30)	(0.29)	(5%)
Legal Domestic Consumption (LDC)	5.88	5.81	5.42	5.44	5.74	6%
Non-Domestic Legal (ND(L))	0.06	0.07	0.03	0.06	0.09	56%
Counterfeit and Contraband (C&C)	0.40	0.47	0.39	0.35	0.25	(28%)
Total Non-Domestic	0.47	0.54	0.42	0.41	0.34	(16%)
Total Consumption	**6.34**	**6.35**	**5.84**	**5.84**	**6.08**	**4%**

- Total cigarette consumption increased by 4% to 6.08bn in 2022, driven by an increase in Legal Domestic Sales
- Illicit Whites with no country-specific labelling declined from 0.20bn in 2021 to 0.07bn in 2022, with Bosnia and Herzegovina now the largest source of Non-Domestic inflows
- Germany, Austria and Slovenia remained the largest destination markets for outflows of Croatian cigarettes in 2022

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Croatia					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Bosnia And Herzegovina	0.27	0.10	0.06	0.09	0.13
IWs with no country-specific labelling	0.02	0.32	0.29	0.20	0.07
Other	0.17	0.12	0.07	0.11	0.14
Total Inflows	**0.47**	**0.54**	**0.42**	**0.41**	**0.34**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from Croatia					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Germany	(0.16)	(0.18)	(0.16)	(0.13)	(0.14)
Austria	(0.03)	(0.03)	(0.02)	(0.03)	(0.04)
Slovenia	(0.07)	(0.06)	(0.02)	(0.06)	(0.02)
Hungary	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
Other	(0.13)	(0.12)	(0.07)	(0.08)	(0.07)
Total Outflows	**(0.39)**	**(0.40)**	**(0.26)**	**(0.30)**	**(0.29)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data;

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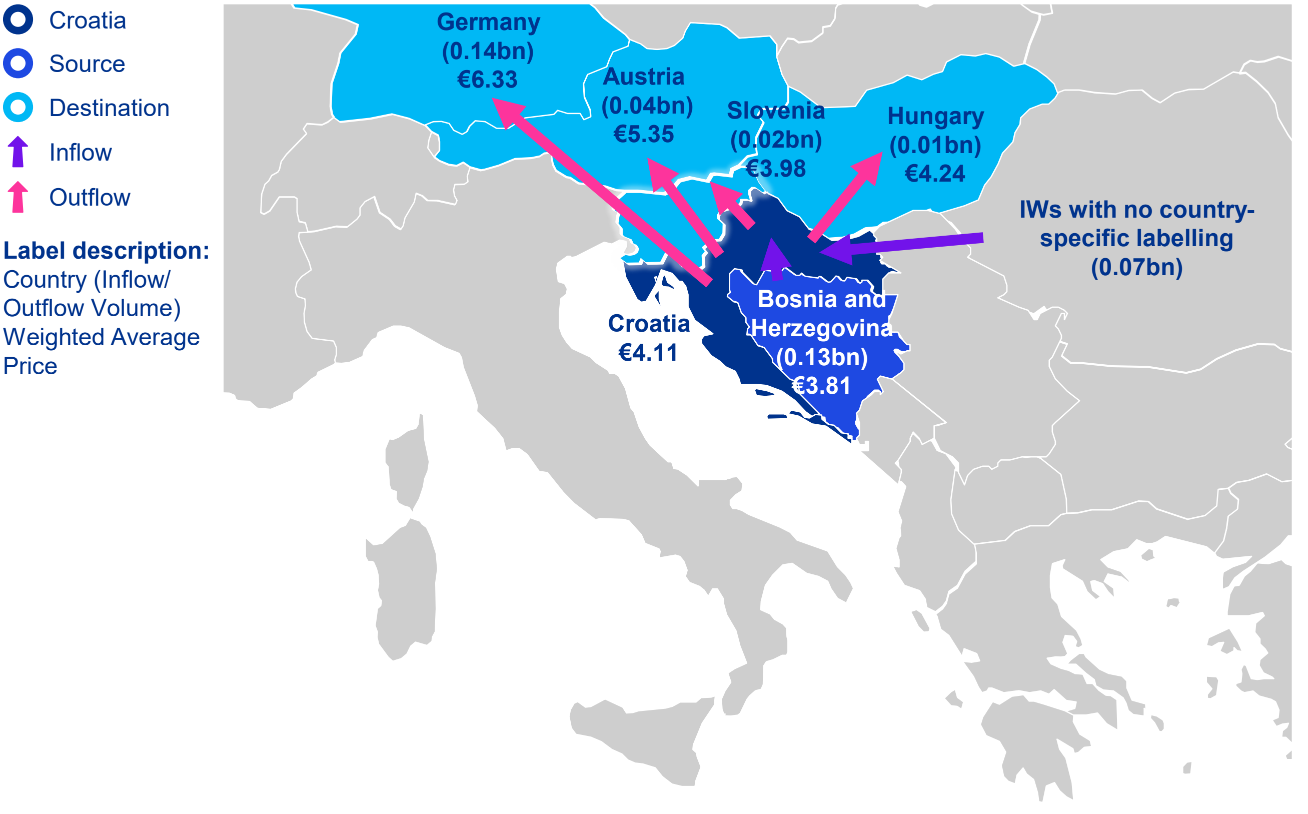
Key flows

Key inflows and outflows[1](a)



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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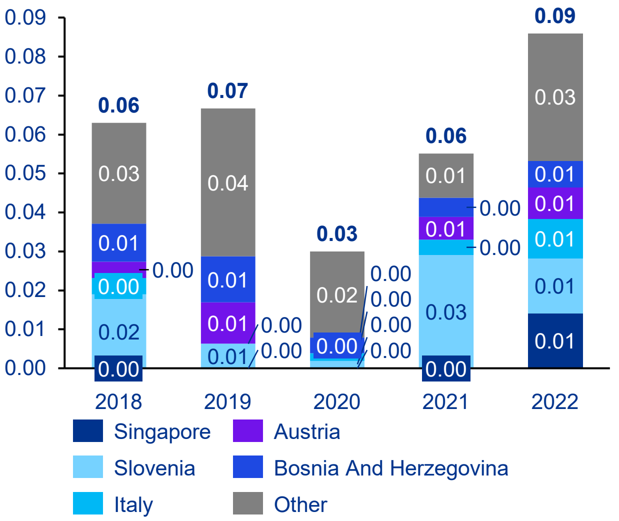
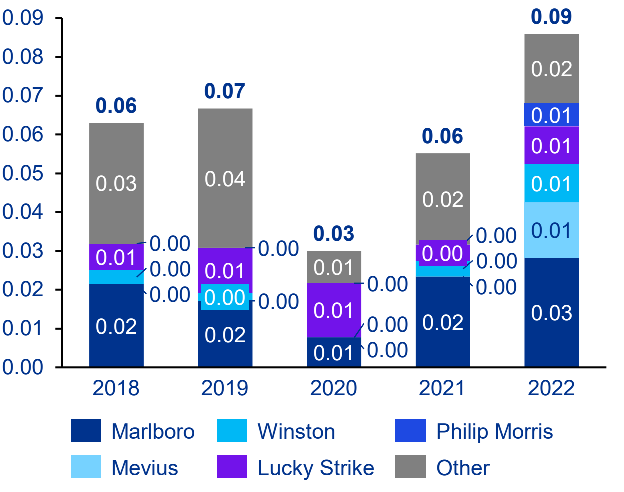
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)(1)

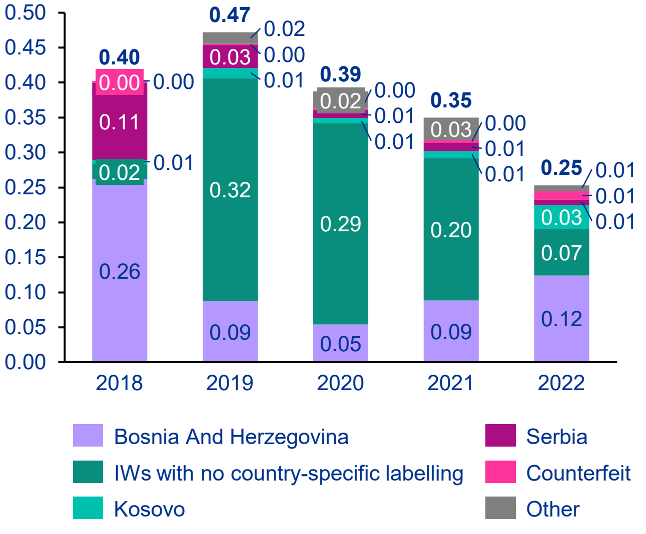


ND(L) by brand – 2018-2022 (bn cigarettes)(1)

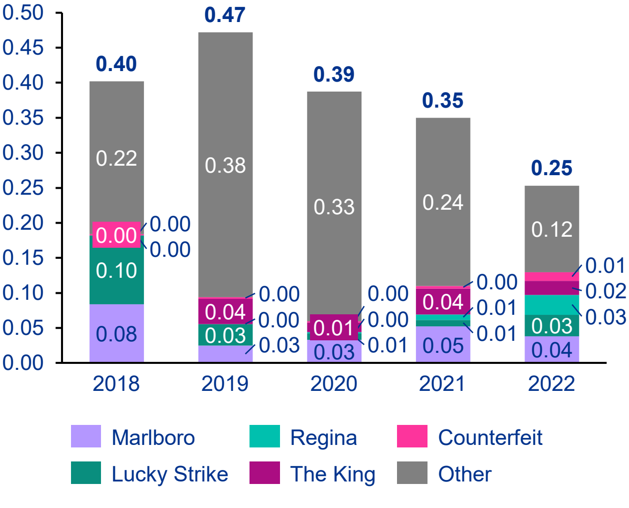


- ND(L) flows increased by 56% in 2022. Legal inflows from all major source markets increased with the exception of Slovenia
- IWs with no country-specific labelling declined by ~0.13bn cigarettes and was the main driver of the decline in C&C consumption in 2022
- Bosnia & Herzegovina became the largest source of C&C, accounting for ~50% of total C&C in 2022 (up from ~25% in 2021)

C&C by country of origin – 2018-2022 (bn cigarettes)(1)(a)



C&C by brand – 2018-2022 (bn cigarettes)(1)(a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Cyprus

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Cyprus

0.9bn

Cigarettes consumed

-0.1bn on 2021

0.1bn

C&C cigarettes consumed

-0.02bn on 2021

12.8%

Of total consumption was C&C

-1.6ppt on 2021

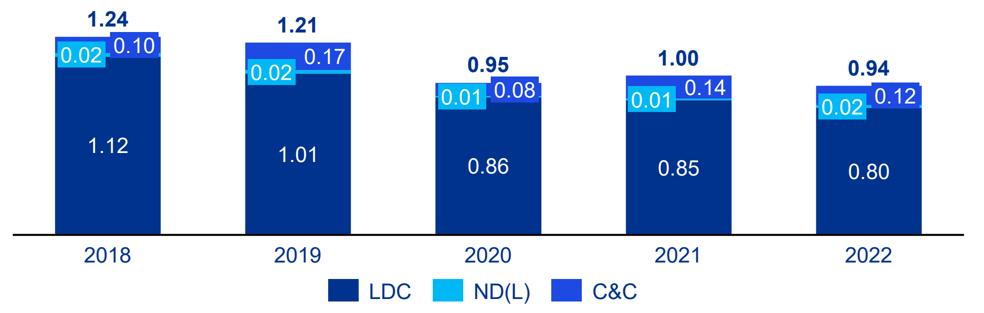
€20m

Total tax revenue lost from C&C

-€4m on 2021

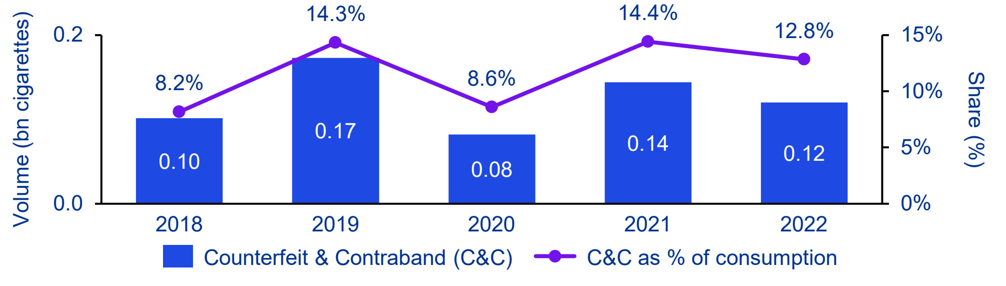
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)[(1)(2)]

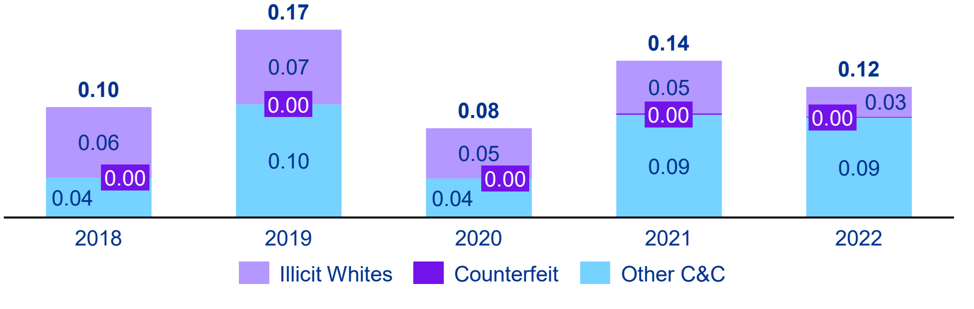


- C&C as a share of total consumption declined by 1.6ppt to 12.8% in 2022
- C&C consumption decline was primarily due to a decline in Illicit Whites

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[(1)(2)]



C&C consumption by type – 2018-2022 (bn cigarettes)[(1)(2)(a)]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2]

Total Cyprus Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	1.14	1.06	0.91	0.86	0.86	(1%)
Outflows	(0.02)	(0.04)	(0.04)	(0.02)	(0.06)	236%
Legal Domestic Consumption (LDC)	1.12	1.01	0.86	0.85	0.80	(6%)
Non-Domestic Legal (ND(L))	0.02	0.02	0.01	0.01	0.02	50%
Counterfeit and Contraband (C&C)	0.10	0.17	0.08	0.14	0.12	(17%)
Total Non-Domestic	0.12	0.20	0.09	0.16	0.14	(12%)
Total Consumption	**1.24**	**1.21**	**0.95**	**1.00**	**0.94**	**(6%)**

- Total consumption decreased by 6% in 2022 as LDS remained relatively stable, outflows increased and Non-Domestic inflows declined
- Inflows to Cyprus declined by 12% in 2022. Duty Free Labelled and IWs with no country-specific labelling declined, but were partly offset by an increase in flows from the non-government-controlled areas of Cyprus
- The UK replaced Greece as the leading outflow destination in 2022, accounting for ~70% of total Outflows from Cyprus

Total inflows by country of origin – 2018-2022[1][a]

Inflows to Cyprus					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Non-government-controlled areas	0.03	0.07	0.02	0.06	0.08
Duty Free Labelled	0.01	0.05	0.01	0.04	0.03
IWs with no country-specific labelling	0.06	0.06	0.04	0.05	0.03
Other	0.01	0.01	0.01	0.01	0.01
Total Inflows	**0.12**	**0.20**	**0.09**	**0.16**	**0.14**

Total outflows by destination – 2018-2022[1][a]

Outflows from Cyprus					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
UK	(0.01)	(0.03)	(0.03)	(0.00)	(0.04)
Other	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Total Outflows	**(0.02)**	**(0.04)**	**(0.04)**	**(0.02)**	**(0.06)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data;

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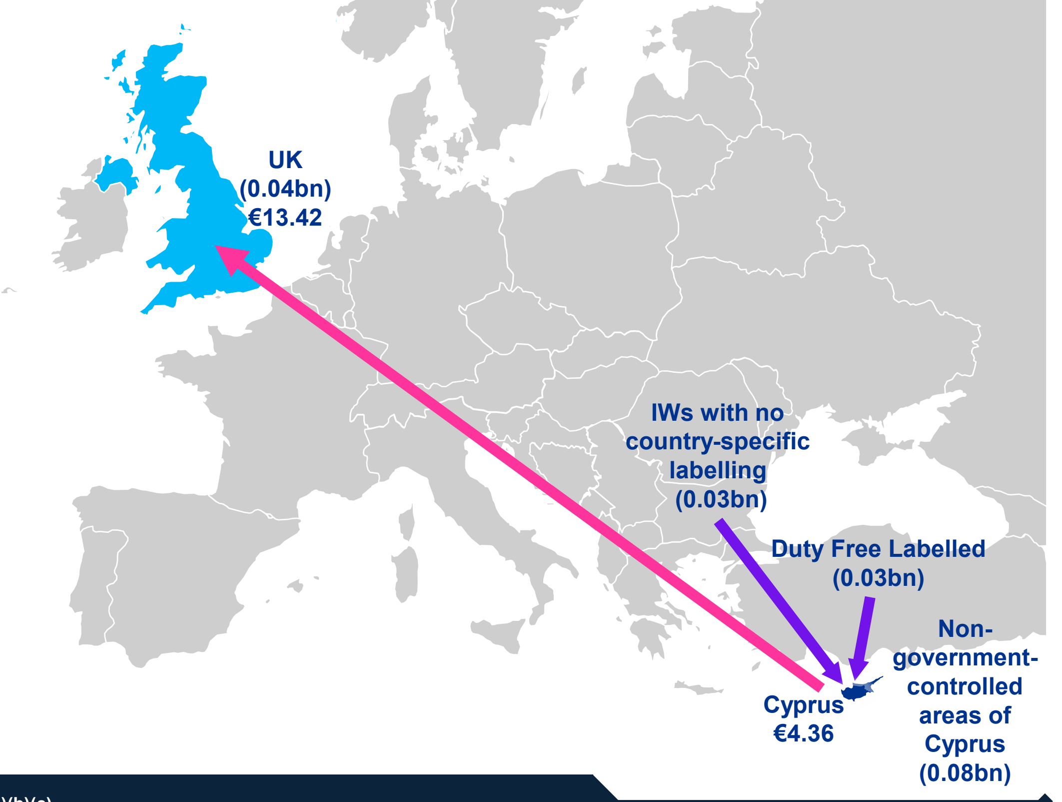
Key flows and C&C consumption patterns

Key inflows and outflows[1](a)

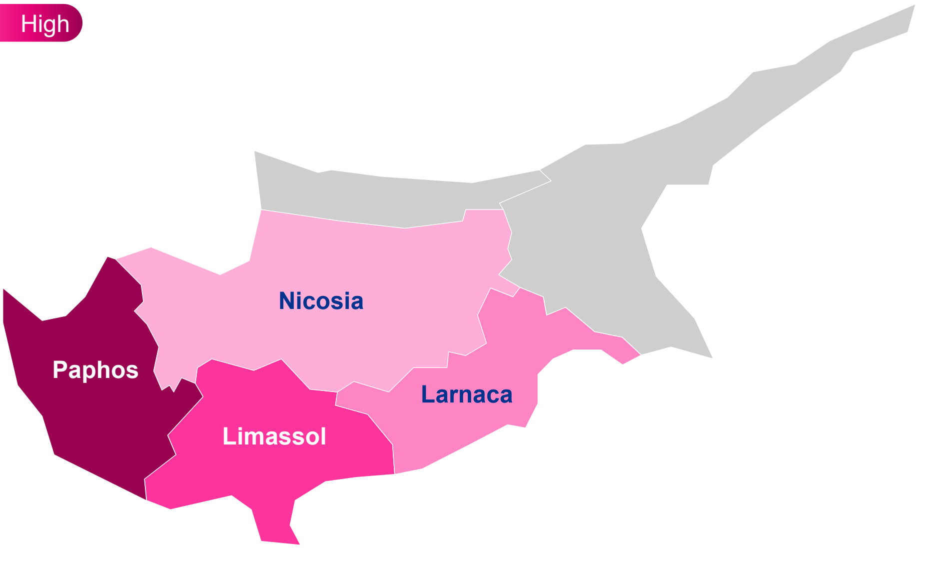
Cyprus
Source
Destination
Inflow
Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



C&C % by region[1](b)(c)

Low High



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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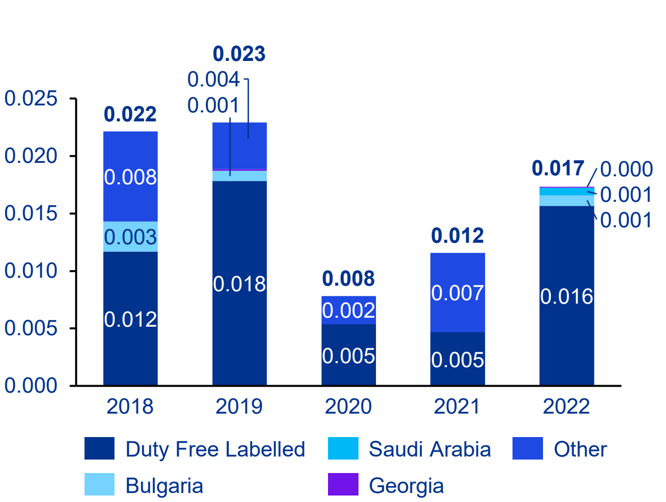
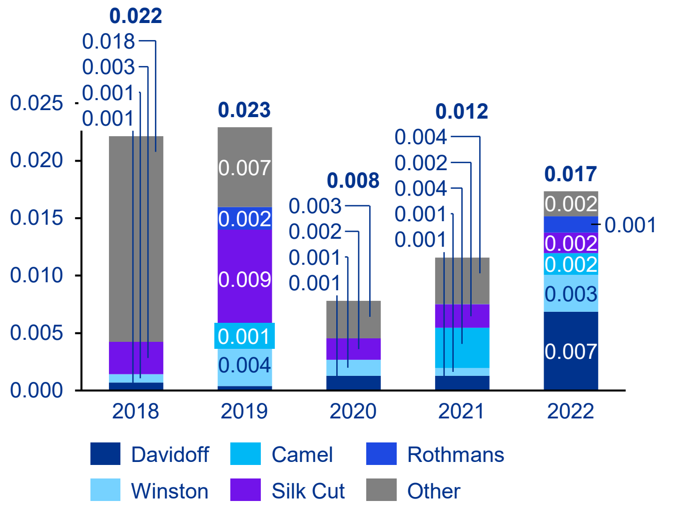
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

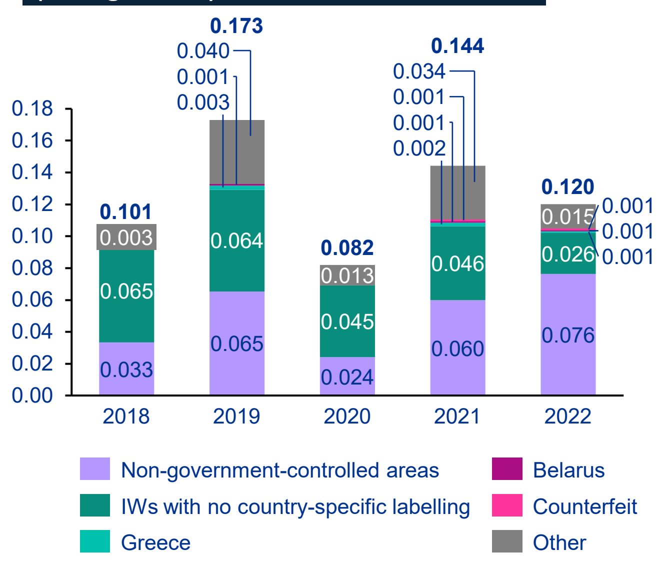


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

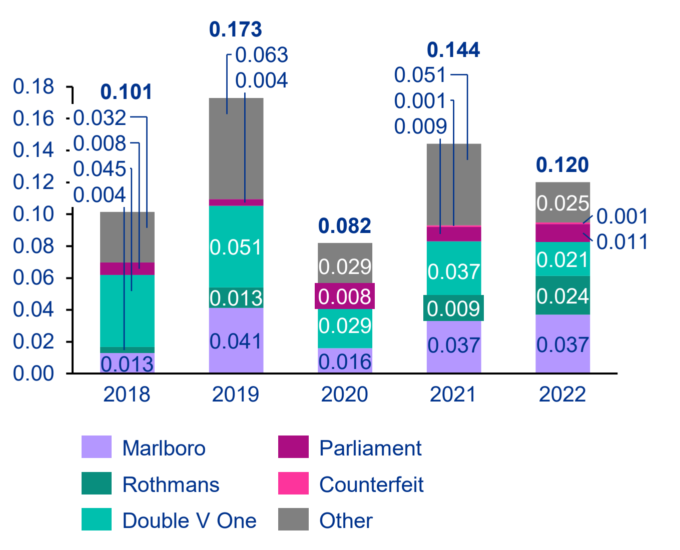


- ND(L) inflows increased by 50% in 2022, but remained below 2019 levels
  - Duty Free Labelled ND(L) increased to 0.016bn and accounted for 90% of total legal inflows, returning to similar volume levels as that seen in 2019
- C&C flows from the non-government-controlled areas of Cyprus increased by ~28% to 0.076bn and accounted ~64% of total illicit flows in 2022, up from ~42% in 2021
- Inflows of Illicit Whites with no country-specific labelling declined by 45% to 0.026bn, the lowest level observed during the reporting period

C&C by country of origin – 2018-2022 (bn cigarettes)[1](a)



C&C by brand – 2018-2022 (bn cigarettes)[1](a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Czech Republic

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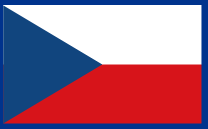
Czech Republic



13.3bn

Cigarettes consumed

-0.4bn on 2021

0.5bn

C&C cigarettes consumed

+0.01bn on 2021

3.7%

Of total consumption was C&C

+0.2ppt on 2021

€93m

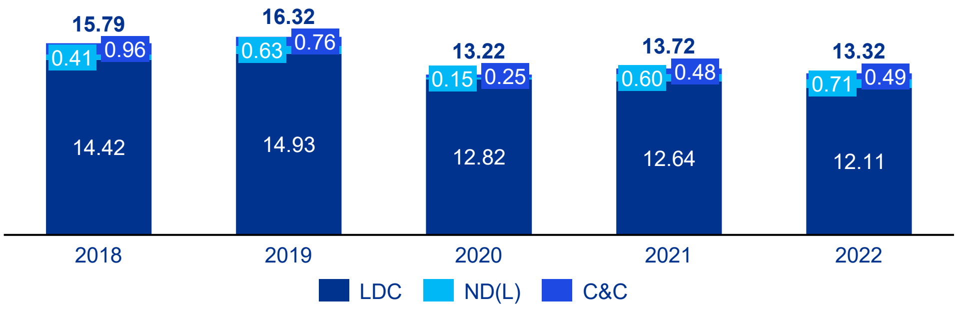
Total tax revenue lost from C&C

+€18m on 2021

Country profile

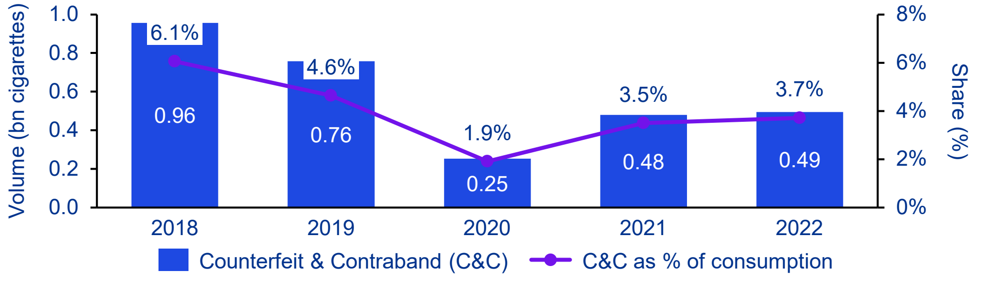
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)[(1)(2)]

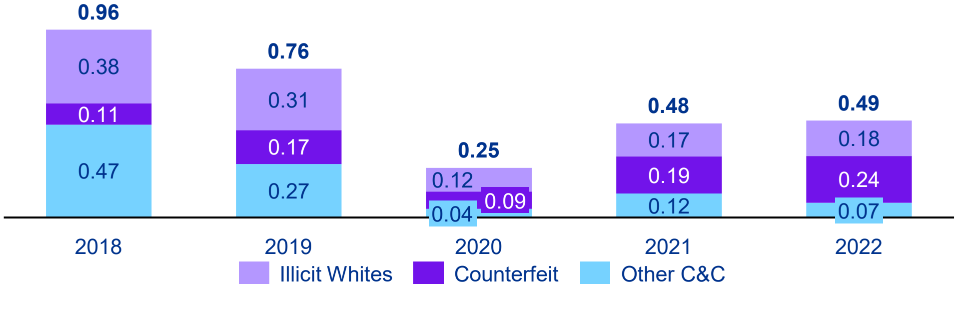


- C&C as a share of total consumption increased to 3.7%, or 0.49bn sticks, but remained below 2019 levels
- C&C volumes remained relatively stable as increases in Illicit Whites and Counterfeit consumption were offset by a decline in Other C&C consumption

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[(1)(2)]



C&C consumption by type – 2018-2022 (bn cigarettes)[(1)(2)(a)]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Czech Republic Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	20.01	19.74	16.97	15.20	14.45	(5%)
Outflows	(5.58)	(4.81)	(4.15)	(2.56)	(2.34)	(8%)
Legal Domestic Consumption (LDC)	14.42	14.93	12.82	12.64	12.11	(4%)
Non-Domestic Legal (ND(L))	0.41	0.63	0.15	0.60	0.71	19%
Counterfeit and Contraband (C&C)	0.96	0.76	0.25	0.48	0.49	3%
Total Non-Domestic	1.37	1.39	0.40	1.08	1.21	12%
Total Consumption	**15.79**	**16.32**	**13.22**	**13.72**	**13.32**	**(3%)**

- Total cigarette consumption decreased by 3% (~0.4bn sticks) in 2022. A 4% decline in legal domestic consumption was partly offset by an increase in Non-Domestic inflows
- Inflows increased in 2022, but remained below pre-pandemic levels. Inflows from the largest origin markets increased, with the largest increase observed in Polish inflows (0.26bn or 120% vs. 2021)
- Outflows declined by 8% in 2022, continuing the year on year decline observed since 2018

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Czech Republic					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Poland	0.08	0.20	0.02	0.21	0.47
Counterfeit	0.11	0.17	0.09	0.19	0.24
IWs with no country-specific labelling	0.24	0.18	0.04	0.09	0.10
Slovakia	0.07	0.10	0.03	0.05	0.06
Belarus	0.15	0.10	0.06	0.06	0.06
Other	0.73	0.64	0.16	0.47	0.27
Total Inflows	**1.37**	**1.39**	**0.40**	**1.08**	**1.21**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from Czech Republic					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Germany	(4.68)	(4.09)	(3.68)	(2.31)	(2.15)
Other	(0.90)	(0.72)	(0.48)	(0.25)	(0.20)
Total Outflows	**(5.58)**	**(4.81)**	**(4.15)**	**(2.56)**	**(2.34)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data;

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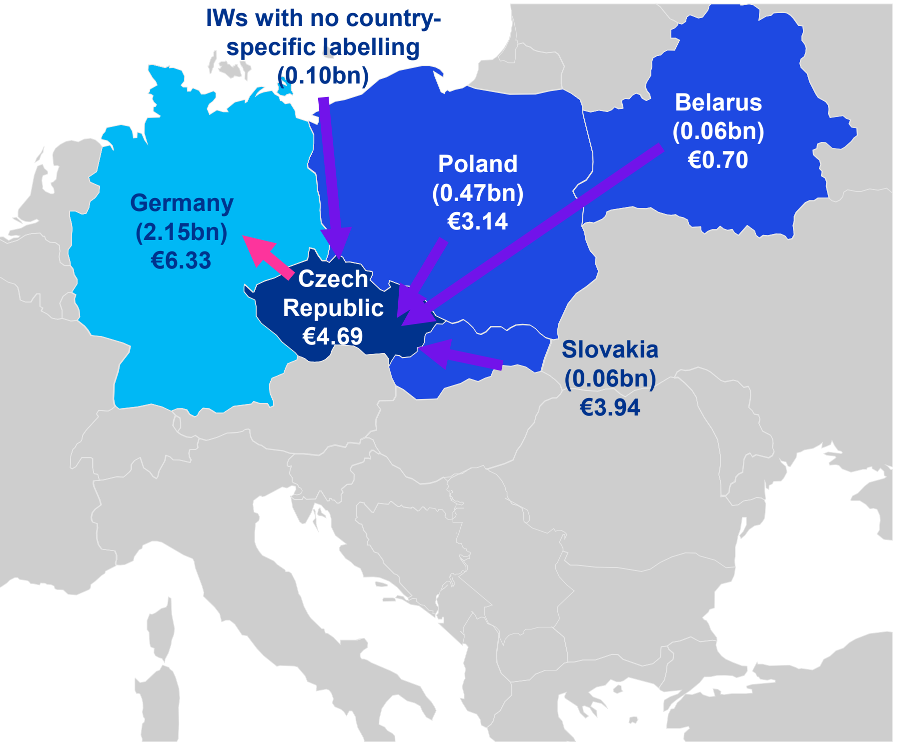
Key flows and C&C consumption patterns

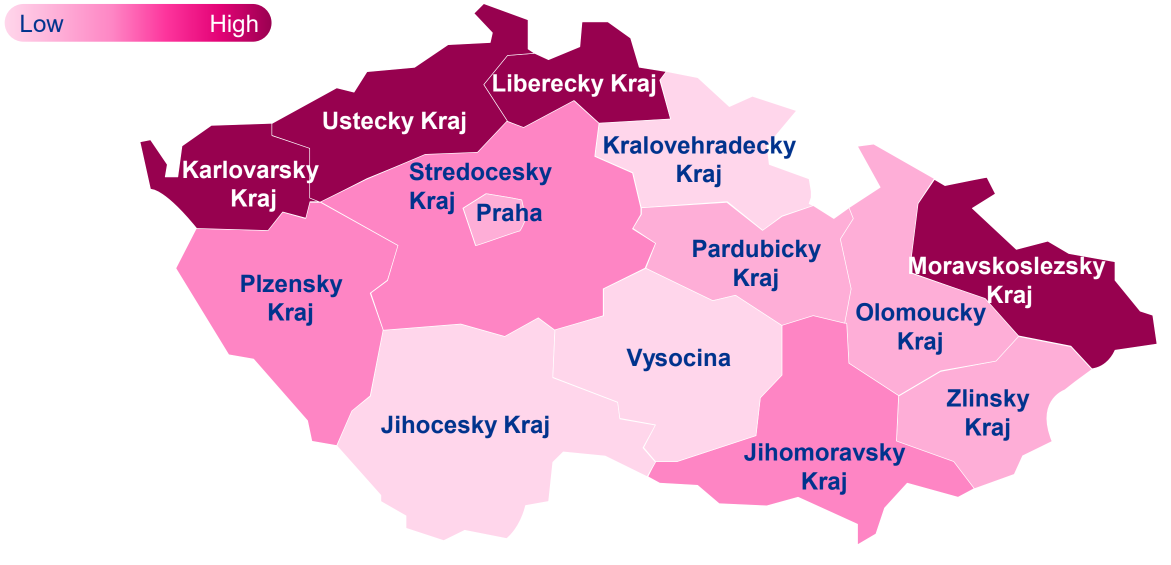
Key inflows and outflows[1](a)

Czech Republic
Source
Destination
Inflow
Outflow

Label description:
Country (Inflow/ Outflow Volume) Weighted Average Price



C&C % by region[1](b)(c)



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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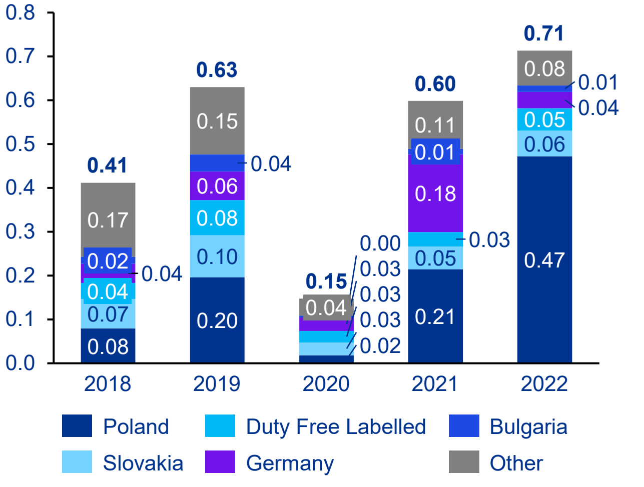
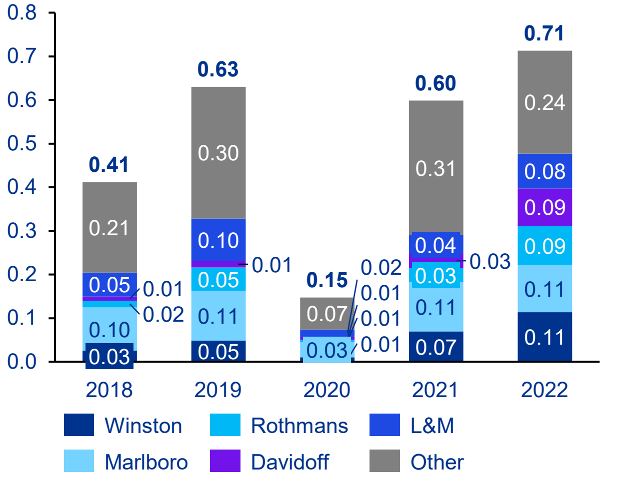
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

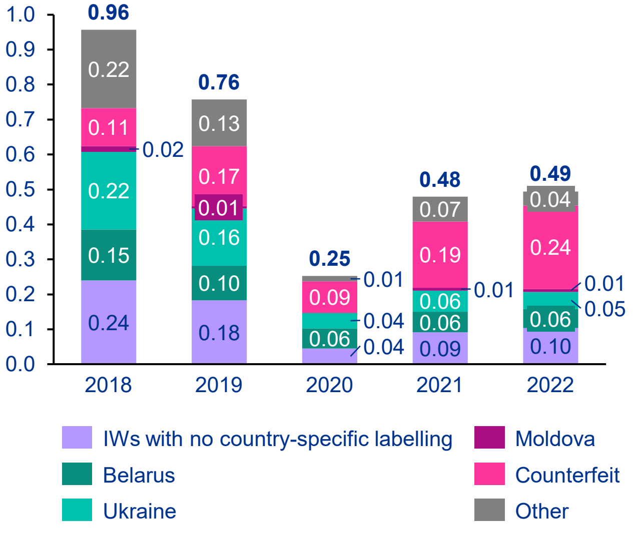


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

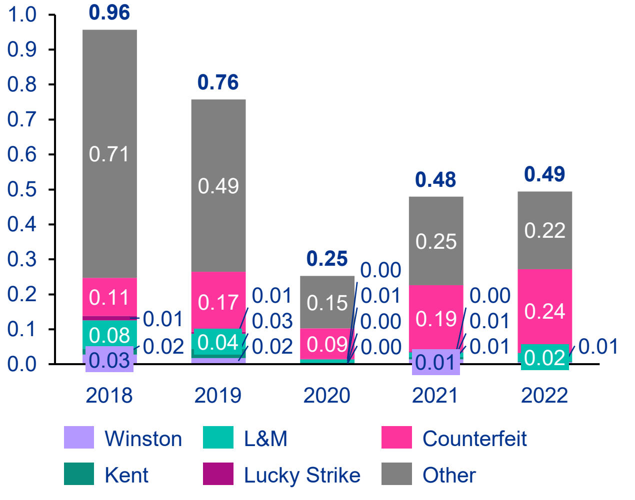


- ND(L) volumes increased in 2022, reaching the highest levels observed during the reporting period. The increase in ND(L) inflows from Poland was partly offset by a decline in German ND(L)
- C&C flows remained relatively stable in 2022. However, Counterfeit accounted for 48% of the total illicit consumption in 2022, up from 39% in 2021
- The highest levels of C&C were found in the Ustecky Kraj , Karlovarsky Kraj, Liberecky Kraj and Moravskoslezsky Kraj regions

C&C by country of origin – 2018-2022 (bn cigarettes)[1][a]



C&C by brand – 2018-2022 (bn cigarettes)[1][a]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Denmark

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Denmark

4.5bn

Cigarettes consumed

-1.3bn on 2021

0.2bn

C&C cigarettes consumed

-0.2bn on 2021

3.9%

Of total consumption was C&C

-2.6ppt on 2021

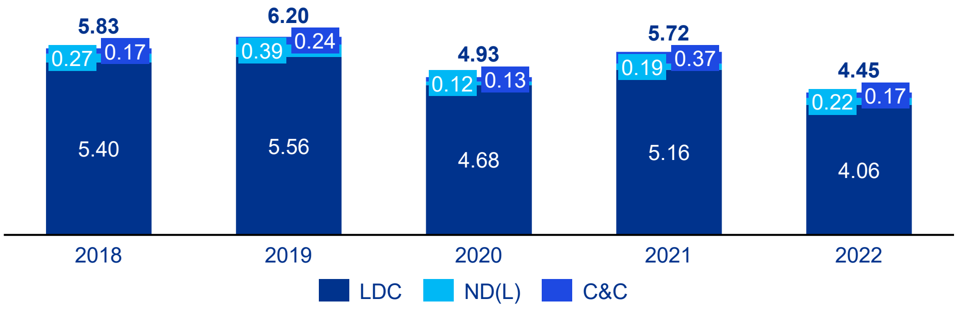
€59m

Total tax revenue lost from C&C

-€55m on 2021

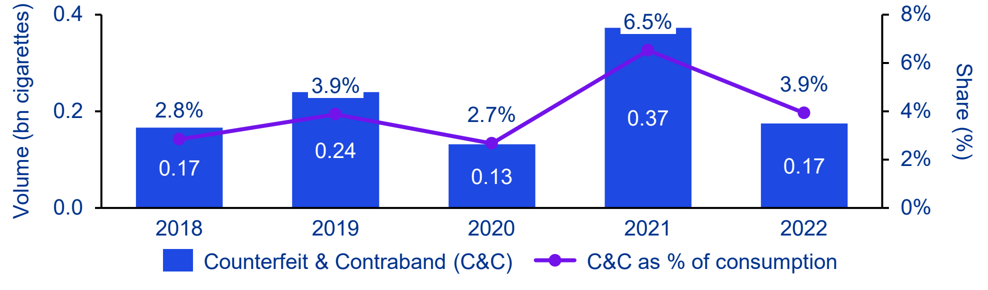
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)(1)(2)(3)(c)

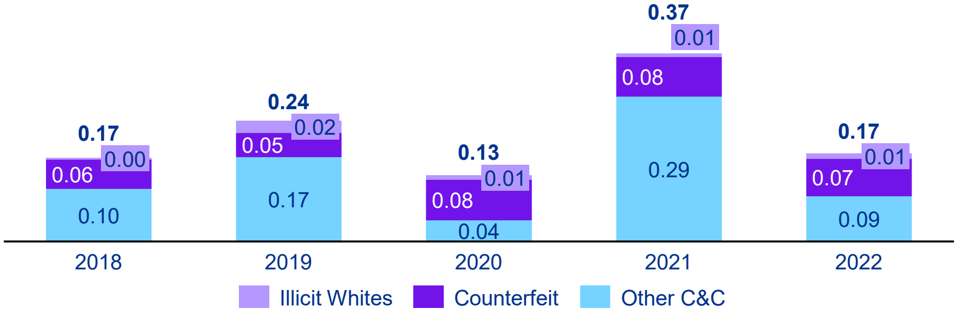


- C&C as a share of total consumption decreased to 3.9% in 2022, returning to a similar share as that seen in 2019
- This decrease in C&C was primarily driven by reduced volumes of Other C&C

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to large volumes of cigarette shipments in Q4 2021 ahead of a price rise in January 2022, LDS volumes in Q1 2022 were significantly lower than in previous periods. As a result we have adjusted 2022 LDS shown to account for this de-loading effect. Refer to the appendix for further details; (d) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data; (3) Nielsen sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)(a)]

Total Denmark Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	5.51	5.68	4.75	5.20	4.13	(21%)
Outflows	(0.12)	(0.11)	(0.07)	(0.04)	(0.06)	59%
Legal Domestic Consumption (LDC)	5.40	5.56	4.68	5.16	4.06	(21%)
Non-Domestic Legal (ND(L))	0.27	0.39	0.12	0.19	0.22	15%
Counterfeit and Contraband (C&C)	0.17	0.24	0.13	0.37	0.17	(53%)
Total Non-Domestic	0.44	0.63	0.25	0.56	0.39	(30%)
Total Consumption	**5.83**	**6.20**	**4.93**	**5.72**	**4.45**	**(22%)**

- Total cigarette consumption decreased by 1.27bn, to the lowest volume observed during the reporting period, primarily driven by a decline in Legal Domestic Sales
- Non-Domestic inflows decreased by 0.17bn with inflows declining from all major sources, with the exception of the UK
  - Counterfeit became the largest source of inflows in 2022
- Outflows increased by 0.02bn, driven by higher flows to Sweden and the Netherlands. Outflows to other markets remained flat

Total inflows by country of origin – 2018-2022[(1)(b)]

Inflows to Denmark					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Counterfeit	0.06	0.05	0.08	0.08	0.07
Sweden	0.03	0.08	0.03	0.07	0.05
Poland	0.01	0.02	0.03	0.08	0.05
Duty Free Labelled	0.13	0.16	0.04	0.06	0.04
UK	0.01	0.02	0.00	0.00	0.03
Other	0.20	0.30	0.08	0.27	0.15
Total Inflows	**0.44**	**0.63**	**0.25**	**0.56**	**0.39**

Total outflows by destination – 2018-2022[(1)(b)]

Outflows from Denmark					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Sweden	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)
Netherlands	(0.01)	(0.02)	(0.01)	(0.00)	(0.01)
Norway	(0.02)	(0.00)	(0.00)	(0.01)	(0.01)
Germany	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
France	(0.01)	(0.00)	(0.01)	(0.00)	(0.00)
Other	(0.05)	(0.04)	(0.02)	(0.01)	(0.01)
Total Outflows	**(0.12)**	**(0.11)**	**(0.07)**	**(0.04)**	**(0.06)**

Note: (a) Due to large volumes of cigarette shipments in Q4 2021 ahead of a price rise in January 2022, LDS volumes in Q1 2022 were significantly lower than in previous periods. As a result we have adjusted 2022 LDS shown to account for this de-loading effect. Refer to the appendix for further details; (b) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data; (3) Nielsen sales data

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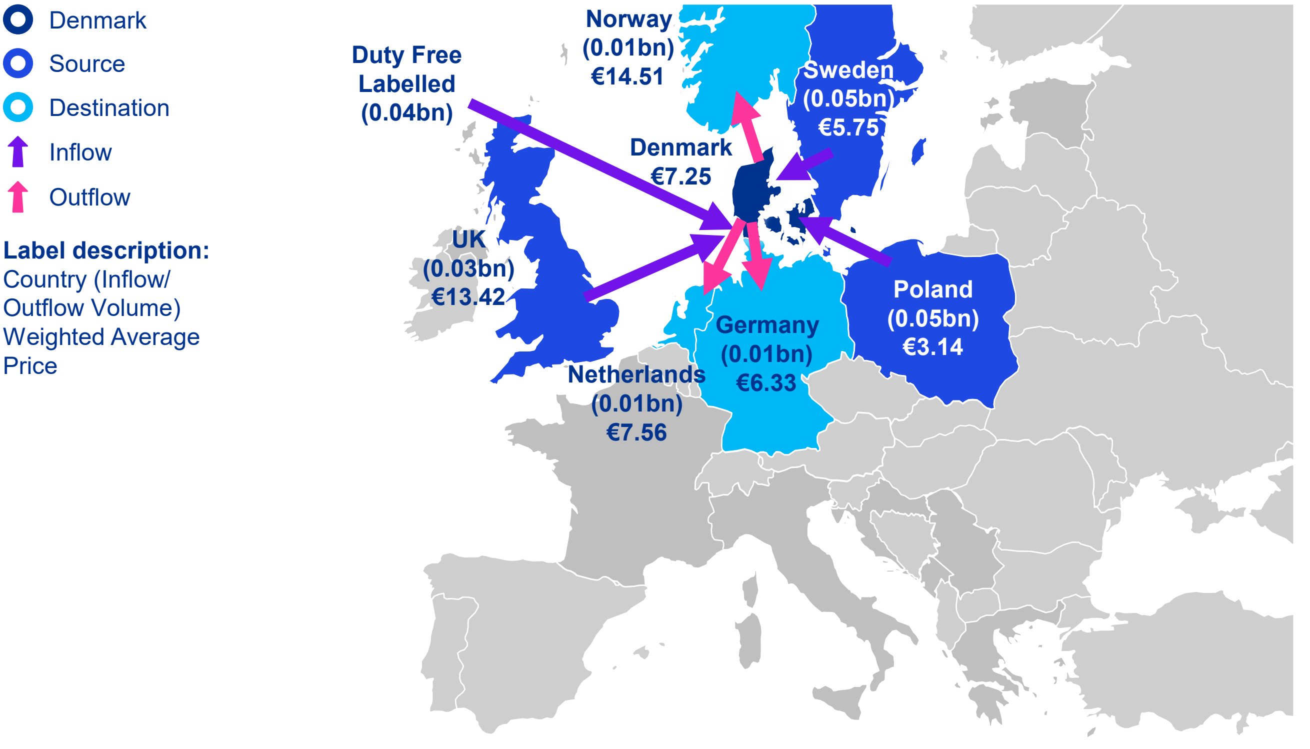
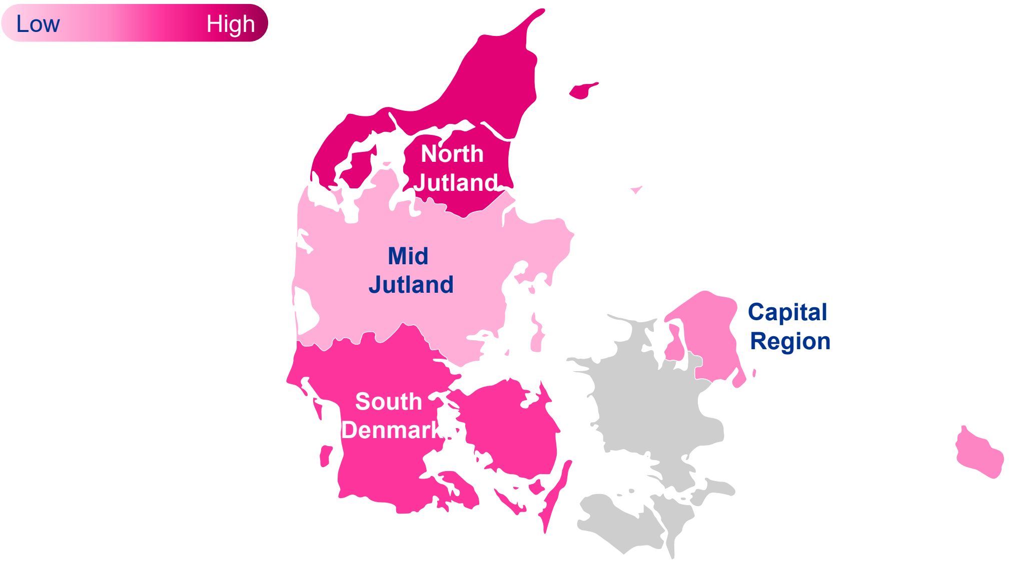
Key flows and C&C consumption patterns

Key inflows and outflows[1](a)



C&C % by region[1](b)(c)



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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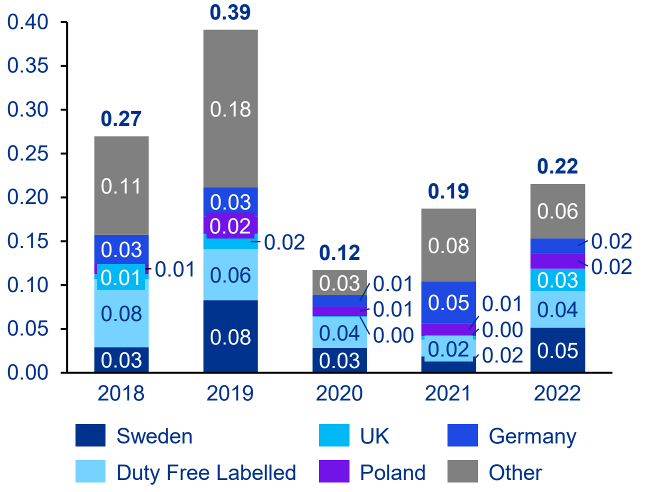
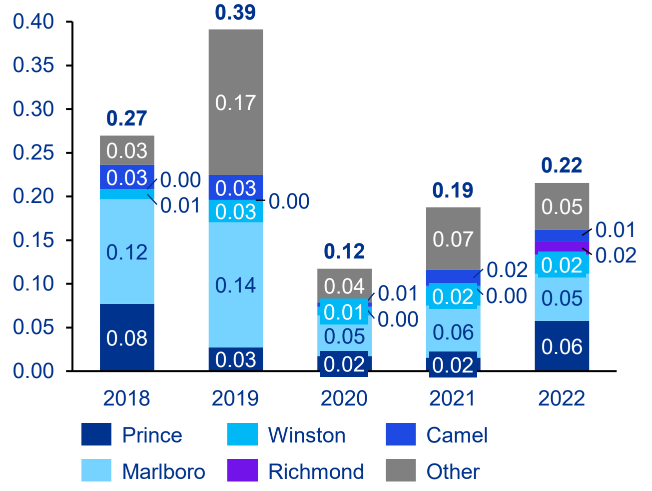
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[(1)]

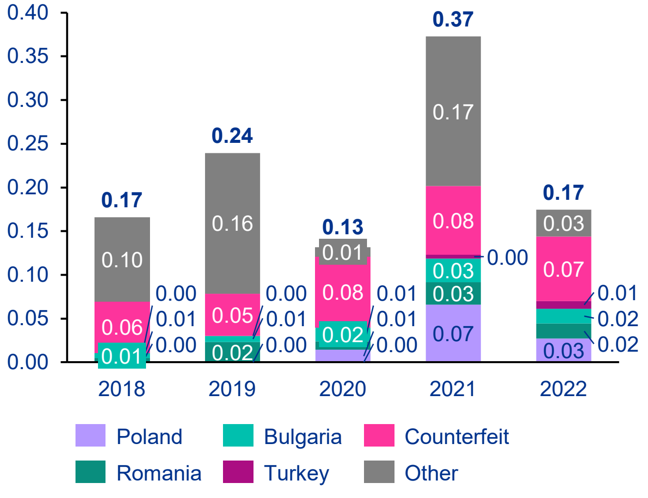


ND(L) by brand – 2018-2022 (bn cigarettes)[(1)]

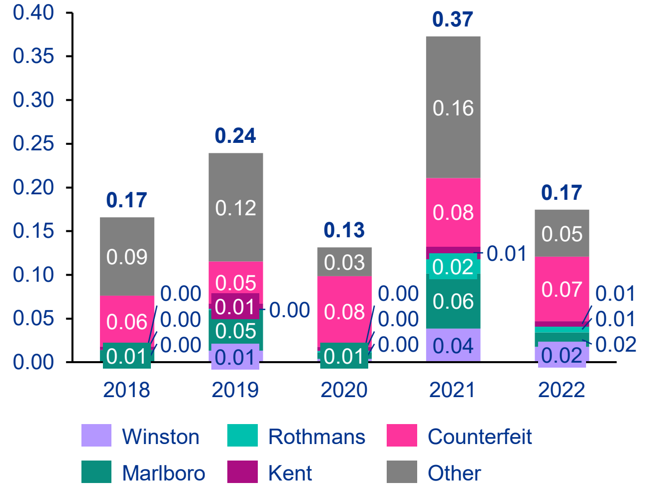


- ND(L) flows increased by 0.03bn in 2022, due to an increase in legal inflows from Sweden, the UK, Poland and Duty Free Labelled packs, partly offset by a decline in legal inflows from Germany
- Illicit flows declined in 2022, returning to similar levels as that seen in 2018, with reduced flows from Poland and a number of smaller origin markets grouped within 'Other'

C&C by country of origin – 2018-2022 (bn cigarettes)[(1)(a)]



C&C by brand – 2018-2022 (bn cigarettes)[(1)(a)]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys
Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Estonia

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C&C cigarette consumption and total consumption

1.4bn

Cigarettes consumed

+0.1bn on 2021

0.2bn

C&C cigarettes consumed

+0.1bn on 2021

14.0%

Of total consumption was C&C

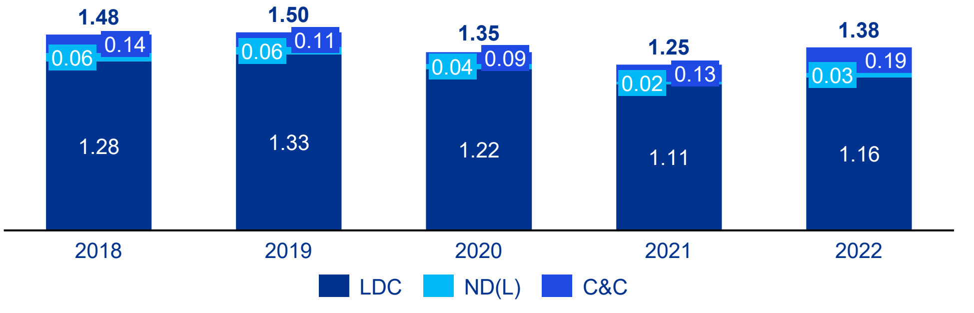
+3.6ppt on 2021

€38m

Total tax revenue lost from C&C

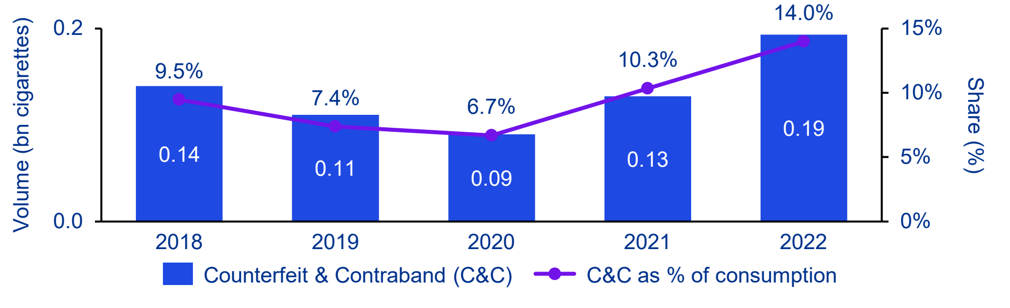
+€14m on 2021

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

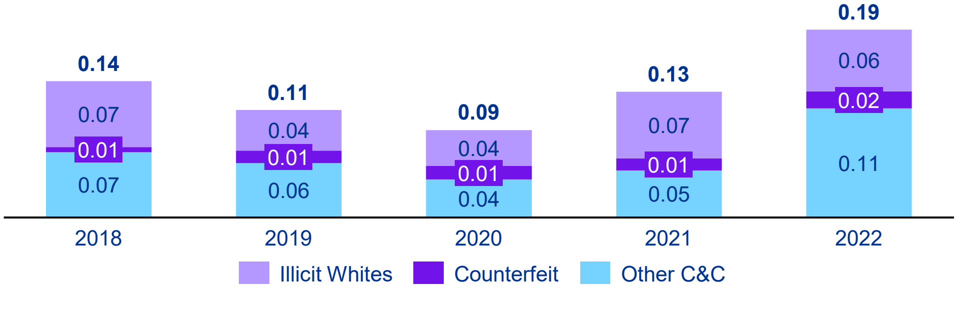


- C&C as a share of total consumption increased to 14% reaching the highest levels observed during the reporting period, primarily driven by an increase in Other C&C

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Estonia Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	1.54	1.56	1.46	1.42	1.39	(2%)
Outflows	(0.26)	(0.23)	(0.24)	(0.32)	(0.23)	(26%)
Legal Domestic Consumption (LDC)	1.28	1.33	1.22	1.11	1.16	5%
Non-Domestic Legal (ND(L))	0.06	0.06	0.04	0.02	0.03	77%
Counterfeit and Contraband (C&C)	0.14	0.11	0.09	0.13	0.19	49%
Total Non-Domestic	0.20	0.17	0.13	0.15	0.23	53%
Total Consumption	**1.48**	**1.50**	**1.35**	**1.25**	**1.38**	**10%**

- Total cigarette consumption increased by 10% in 2022 and has retuned to similar levels as that seen in 2020, driven by declining outflows and increasing Non-Domestic inflows
- Non-Domestic flows increased in 2022, primarily driven by inflows from Ukraine and coinciding with increased migration from Ukraine to Estonia[(3)]
- Higher-priced Finland remained the principal outflow destination for Estonian cigarettes, with outflows declining by 0.08bn in 2022 (~27%).
  - Finland accounted for ~94% of outflows from Estonia in 2022

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Estonia					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Ukraine	0.01	0.00	0.01	0.00	0.07
Belarus	0.05	0.03	0.02	0.06	0.05
Duty Free Labelled	0.02	0.03	0.03	0.01	0.03
Counterfeit	0.01	0.01	0.01	0.01	0.02
Other	0.11	0.09	0.05	0.06	0.06
Total Inflows	**0.20**	**0.17**	**0.13**	**0.15**	**0.23**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from Estonia					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Finland	(0.23)	(0.19)	(0.21)	(0.30)	(0.22)
Other	(0.03)	(0.03)	(0.03)	(0.01)	(0.01)
Total Outflows	**(0.26)**	**(0.23)**	**(0.24)**	**(0.32)**	**(0.23)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data; (3) https://data2.unhcr.org/en/situations/ukraine

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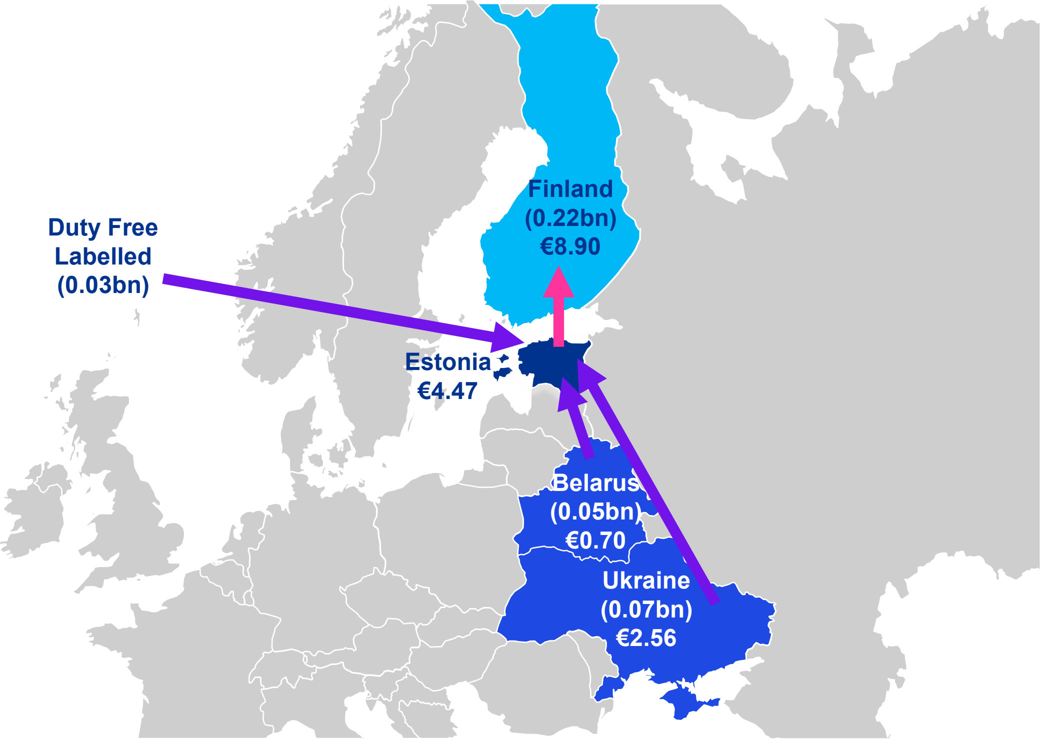
Key flows and C&C consumption patterns

Key inflows and outflows[1](a)

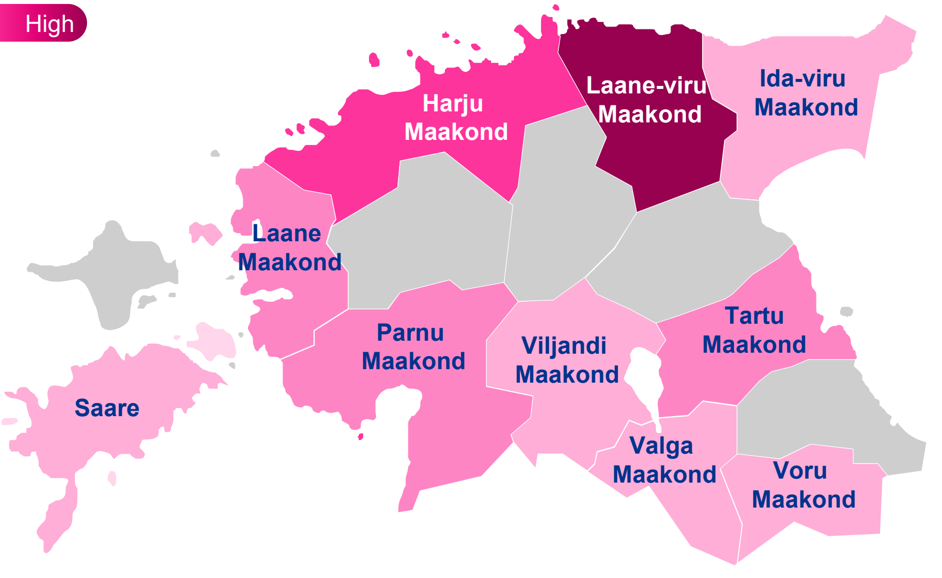
- Estonia
- Source
- Destination
- Inflow
- Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



C&C % by region[1](b)(c)

Low High



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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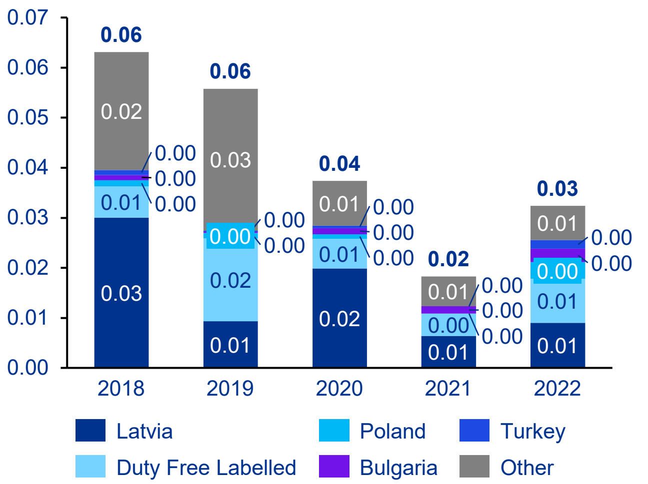
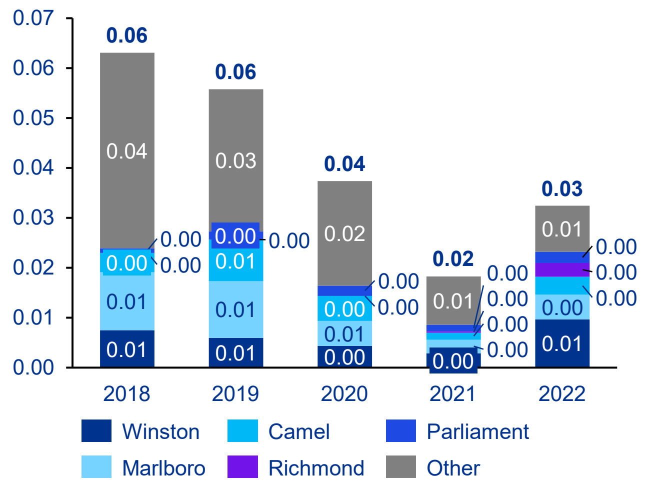
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

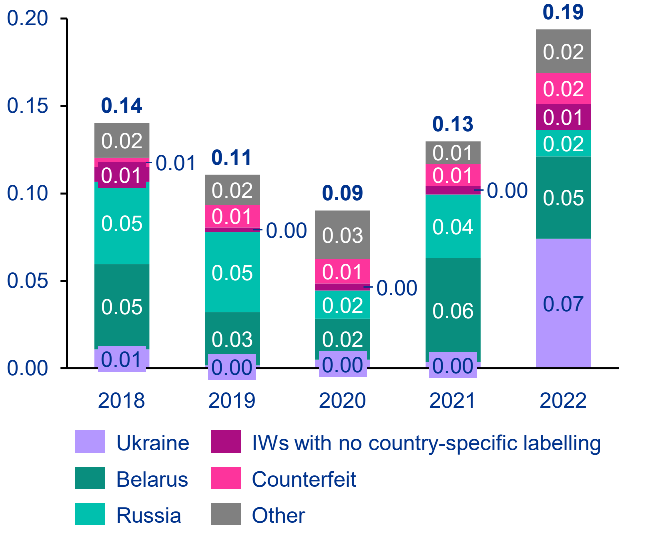


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

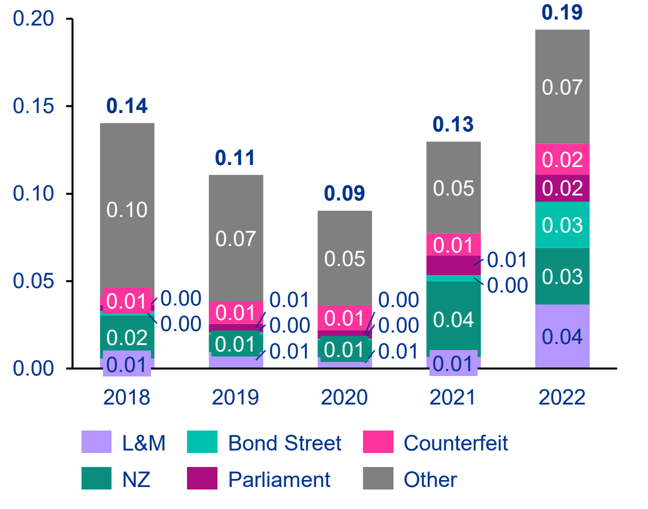


- Legal inflows (ND(L)) increased in 2022 but remained below 2019 levels, with increased inflows from all major source markets, as well as smaller source markets grouped under 'Other'
- C&C flows from Ukraine were the main driver of increased illicit consumption, accounting for ~40% of all C&C in 2022 compared to 3% in 2021
- C&C levels were highest in the Laane-viru Maakond region in Northern Estonia

C&C by country of origin – 2018-2022 (bn cigarettes)[1](a)



C&C by brand – 2018-2022 (bn cigarettes)[1](a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Finland

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C&C cigarette consumption and total consumption

3.5bn
Cigarettes consumed

-0.4bn on 2021

0.5bn
C&C cigarettes consumed

-0.02bn on 2021

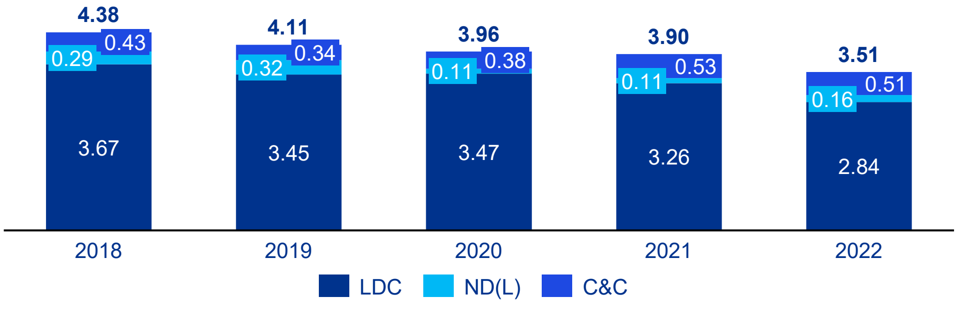
14.7%
Of total consumption was C&C

+1.1ppt on 2021

€208m
Total tax revenue lost from C&C

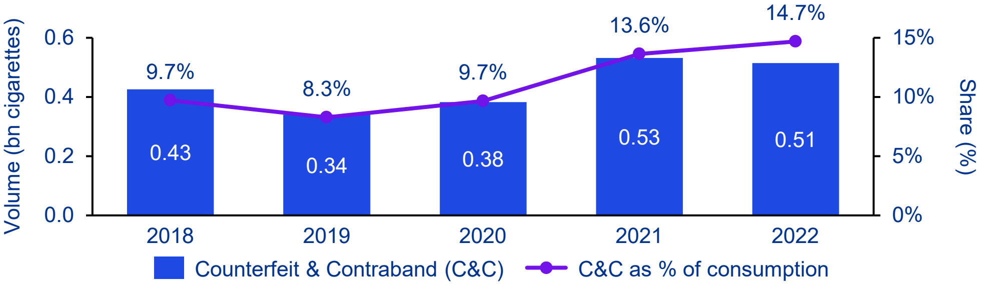
+€3m on 2021

Total consumption – 2018-2022 (bn cigarettes)[(1)(2)]

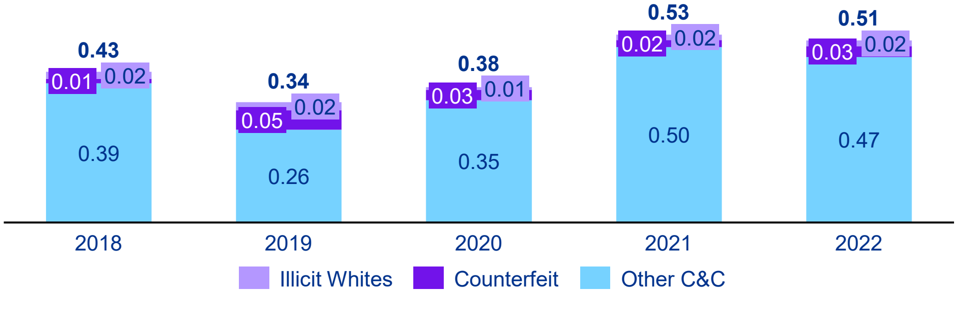


- C&C as a share of total consumption increased to 14.7% in 2022, the highest share observed in the reporting period
- C&C volumes declined slightly by 0.02bn cigarettes, driven by decline in flows of Other C&C

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[(1)(2)]



C&C consumption by type – 2018-2022 (bn cigarettes)[(1)(2)(a)]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Finland Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	3.72	3.48	3.48	3.26	2.85	(13%)
Outflows	(0.05)	(0.03)	(0.02)	(0.01)	(0.01)	129%
Legal Domestic Consumption (LDC)	3.67	3.45	3.47	3.26	2.84	(13%)
Non-Domestic Legal (ND(L))	0.29	0.32	0.11	0.11	0.16	39%
Counterfeit and Contraband (C&C)	0.43	0.34	0.38	0.53	0.51	(3%)
Total Non-Domestic	0.71	0.66	0.49	0.64	0.67	4%
Total Consumption	**4.38**	**4.11**	**3.96**	**3.90**	**3.51**	**(10%)**

- Total cigarette consumption decreased by 10%, driven by a decline in Legal Domestic Sales
- Inflows increased by 4%, primarily driven by higher flows from Latvia and smaller markets grouped within 'Other'. This was partially offset by a decline in flows from Estonia
- Estonia remained the largest source of Finnish Non-Domestic inflows
- Outflows from Finland remained low

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Finland					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Estonia	0.23	0.19	0.21	0.30	0.22
Duty Free Labelled	0.21	0.21	0.13	0.16	0.17
Latvia	0.02	0.02	0.03	0.05	0.08
Other	0.25	0.24	0.12	0.13	0.20
Total Inflows	**0.71**	**0.66**	**0.49**	**0.64**	**0.67**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from Finland					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Other	(0.05)	(0.03)	(0.02)	(0.01)	(0.01)
Total Outflows	**(0.05)**	**(0.03)**	**(0.02)**	**(0.01)**	**(0.01)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data; (3) European Commission Excise Duty Tables

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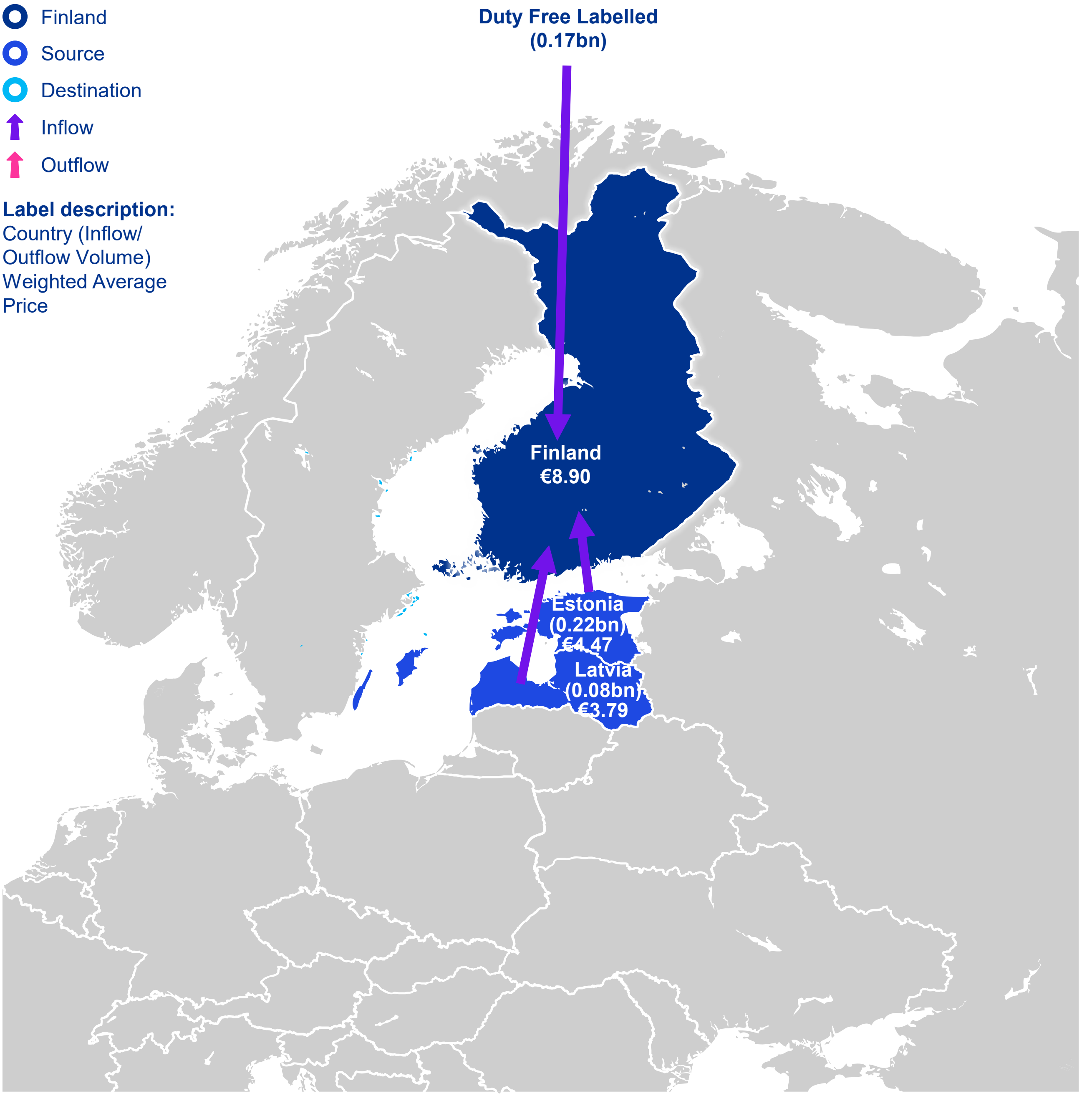
Key flows

Key inflows and outflows[1](a)

- Finland
- Source
- Destination
- Inflow
- Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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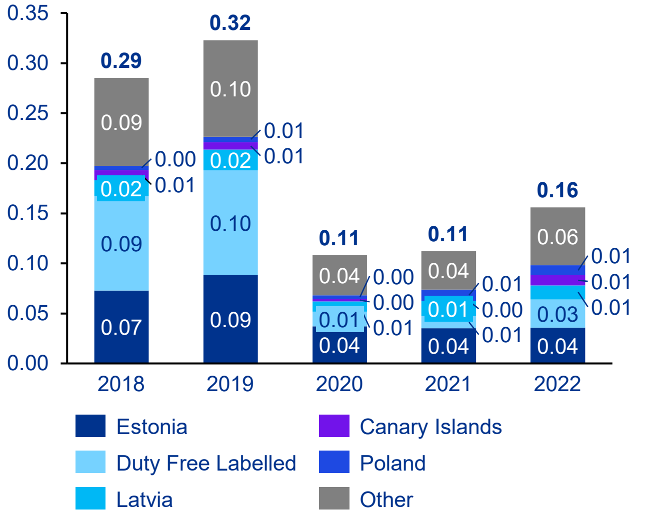
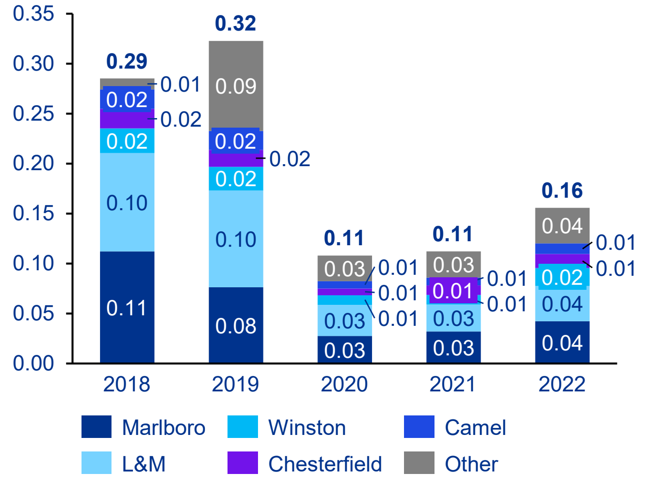
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)(1)

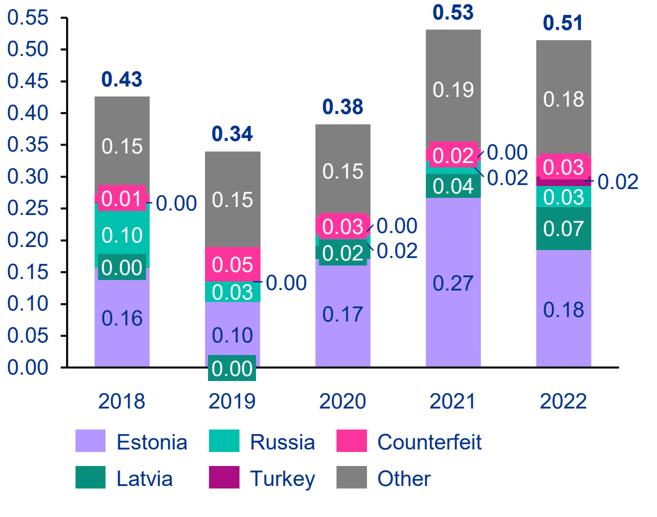


ND(L) by brand – 2018-2022 (bn cigarettes)(1)

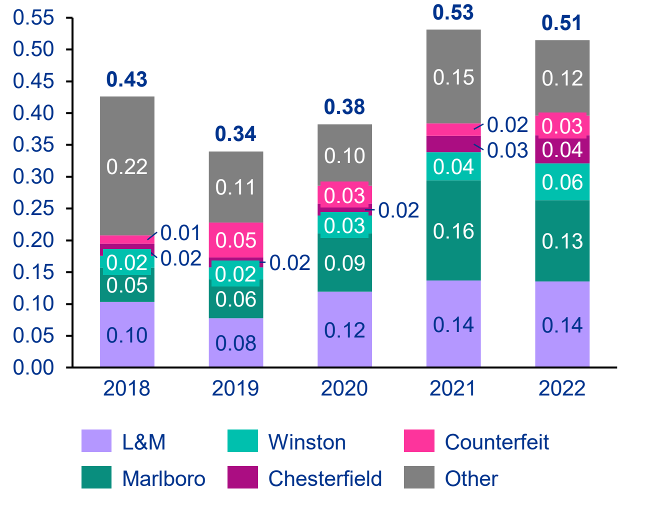


- Total legal inflows (ND(L)) increased to 0.16bn in 2022 but remained below 2018 and 2019 levels. This growth was primarily due to increased Duty Free labelled inflows and inflows from smaller source markets grouped under ‘Other’
- C&C declined marginally to 0.51bn in 2022, with a decrease in illicit flows from Estonia partly offset by a reduction in illicit flows from Latvia

C&C by country of origin – 2018-2022 (bn cigarettes)(1)(a)



C&C by brand – 2018-2022 (bn cigarettes)(1)(a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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France

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France

52.2bn

Cigarettes consumed

+0.7bn on 2021

16.9bn

C&C cigarettes consumed

+1.8bn on 2021

32.4%

Of total consumption was C&C

+3.1ppt on 2021

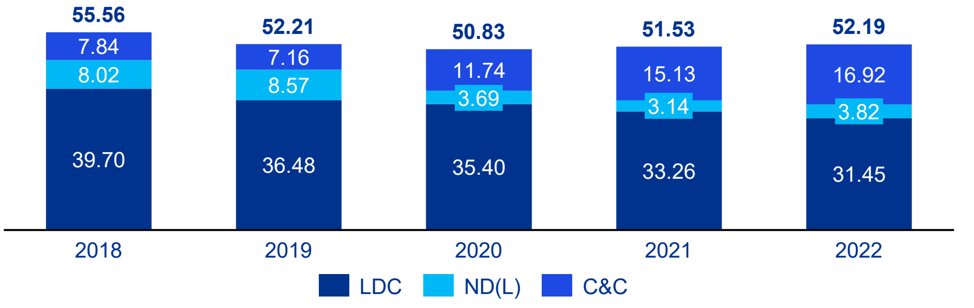
€7,255m

Total tax revenue lost from C&C

+€1,035m on 2021

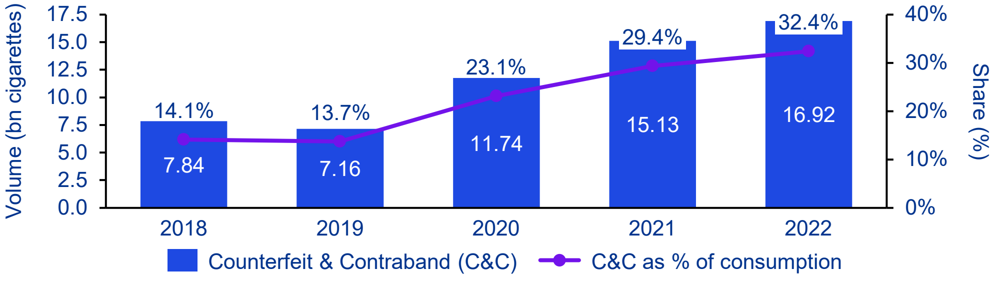
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)[(1)(2)]

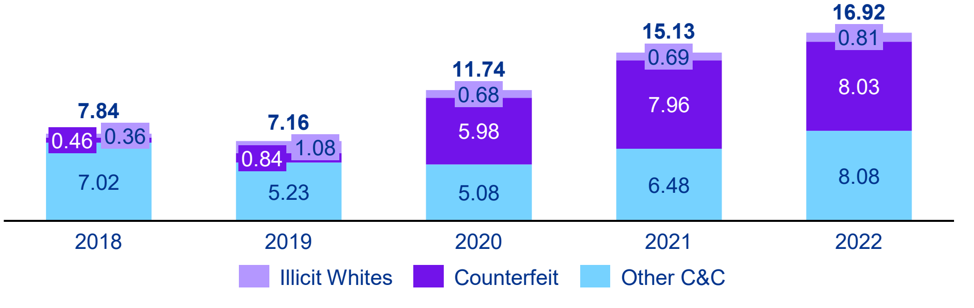


- C&C increased by 1.79bn to reach 32.4% of total cigarette consumption in 2022, the highest level observed during the reporting period
- Other C&C was the primary contributor to the increase in C&C. Counterfeit flows remained at levels similar to those seen in 2021

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[(1)(2)]



C&C consumption by type – 2018-2022 (bn cigarettes)[(1)(2)(a)]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2]

Total France Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	40.23	37.21	35.82	33.48	31.73	(5%)
Outflows	(0.53)	(0.73)	(0.42)	(0.22)	(0.28)	25%
Legal Domestic Consumption (LDC)	39.70	36.48	35.40	33.26	31.45	(5%)
Non-Domestic Legal (ND(L))	8.02	8.57	3.69	3.14	3.82	21%
Counterfeit and Contraband (C&C)	7.84	7.16	11.74	15.13	16.92	12%
Total Non-Domestic	15.86	15.73	15.44	18.27	20.74	14%
Total Consumption	**55.56**	**52.21**	**50.83**	**51.53**	**52.19**	**1%**

- Total cigarette consumption remained relatively stable at 52.19bn, with reduced legal domestic consumption more than offset by increased Non-Domestic flows
- Inflows from all major source markets increased in 2022, with the largest increase being observed in flows from Algeria (0.74bn), Poland (0.54bn) and Duty Free Labelled (0.51bn)
- Duty Free flows increased against a backdrop of increased travel post lifting of COVID-19 restrictions, and travellers to the UK being able to purchase Duty Free cigarettes post the UK's exit from the EU
- C&C formed 82% of inflows and Counterfeit remained the largest source at 15.4% of total consumption
- Outflows from France increased in 2021, but remained below the pre-pandemic levels. Outflows to Belgium and 'Other' smaller markets increased

Total inflows by country of origin – 2018-2022[1][a]

Inflows to France					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Counterfeit	0.46	0.84	5.98	7.96	8.03
Spain	3.61	4.08	2.77	2.56	2.62
Duty Free Labelled	1.33	1.15	0.51	0.85	1.36
Poland	0.09	0.08	0.10	0.63	1.17
Algeria	2.02	1.98	0.44	0.32	1.06
Other	8.35	7.59	5.64	5.96	6.50
Total Inflows	**15.86**	**15.73**	**15.44**	**18.27**	**20.74**

Total outflows by destination – 2018-2022[1][a]

Outflows from France					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Belgium	(0.06)	(0.13)	(0.07)	(0.03)	(0.07)
Germany	(0.06)	(0.08)	(0.06)	(0.05)	(0.05)
Switzerland	(0.07)	(0.29)	(0.06)	(0.07)	(0.05)
Netherlands	(0.10)	(0.08)	(0.16)	(0.04)	(0.04)
Other	(0.25)	(0.15)	(0.07)	(0.04)	(0.07)
Total Outflows	**(0.53)**	**(0.73)**	**(0.42)**	**(0.22)**	**(0.28)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data;

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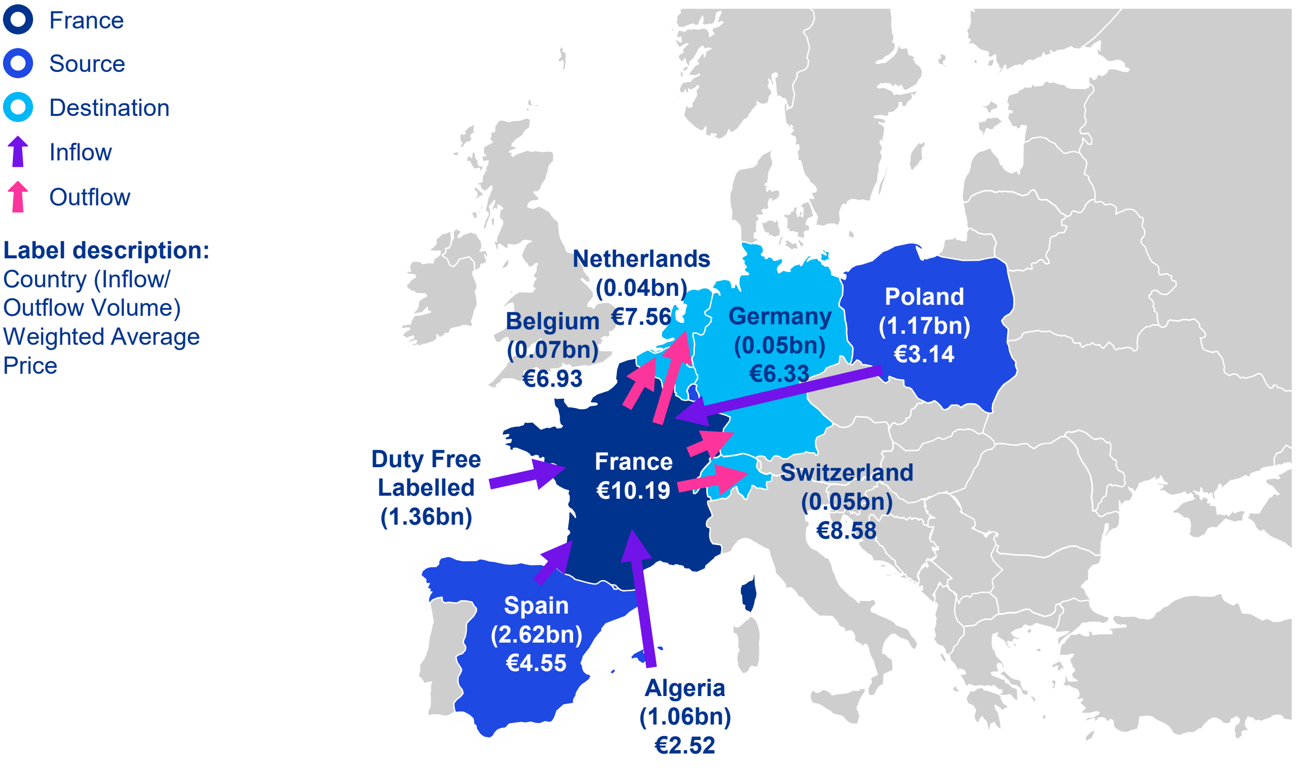
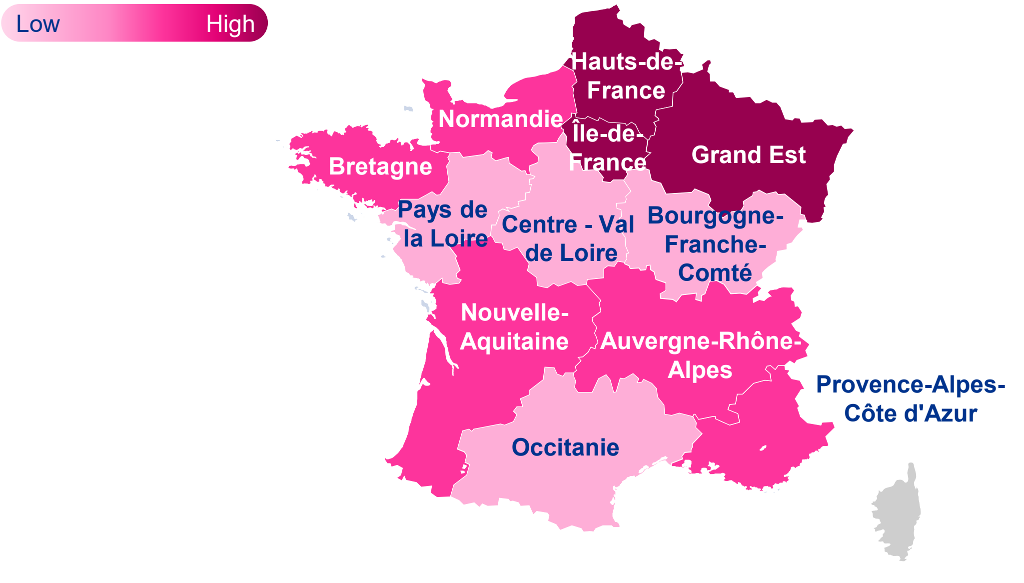
Key flows and C&C consumption patterns

Key inflows and outflows[1][a]



C&C % by region[1][b][c]



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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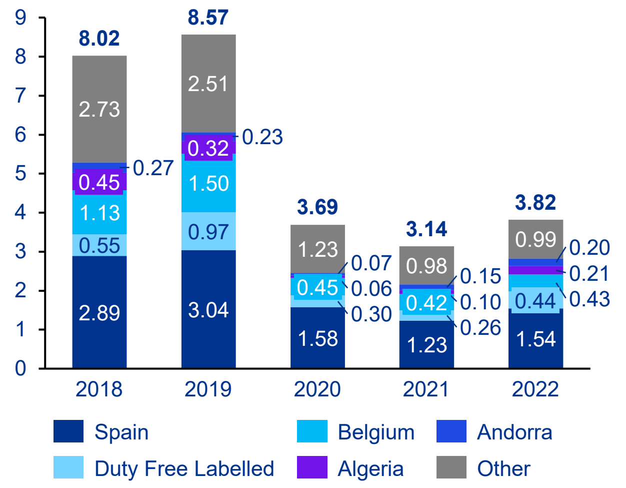
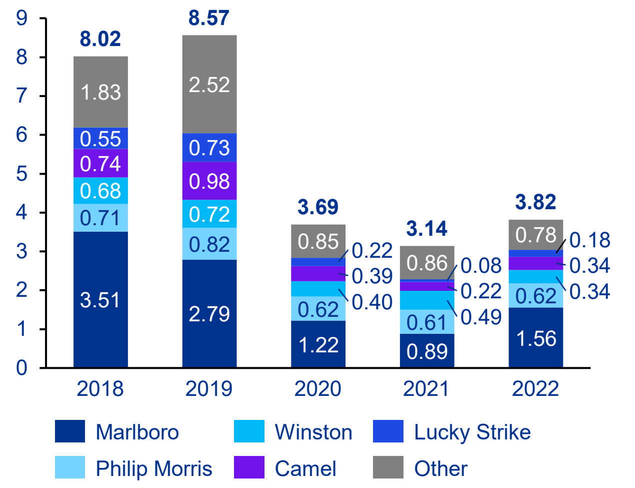
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)(1)(a)

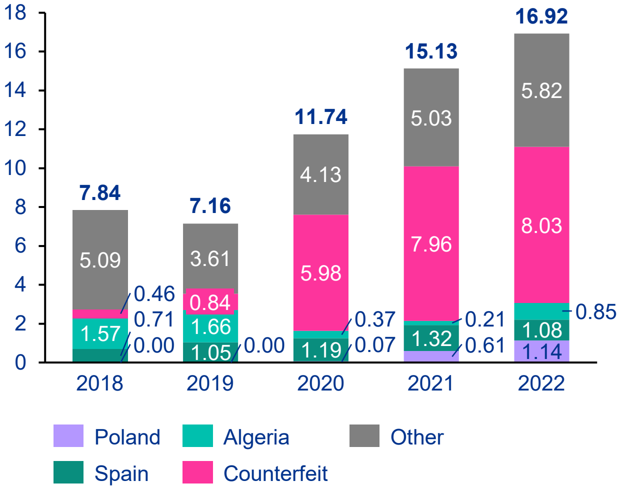


ND(L) by brand – 2018-2022 (bn cigarettes)(1)(a)

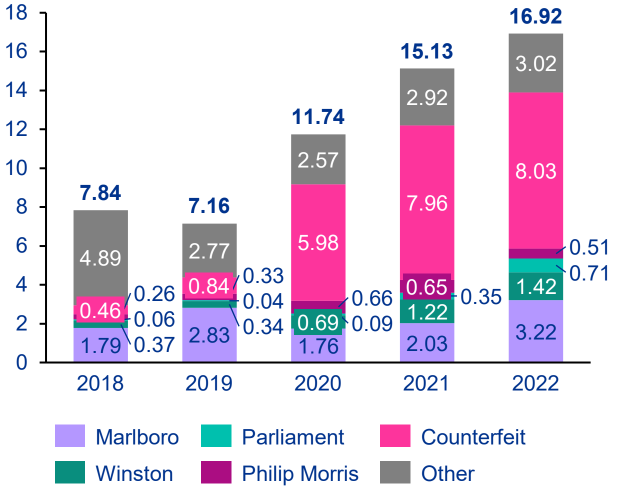


- Legal inflows (ND(L)) increased by 0.68bn in 2022, but remained below pre-pandemic levels. Inflows of Duty Free Labelled products and flows from Spain increased
- Increasing C&C in 2022 was primarily driven by increased flows from Poland, Algeria and smaller markets grouped under 'Other'
- Counterfeit represented 15.4% of total cigarettes consumed in France in 2022. The share of Counterfeit packs that bore Duty Free labelling increased from 67% in 2021 to 82% in 2022

C&C by country of origin – 2018-2022 (bn cigarettes)(1)(b)



C&C by brand – 2018-2022 (bn cigarettes)(1)(b)



Note: (a) Legal limits for cross border travellers was reduced from 800 cigarettes to 200 cigarettes in 2020 (b) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Germany

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Germany

C&C cigarette consumption and total consumption

76.7bn
Cigarettes consumed

-3.4bn on 2021

1.7bn
C&C cigarettes consumed

-0.02bn on 2021

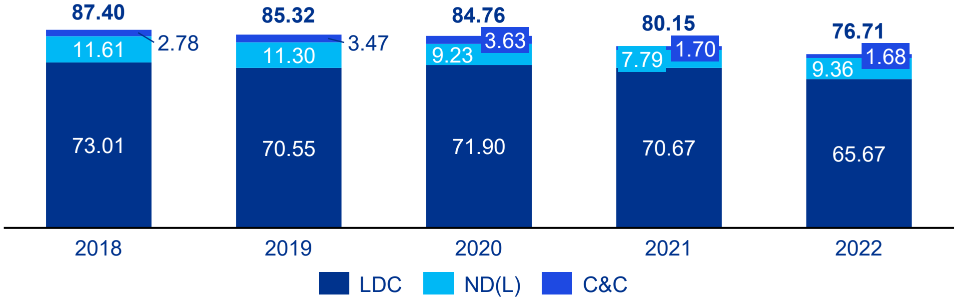
2.2%
Of total consumption was C&C

+0.1ppt on 2021

€373m
Total tax revenue lost from C&C

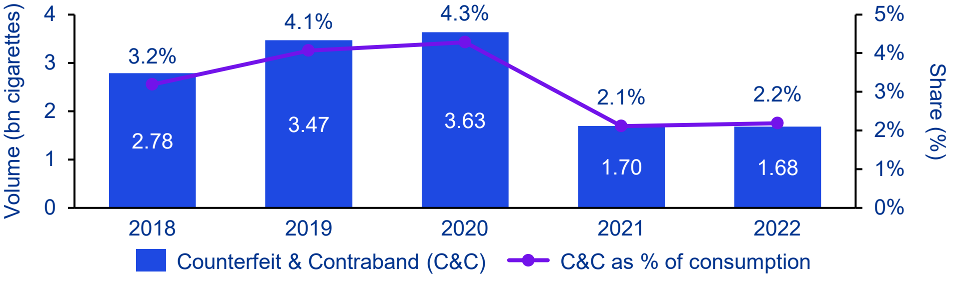
+€9m on 2021

Total consumption – 2018-2022 (bn cigarettes)[(1)(2)]

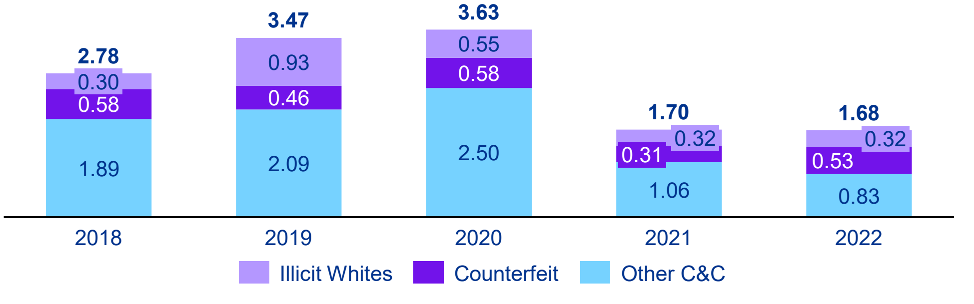


- Total cigarette consumption declined by 4% in 2022, a similar rate as observed in 2021
- The C&C share of total consumption remained relatively stable at 2.2% in 2022, with an increase in Counterfeit offset by a decline in Other C&C

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[(1)(2)]



C&C consumption by type – 2018-2022 (bn cigarettes)[(1)(2)(a)]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Germany Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	74.76	72.35	72.96	71.62	66.54	(7%)
Outflows	(1.75)	(1.80)	(1.06)	(0.95)	(0.87)	(8%)
Legal Domestic Consumption (LDC)	73.01	70.55	71.90	70.67	65.67	(7%)
Non-Domestic Legal (ND(L))	11.61	11.30	9.23	7.79	9.36	20%
Counterfeit and Contraband (C&C)	2.78	3.47	3.63	1.70	1.68	(1%)
Total Non-Domestic	14.39	14.77	12.86	9.49	11.04	16%
Total Consumption	**87.40**	**85.32**	**84.76**	**80.15**	**76.71**	**(4%)**

- Total cigarette consumption continued its long-term declining trend, reducing by 4% (3.4bn cigarettes) to 76.7bn in 2022. This decline was driven by lower Legal Domestic Sales, partly offset by an increase in Non-Domestic legal inflows
- Neighbouring Poland and Czech Republic remained the main inflow source markets, and accounted for ~60% of total inflows, a similar share to that seen since 2018
- Total outflows from Germany declined in 2022. This was in line with the declining trend observed since 2019, with reduced outflows to the Netherlands partly offset by increased outflows to France

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Germany					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Poland	4.20	4.94	4.66	3.82	4.66
Czech Republic	4.68	4.09	3.68	2.31	2.15
Duty Free Labelled	1.29	1.44	0.86	0.53	0.67
Luxembourg	0.33	0.35	0.43	0.37	0.55
Counterfeit	0.58	0.46	0.58	0.31	0.53
Other	3.30	3.50	2.64	2.15	2.48
Total Inflows	**14.39**	**14.77**	**12.86**	**9.49**	**11.04**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from Germany					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
France	(0.67)	(0.71)	(0.33)	(0.12)	(0.22)
Netherlands	(0.35)	(0.38)	(0.22)	(0.23)	(0.19)
Switzerland	(0.19)	(0.21)	(0.16)	(0.10)	(0.09)
Poland	(0.04)	(0.05)	(0.09)	(0.06)	(0.08)
Austria	(0.07)	(0.08)	(0.05)	(0.10)	(0.07)
Other	(0.43)	(0.36)	(0.21)	(0.33)	(0.23)
Total Outflows	**(1.75)**	**(1.80)**	**(1.06)**	**(0.95)**	**(0.87)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data;

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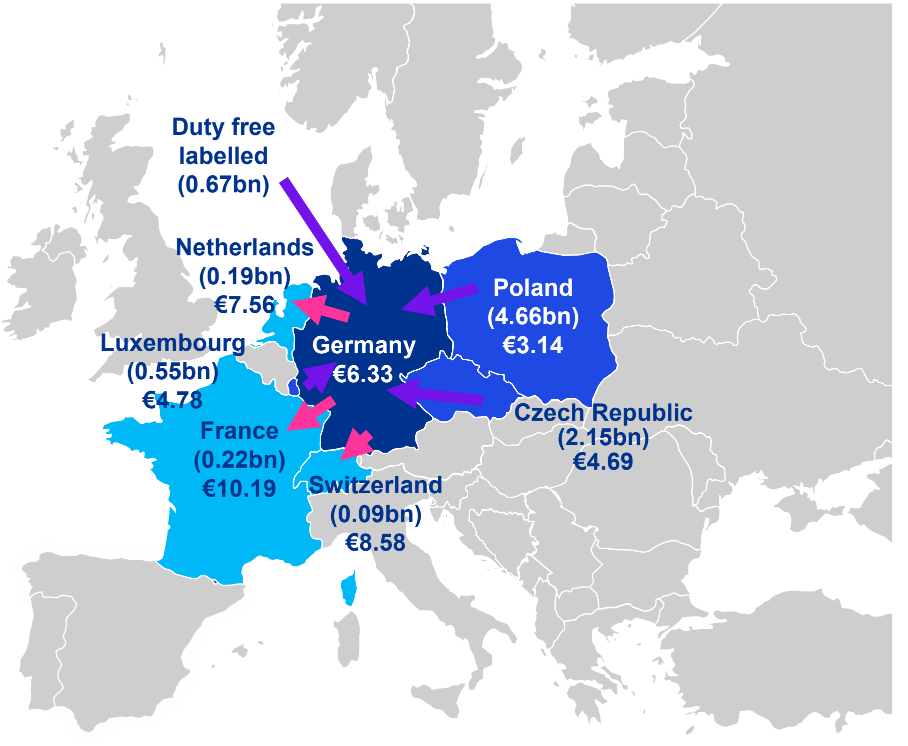
Key flows and C&C consumption patterns

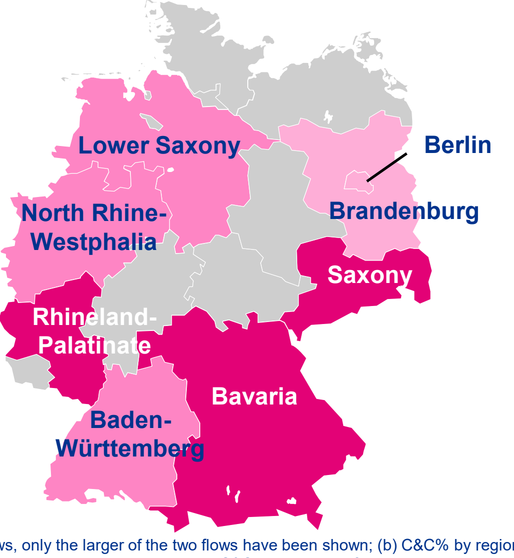
Key inflows and outflows[1][a]

- Germany
- Source
- Destination
- Inflow
- Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



C&C % by region[1][b][c][d]



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region (c) Data not available for regions in grey (d) C&C incidence is relatively low across all regions and differs by just 2.4 ppt with the lowest C&C percentage in Berlin at 0.9% and highest C&C% in Saxony at 3.3%

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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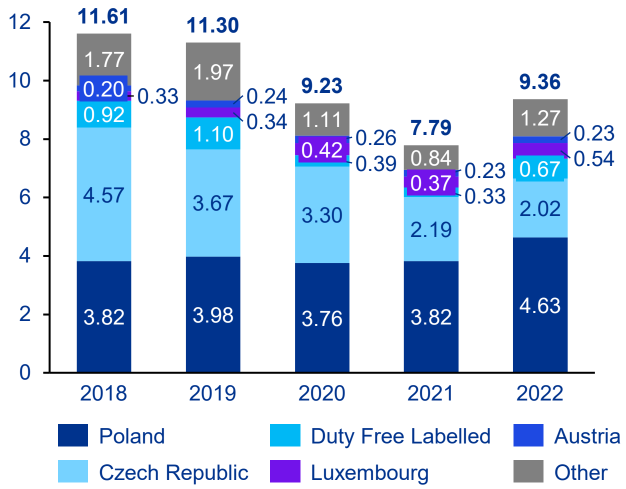
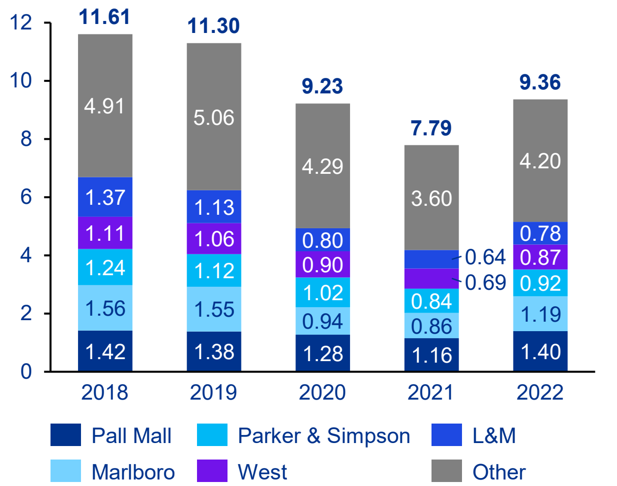
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

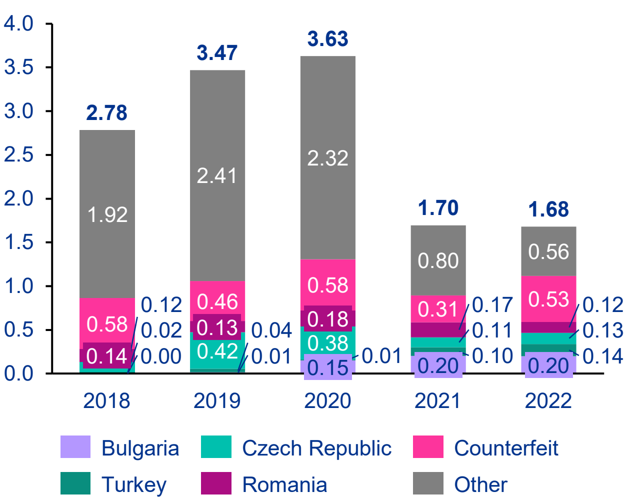


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

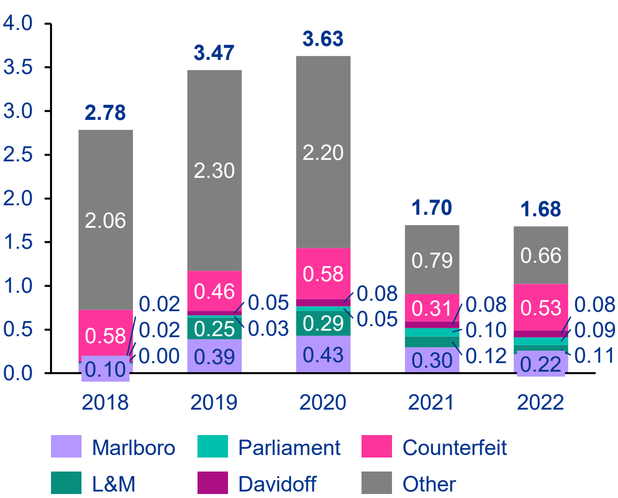


- ND(L) inflows increased by ~20% in 2022, returning to similar levels seen in 2020, albeit still lower than those observed pre-COVID. The ND(L) increase was driven by larger flows from Poland, Duty Free Labelled and Luxembourg, partly offset by reduced inflows from the Czech Republic
- C&C remained relatively stable at 1.68bn in 2022, with an increase in Counterfeit volumes. Furthermore, declined flows from markets such as Romania were noticeable
- The highest C&C incidence was observed in the Saxony region

C&C by country of origin – 2018-2022 (bn cigarettes)[1](a)



C&C by brand – 2018-2022 (bn cigarettes)[1](a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys
Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Greece

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14.1bn

Cigarettes consumed

-0.1bn on 2021

2.9bn

C&C cigarettes consumed

-0.5bn on 2021

20.7%

Of total consumption was C&C

-3.1ppt on 2021

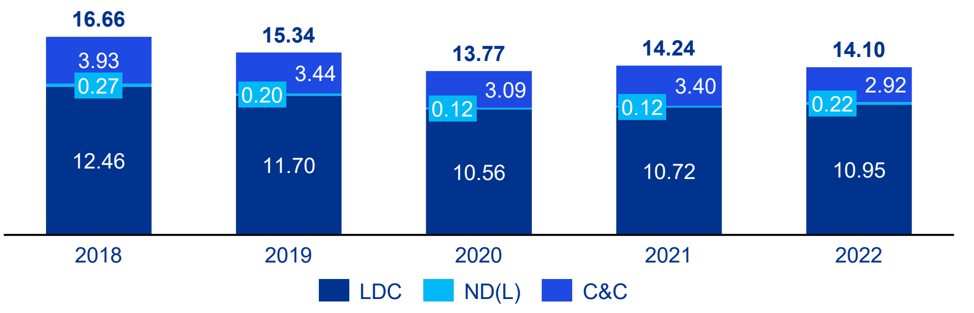
€519m

Total tax revenue lost from C&C

-€85m on 2021

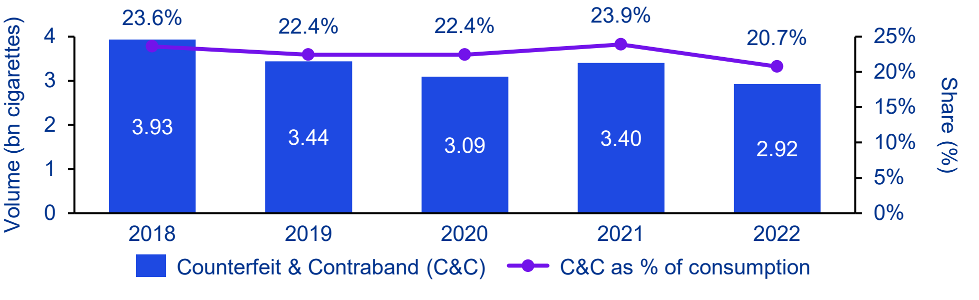
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)[1][2]

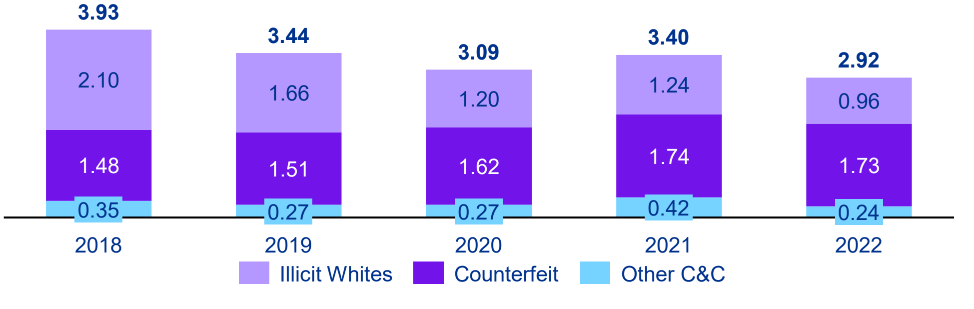


- C&C decreased to 2.92bn cigarettes in 2022, the lowest since 2018, and represented 20.7% of total cigarette consumption
- Counterfeit and Illicit Whites continue to account for the large majority of C&C consumption in Greece
- As in 2021, Greece accounted for the second largest C&C volume in the EU27, after France

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[1][2]



C&C consumption by type – 2018-2022 (bn cigarettes)[1][2][a]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022(1)(2)

Total Greece Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	12.80	12.14	10.94	11.12	11.33	2%
Outflows	(0.34)	(0.44)	(0.38)	(0.40)	(0.38)	(4%)
Legal Domestic Consumption (LDC)	12.46	11.70	10.56	10.72	10.95	2%
Non-Domestic Legal (ND(L))	0.27	0.20	0.12	0.12	0.22	92%
Counterfeit and Contraband (C&C)	3.93	3.44	3.09	3.40	2.92	(14%)
Total Non-Domestic	4.20	3.64	3.21	3.52	3.15	(11%)
Total Consumption	**16.66**	**15.34**	**13.77**	**14.24**	**14.10**	**(1%)**

- Total cigarette consumption decreased by 1%, driven by a decline in C&C partly offset by an increase in legal domestic consumption and Non-Domestic legal inflows
- Inflows to Greece continue to be primarily comprised of Counterfeit and Illicit Whites with no country-specific labelling, which together accounted for ~83% of total inflows in 2022
- Outflows from Greece decreased by 4%
  - Outflows from Greece are principally to countries where Greece is a popular holiday destination, such as Germany, the UK and France

Total inflows by country of origin – 2018-2022(1)(a)

Inflows to Greece					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Counterfeit	1.48	1.51	1.62	1.74	1.73
IWs with no country-specific labelling	2.10	1.61	1.15	1.21	0.90
Other	0.62	0.52	0.45	0.57	0.52
Total Inflows	**4.20**	**3.64**	**3.21**	**3.52**	**3.15**

Total outflows by destination – 2018-2022(1)(a)

Outflows from Greece					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Germany	(0.13)	(0.15)	(0.12)	(0.10)	(0.14)
UK	(0.02)	(0.07)	(0.02)	(0.14)	(0.10)
France	(0.06)	(0.05)	(0.04)	(0.05)	(0.04)
Poland	(0.00)	(0.01)	(0.00)	(0.00)	(0.02)
Other	(0.13)	(0.16)	(0.20)	(0.10)	(0.09)
Total Outflows	**(0.34)**	**(0.44)**	**(0.38)**	**(0.40)**	**(0.38)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data;

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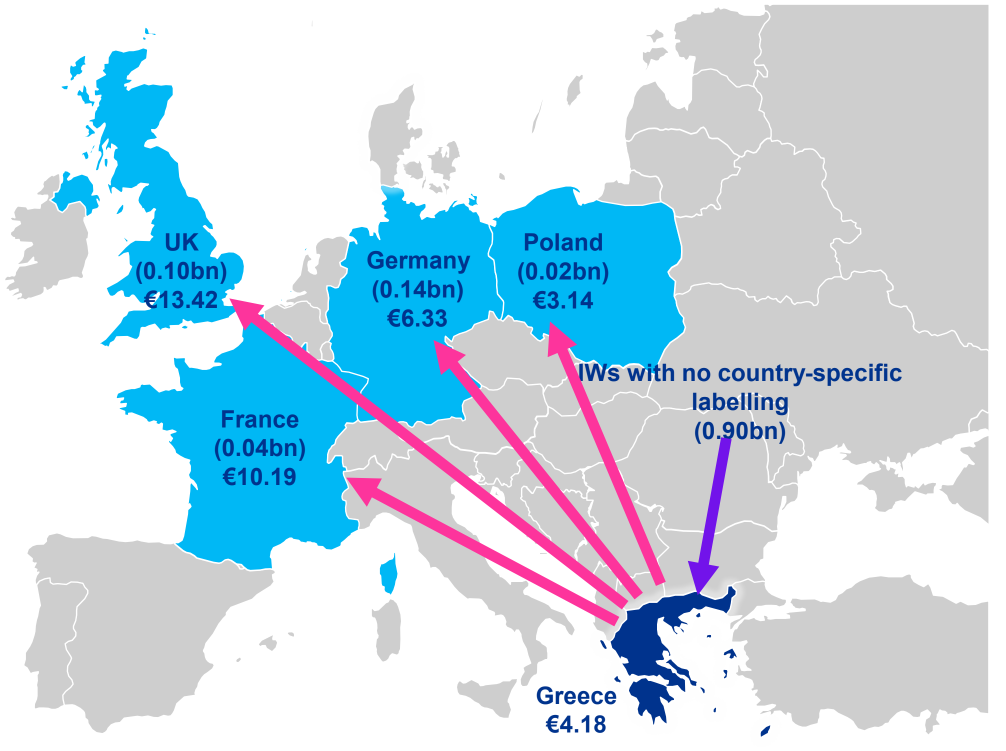
Key flows and C&C consumption patterns

Key inflows and outflows[(1)(a)]

- Greece
- Source
- Destination
- Inflow
- Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



C&C % by region[(1)(b)]

Low High

Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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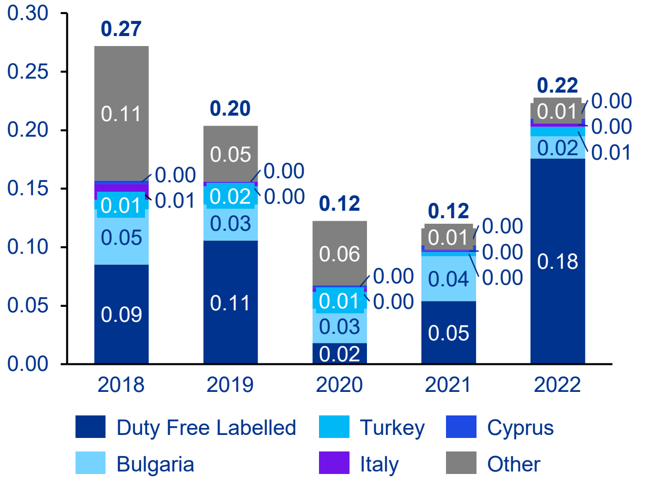
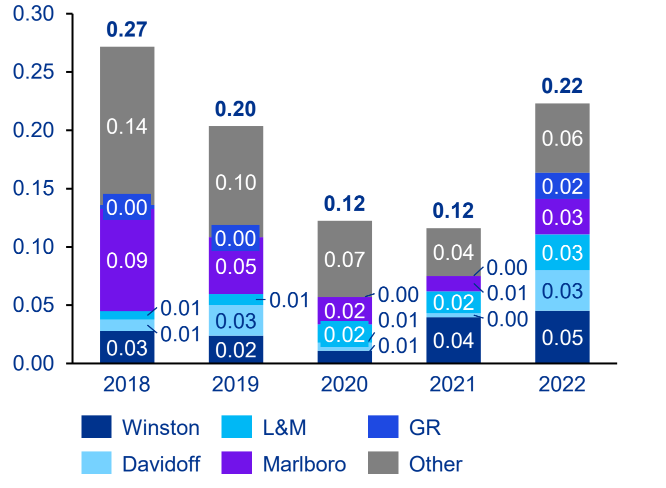
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

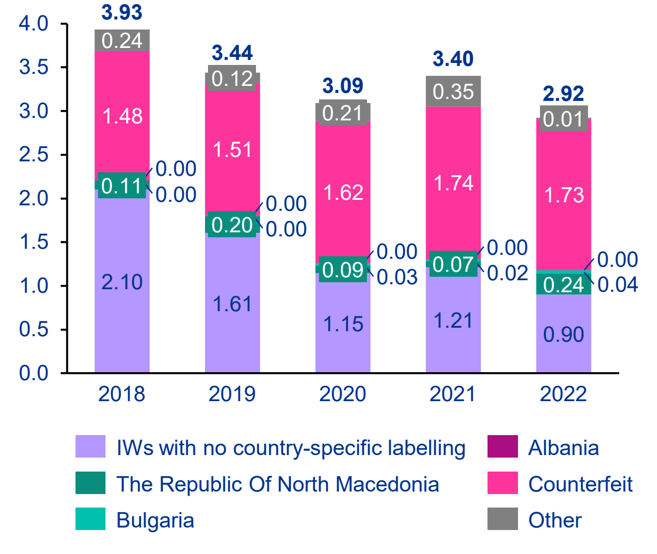


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

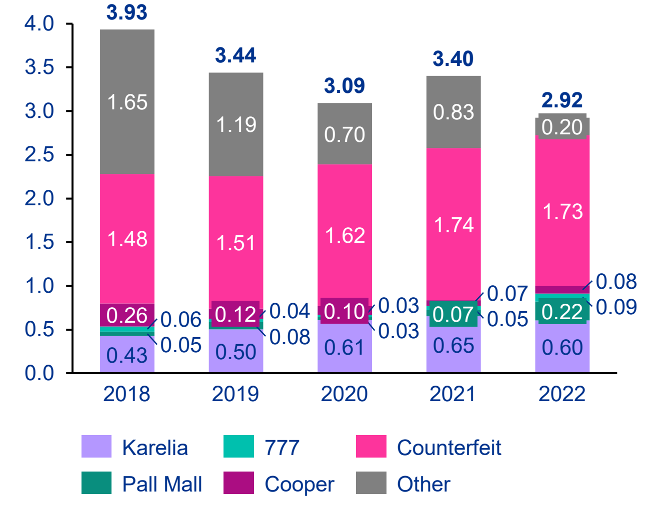


- ND(L) flows increased in 2022, returning to similar levels as those seen in 2019, primarily driven by increased travel volumes
- Duty Free Labelled products increased its share of legal inflows from 47% in 2021 to ~80% in 2022
- Counterfeit, Illicit Whites and illicit inflows from The Republic of North Macedonia accounted for almost all of C&C. Growing illicit flows from The Republic of North Macedonia more than offset declining volumes of Illicit Whites with no country specific labelling and smaller sources within 'Other'

C&C by country of origin – 2018-2022 (bn cigarettes)[1][a]



C&C by brand – 2018-2022 (bn cigarettes)[1][a]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Hungary

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Hungary

7.0bn
Cigarettes consumed

-0.2bn on 2021

0.5bn
C&C cigarettes consumed

+0.2bn on 2021

7.2%
Of total consumption was C&C

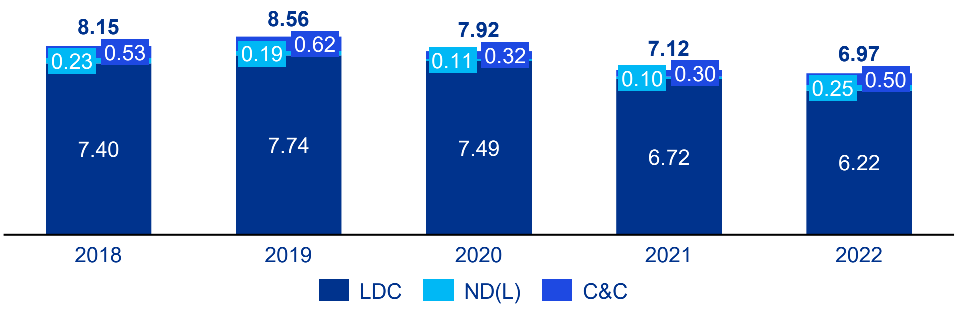
+3.0ppt on 2021

€83m
Total tax revenue lost from C&C

+€35m on 2021

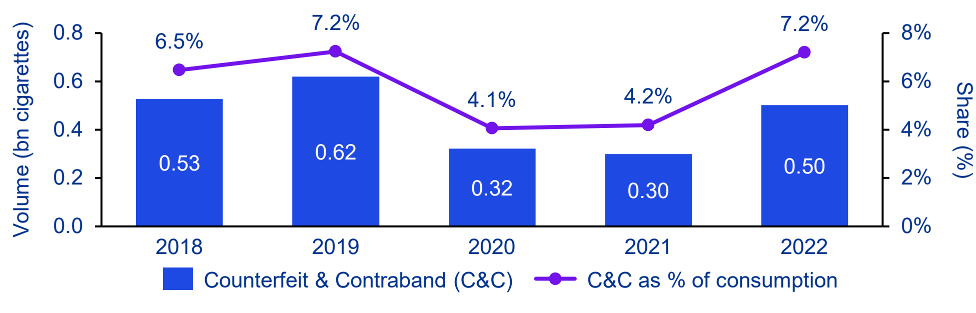
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)[1][2]

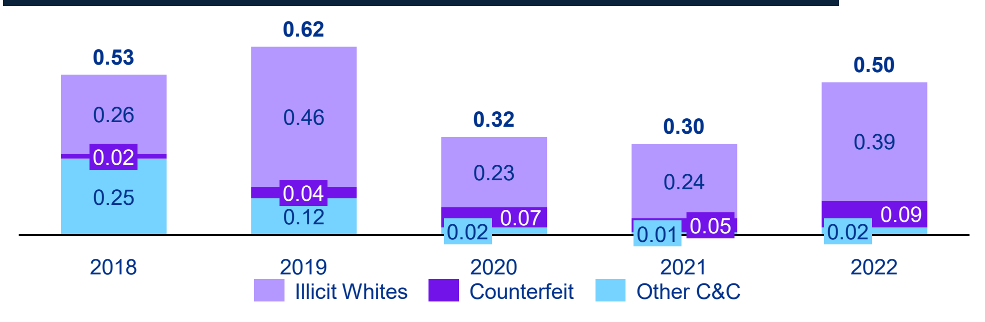


- C&C as a share of total consumption increased by 3ppt to 7.2%, returning to a similar share as that seen in 2019
- This increase in illicit consumption was primarily driven by Illicit Whites inflows and, to a lesser extent, by Counterfeit

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[1][2]



C&C consumption by type – 2018-2022 (bn cigarettes)[1][2][a]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2]

Total Hungary Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	7.99	8.21	7.73	6.88	6.50	(6%)
Outflows	(0.59)	(0.46)	(0.25)	(0.17)	(0.28)	66%
Legal Domestic Consumption (LDC)	7.40	7.74	7.49	6.72	6.22	(7%)
Non-Domestic Legal (ND(L))	0.23	0.19	0.11	0.10	0.25	135%
Counterfeit and Contraband (C&C)	0.53	0.62	0.32	0.30	0.50	68%
Total Non-Domestic	0.76	0.81	0.43	0.40	0.75	85%
Total Consumption	**8.15**	**8.56**	**7.92**	**7.12**	**6.97**	**(2%)**

- Total consumption decreased by 2% in 2022, driven by a decline in Legal Domestic Sales and increasing outflows, partially offset by higher Non-Domestic inflows
- Inflows from all major source markets increased in 2022, with the largest increase coming from Illicit Whites with no country-specific labelling
- Outflows increased by 66% in 2022, reversing the long-term declining trend seen between 2018 and 2021. This increase was primarily driven by higher outflows to Austria and France, which together accounted for ~60% of total outflows

Total inflows by country of origin – 2018-2022[1][a]

Inflows to Hungary					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
IWs with no country-specific labelling	0.29	0.44	0.16	0.21	0.37
Counterfeit	0.02	0.04	0.07	0.05	0.09
Duty Free Labelled	0.03	0.02	0.02	0.01	0.03
Slovakia	0.01	0.01	0.01	0.01	0.03
Austria	0.02	0.01	0.01	0.01	0.03
Other	0.39	0.29	0.17	0.12	0.21
Total Inflows	**0.76**	**0.81**	**0.43**	**0.40**	**0.75**

Total outflows by destination – 2018-2022[1][a]

Outflows from Hungary					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Austria	(0.24)	(0.23)	(0.14)	(0.06)	(0.11)
France	(0.03)	(0.02)	(0.01)	(0.03)	(0.06)
Germany	(0.11)	(0.07)	(0.04)	(0.02)	(0.03)
Slovenia	(0.03)	(0.00)	(0.01)	(0.00)	(0.02)
Other	(0.17)	(0.14)	(0.04)	(0.04)	(0.05)
Total Outflows	**(0.59)**	**(0.46)**	**(0.25)**	**(0.17)**	**(0.28)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data;

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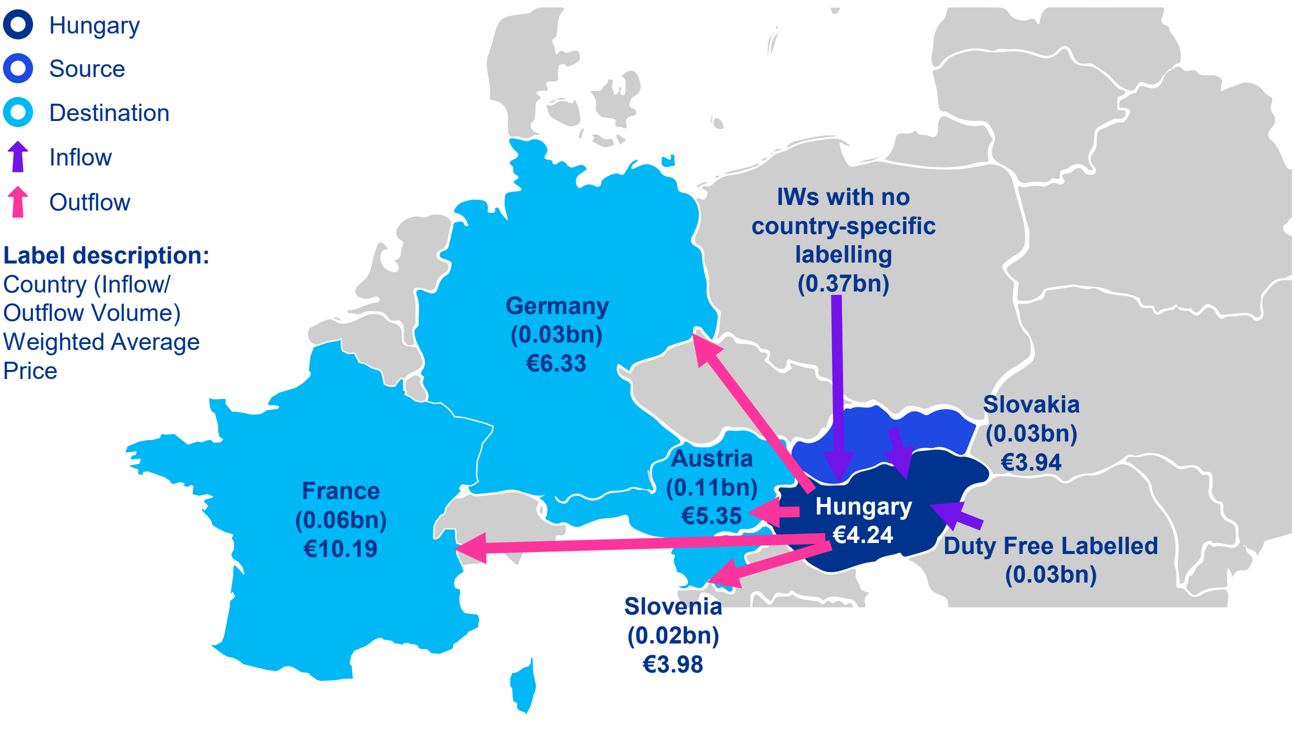
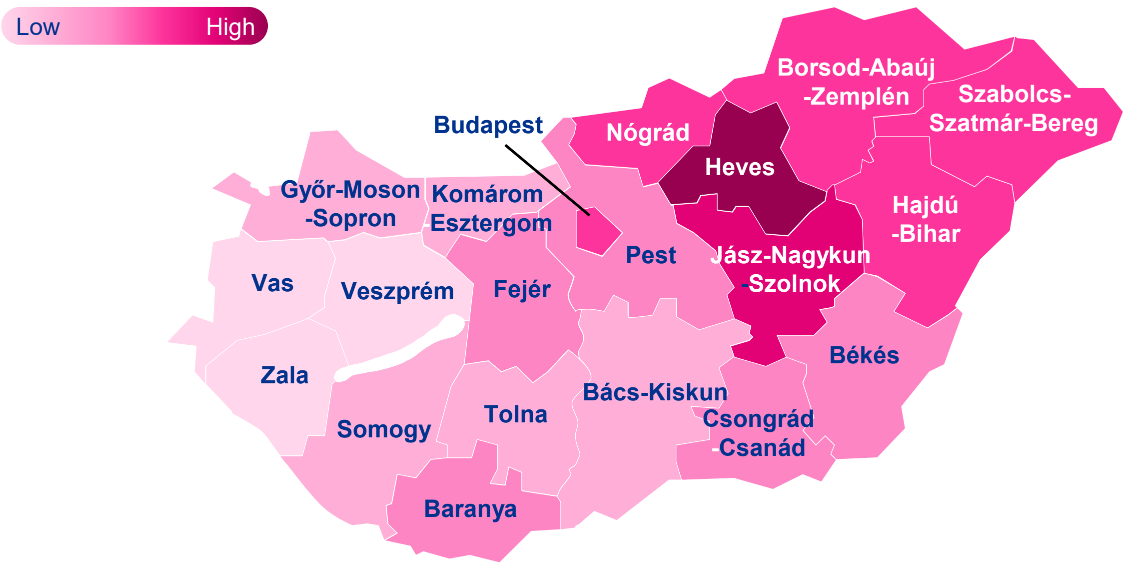
Key flows and C&C consumption patterns

Key inflows and outflows[1][a]



C&C % by region[1][b][c]



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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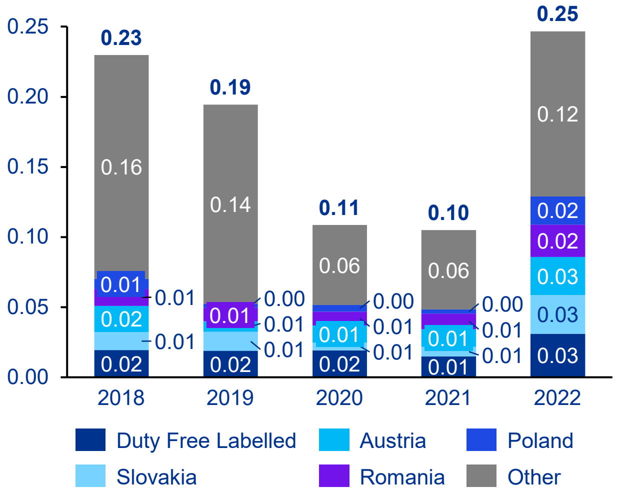
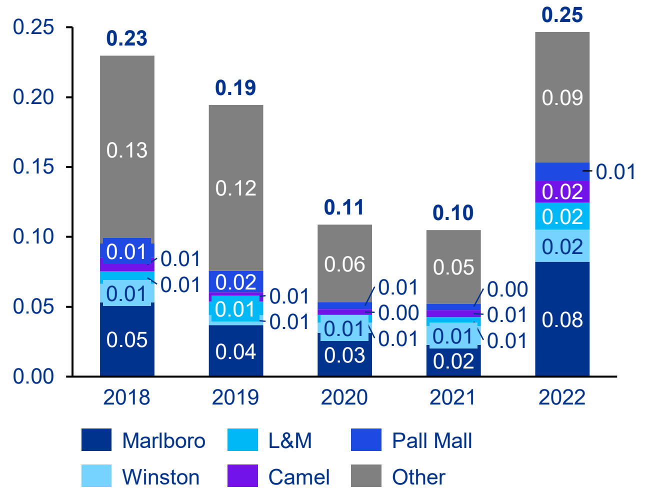
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

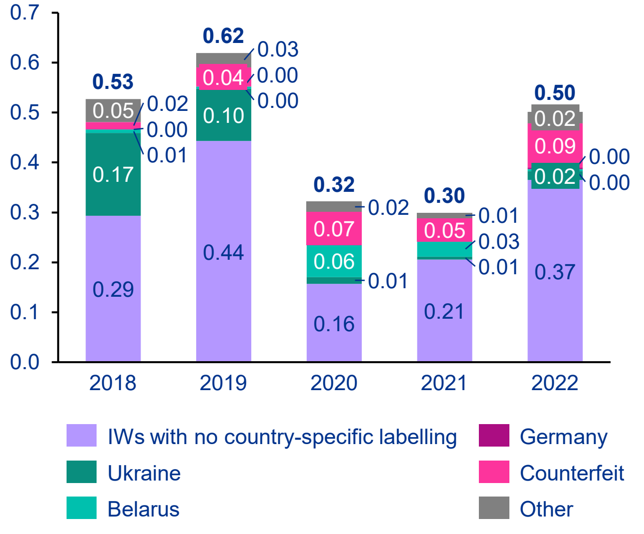


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

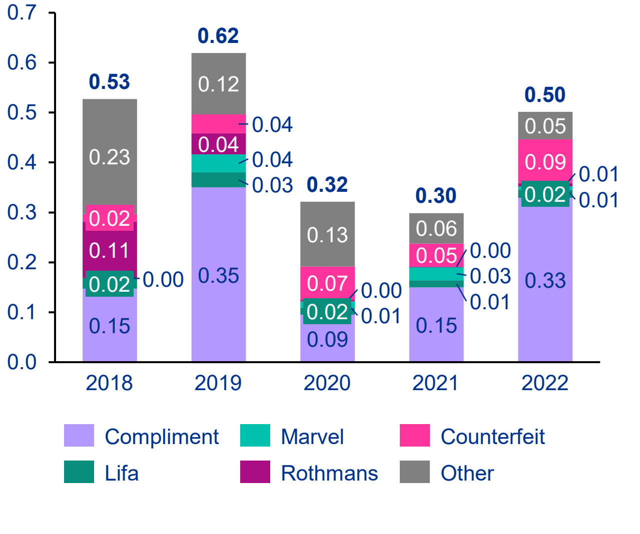


- Non domestic legal (ND(L)) inflows increased by 0.15bn (~135%), returning to similar levels as seen in 2018, with increased inflows from all major source markets as well as smaller markets grouped together within 'Other'
- Increased C&C consumption in 2022 was primarily driven by higher inflows of Illicit Whites with no country-specific labelling and, to a lesser extent, Counterfeit
- Flows of 'Compliment' continued to remain the most prevalent illicit brand flow in 2022, accounting for ~66% of all C&C inflows

C&C by country of origin – 2018-2022 (bn cigarettes)[1][a]



C&C by brand – 2018-2022 (bn cigarettes)[1][a]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Ireland

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C&C cigarette consumption and total consumption

3.3bn

Cigarettes consumed

+0.1bn on 2021

0.8bn

C&C cigarettes consumed

+0.3bn on 2021

24.4%

Of total consumption was C&C

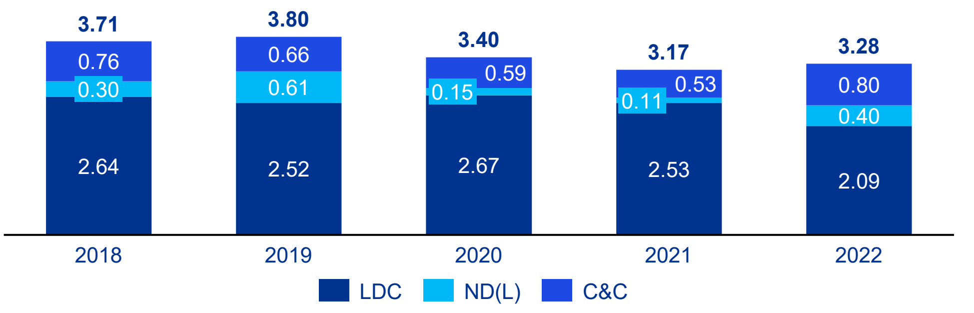
+7.6ppt on 2021

€455m

Total tax revenue lost from C&C

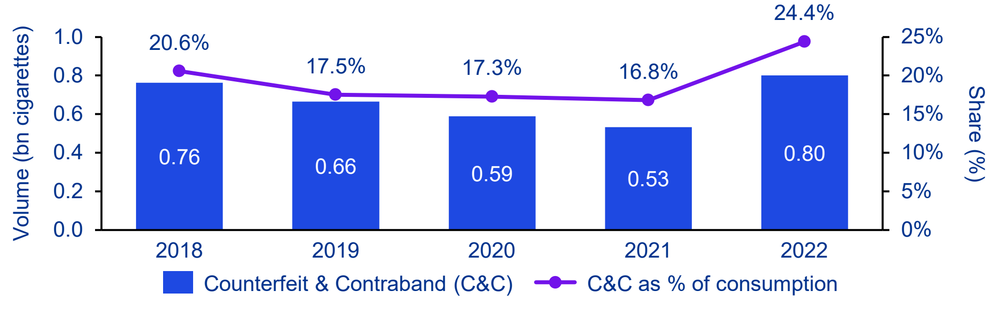
+€171m on 2021

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

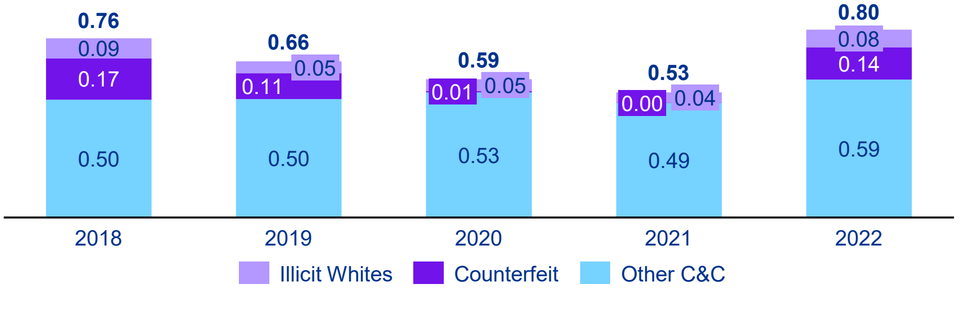


- C&C increased to 24.4% of total consumption in 2022, the highest level observed during the reporting period, with an increase in flows of Illicit Whites, Counterfeit and Other C&C

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022(1)(2)

Total Ireland Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	2.75	2.55	2.70	2.54	2.16	(15%)
Outflows	(0.11)	(0.03)	(0.03)	(0.01)	(0.08)	737%
Legal Domestic Consumption (LDC)	2.64	2.52	2.67	2.53	2.09	(17%)
Non-Domestic Legal (ND(L))	0.30	0.61	0.15	0.11	0.40	271%
Counterfeit and Contraband (C&C)	0.76	0.66	0.59	0.53	0.80	50%
Total Non-Domestic	1.07	1.27	0.73	0.64	1.20	87%
Total Consumption	**3.71**	**3.80**	**3.40**	**3.17**	**3.28**	**4%**

- Total cigarette consumption increased by 4% in 2022, with increased inflows more than offsetting a decline in legal domestic consumption
- Inflows from all major source markets increased in 2022, with the largest increases from Duty Free Labelled, Counterfeit, and Romania
- Outflows increased by 0.07bn in 2022, returning to similar levels as that seen in 2018, with UK remaining the primary destination market

Total inflows by country of origin – 2018-2022(1)(a)

Inflows to Ireland					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Romania	0.17	0.11	0.19	0.15	0.26
Duty Free Labelled	0.14	0.14	0.08	0.07	0.23
Counterfeit	0.17	0.11	0.01	0.00	0.14
Poland	0.10	0.06	0.09	0.05	0.09
Spain	0.05	0.12	0.02	0.01	0.07
Other	0.43	0.73	0.34	0.36	0.41
Total Inflows	**1.07**	**1.27**	**0.73**	**0.64**	**1.20**

Total outflows by destination – 2018-2022(1)(a)

Outflows from Ireland					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
UK	(0.07)	(0.01)	0.00	(0.01)	(0.06)
Other	(0.04)	(0.02)	(0.03)	(0.00)	(0.02)
Total Outflows	**(0.11)**	**(0.03)**	**(0.03)**	**(0.01)**	**(0.08)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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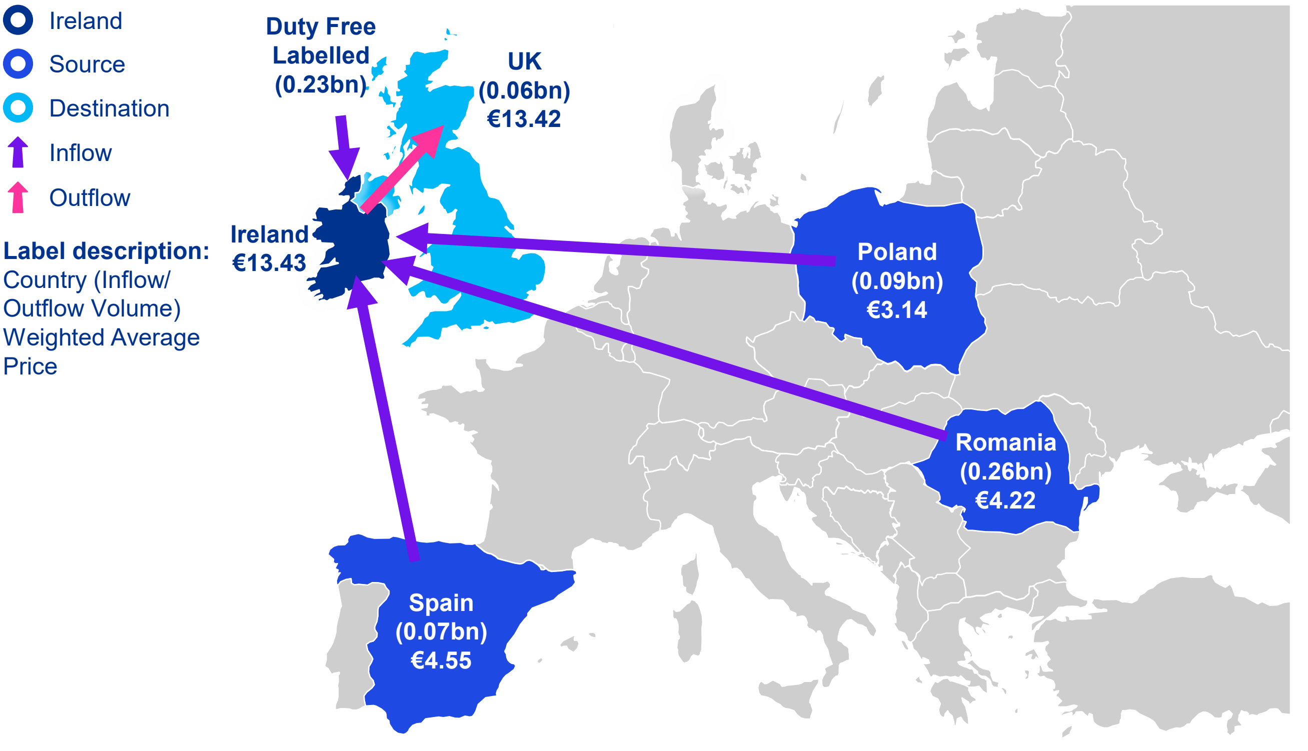
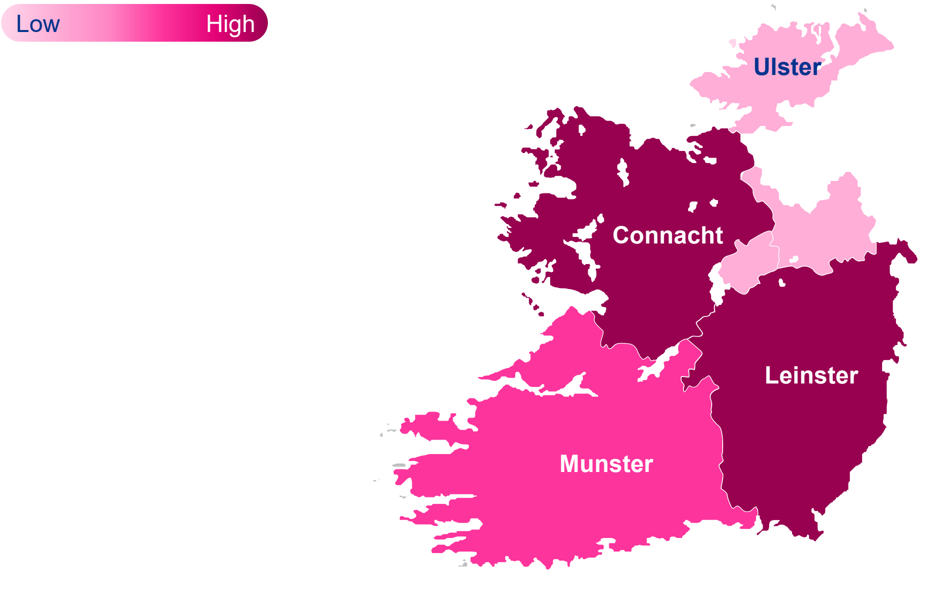
Key flows and C&C consumption patterns

Key inflows and outflows[(1)(a)]



C&C % by region[(1)(b)(c)]



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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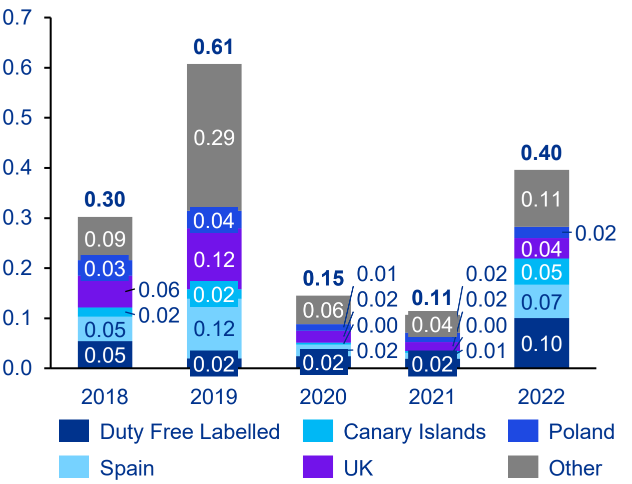
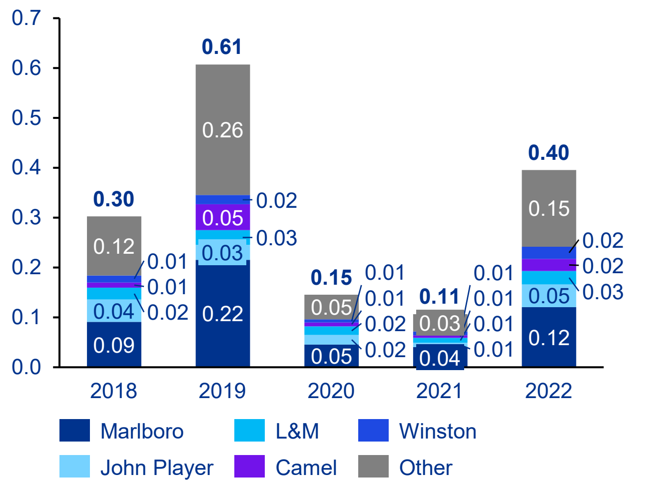
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[(1)]

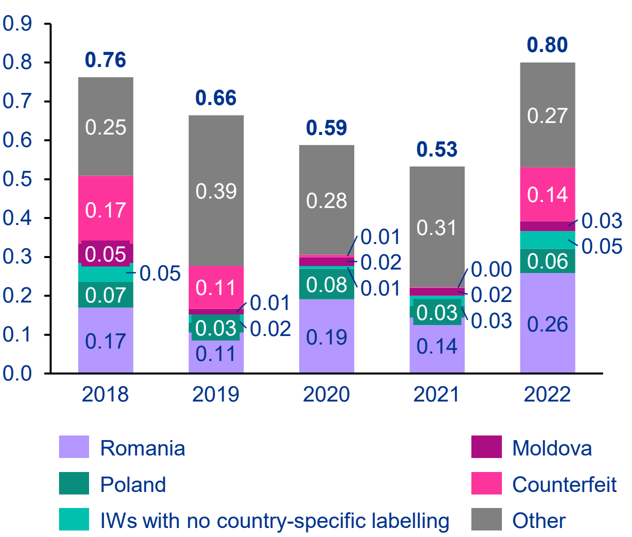


ND(L) by brand – 2018-2022 (bn cigarettes)[(1)]

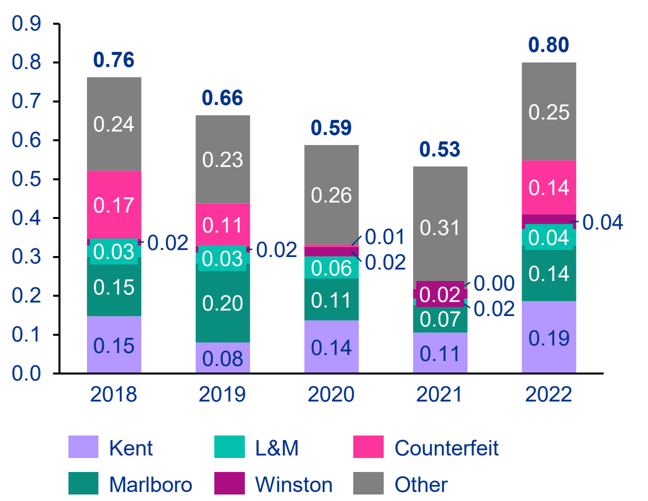


- ND(L) inflows increased to 0.4bn sticks in 2022, returning to volumes more in line with pre-pandemic levels. There were higher inflows from Duty Free Labelled, Spain and the Canary Islands, as well as inflows from a number of smaller markets grouped together under 'Other'
- Total illicit inflows increased by 0.27bn in 2022, with the largest increases from Romanian and Counterfeit inflows

C&C by country of origin – 2018-2022 (bn cigarettes)[(1)(a)]



C&C by brand – 2018-2022 (bn cigarettes)[(1)(a)]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Italy

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C&C cigarette consumption and total consumption

61.7bn

Cigarettes consumed

-0.8bn on 2021

1.4bn

C&C cigarettes consumed

+0.1bn on 2021

2.3%

Of total consumption was C&C

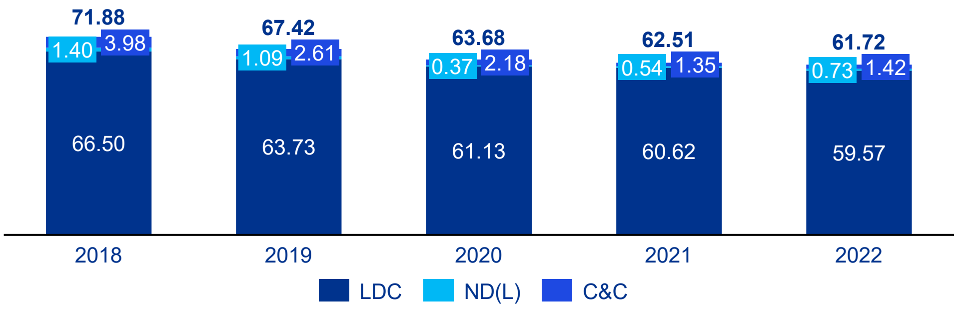
+0.1ppt on 2021

€288m

Total tax revenue lost from C&C

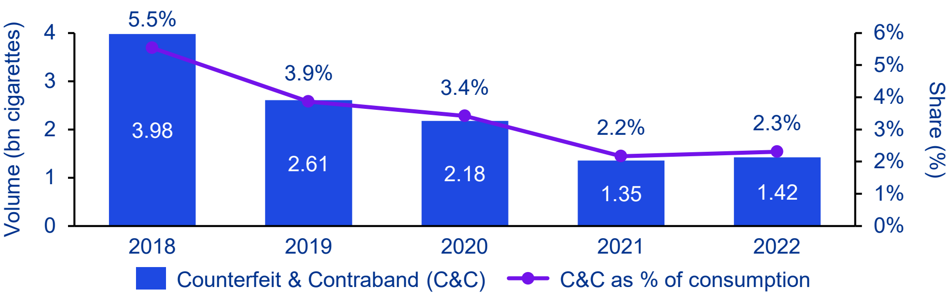
+€16m on 2021

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

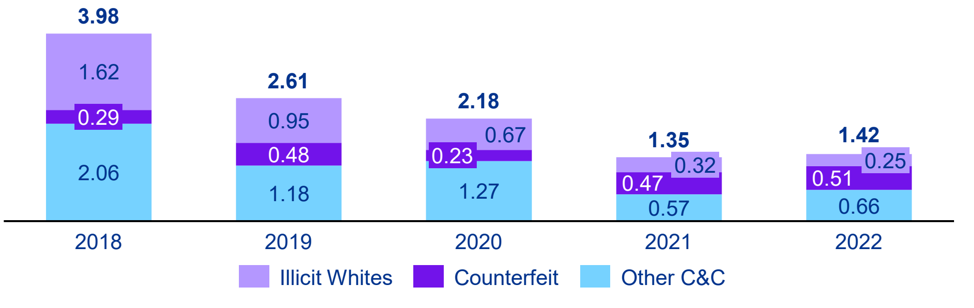


- C&C formed 2.3% of total consumption in 2022. The increase in Other C&C and Counterfeit consumption was offset by a decline in Illicit Whites

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Italy Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	67.46	64.63	61.74	61.11	60.22	(1%)
Outflows	(0.97)	(0.90)	(0.61)	(0.49)	(0.65)	34%
Legal Domestic Consumption (LDC)	66.50	63.73	61.13	60.62	59.57	(2%)
Non-Domestic Legal (ND(L))	1.40	1.09	0.37	0.54	0.73	36%
Counterfeit and Contraband (C&C)	3.98	2.61	2.18	1.35	1.42	5%
Total Non-Domestic	5.38	3.70	2.55	1.89	2.15	14%
Total Consumption	**71.88**	**67.42**	**63.68**	**62.51**	**61.72**	**(1%)**

- Total cigarette consumption declined by 1% in 2022, continuing the trend seen since 2017. A 2% fall in legal domestic consumption was partially offset by a 14% increase in Non-Domestic inflows
- Inflows from all major origins increased, with the exception of IWs with no country-specific labelling. Counterfeit was the largest source of inflows to Italy, increasing to 0.51bn, the highest level observed during the reporting period
- Outflows increased by 34%, primarily driven by higher flows to Germany, the Netherlands and smaller outflows grouped under the 'Other' category

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Italy					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Counterfeit	0.29	0.48	0.23	0.47	0.51
Slovenia	0.18	0.41	0.45	0.32	0.46
Duty Free Labelled	0.77	0.68	0.45	0.25	0.34
IWs with no country-specific labelling	1.60	0.82	0.60	0.27	0.18
Albania	0.08	0.08	0.09	0.06	0.08
Other	2.46	1.23	0.72	0.52	0.58
Total Inflows	**5.38**	**3.70**	**2.55**	**1.89**	**2.15**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from Italy					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
France	(0.33)	(0.38)	(0.31)	(0.18)	(0.19)
Germany	(0.16)	(0.10)	(0.08)	(0.08)	(0.11)
Netherlands	(0.14)	(0.07)	(0.06)	(0.02)	(0.07)
Switzerland	(0.10)	(0.06)	(0.03)	(0.07)	(0.07)
Other	(0.24)	(0.29)	(0.13)	(0.14)	(0.21)
Total Outflows	**(0.97)**	**(0.90)**	**(0.61)**	**(0.49)**	**(0.65)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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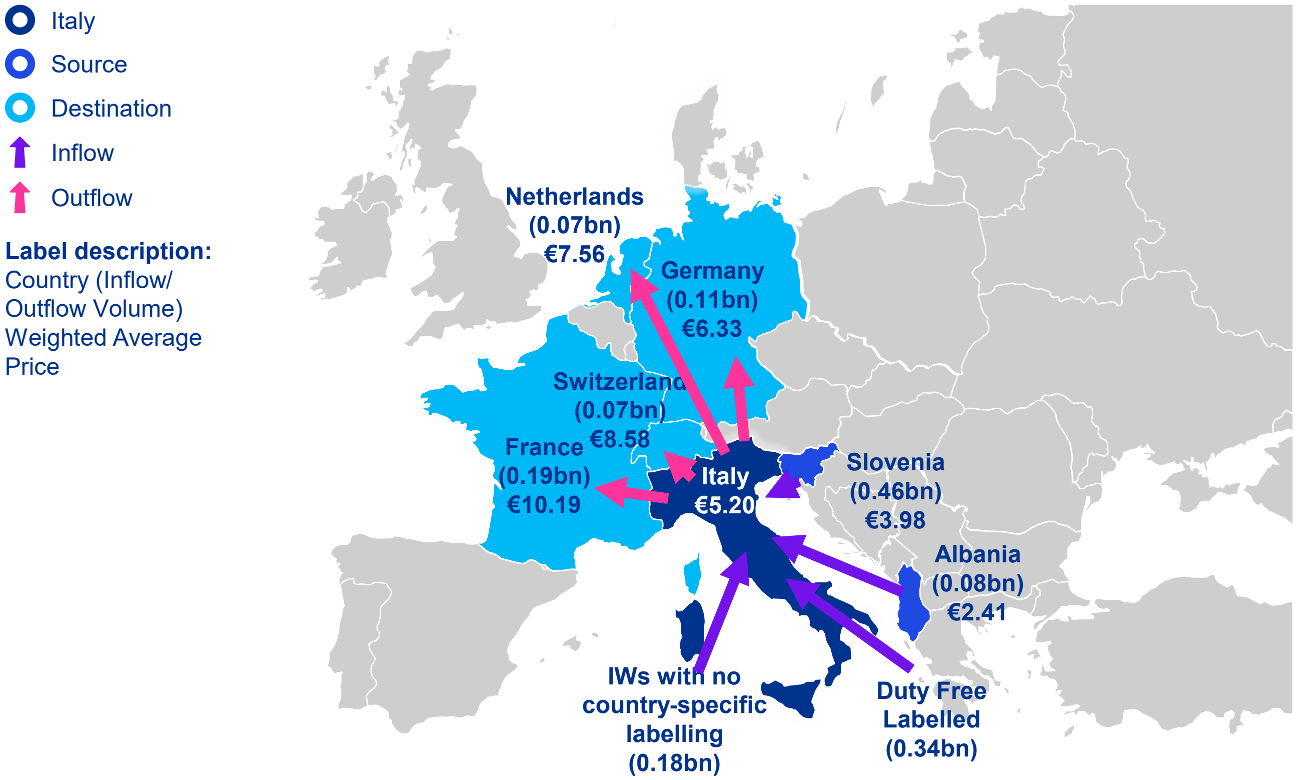
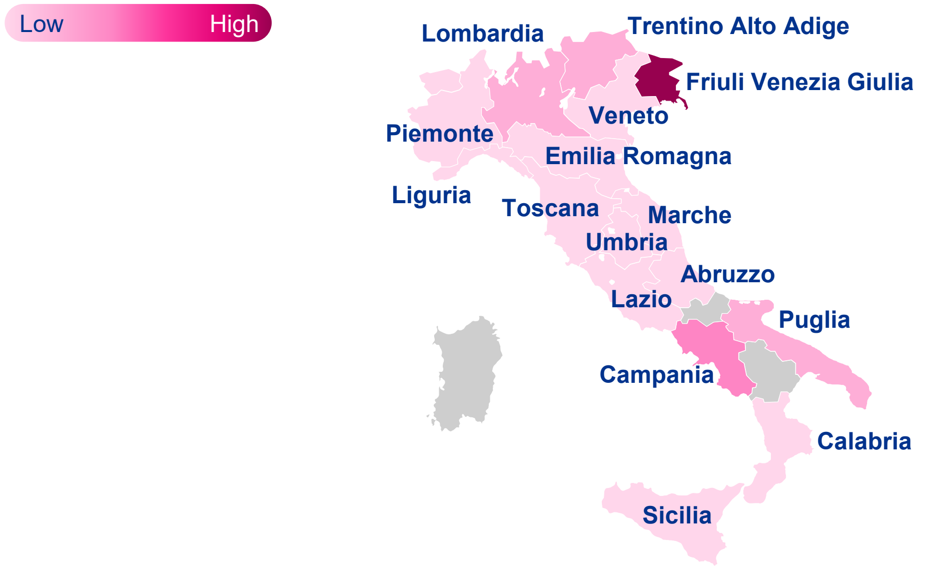
Key flows and C&C consumption patterns

Key inflows and outflows[1][a]



C&C % by region[1][b][c]



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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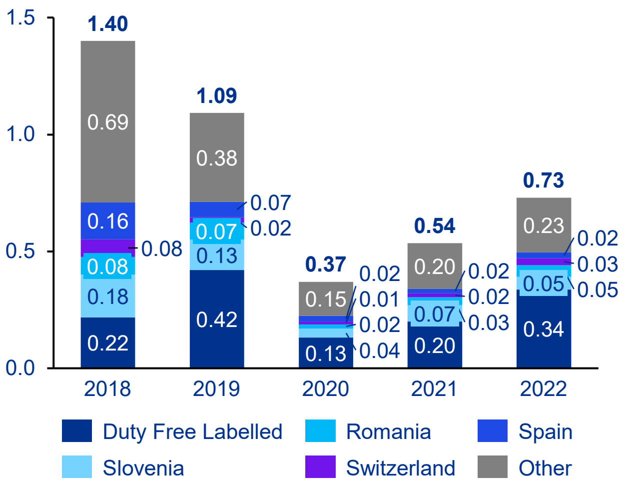
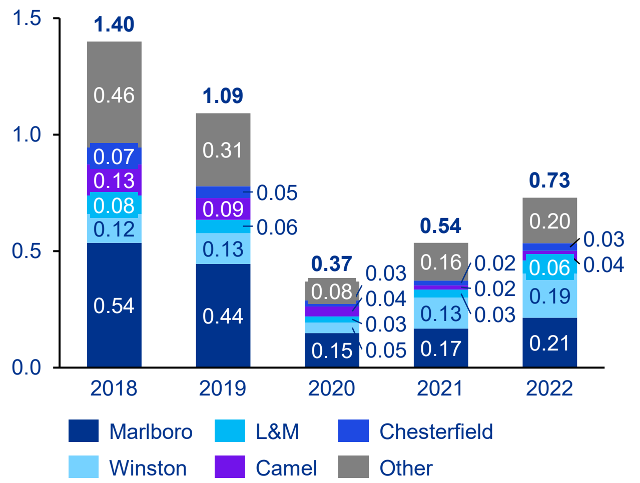
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[(1)]

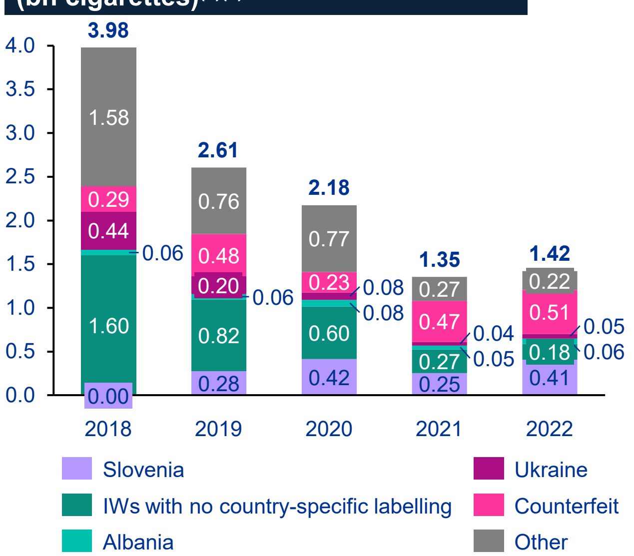


ND(L) by brand – 2018-2022 (bn cigarettes)[(1)]

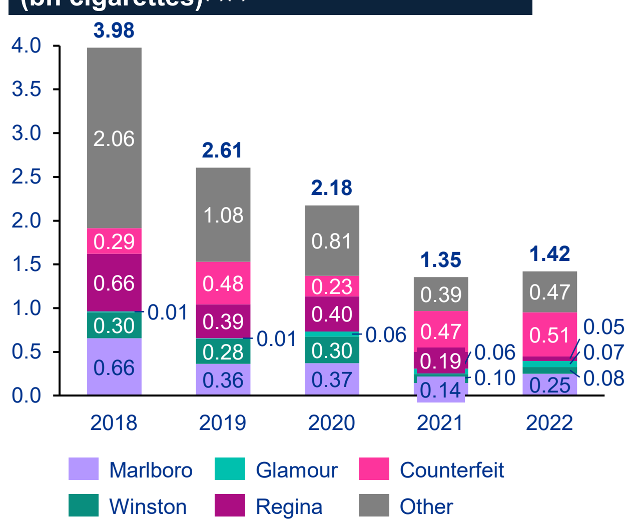


- ND(L) flows increased by 36% against the backdrop of higher travel volumes in 2022, but remained below pre-pandemic levels
- Illicit flows from the top five origins (including Counterfeit) formed 85% of total C&C in 2022. Illicit inflows from Slovenia saw the largest increase (up by 60%)

C&C by country of origin – 2018-2022 (bn cigarettes)[(1)(a)]



C&C by brand – 2018-2022 (bn cigarettes)[(1)(a)]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Latvia

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Latvia

2.0bn

Cigarettes consumed

+0.02bn on 2021

0.3bn

C&C cigarettes consumed

-0.02bn on 2021

15.2%

Of total consumption was C&C

-1.0ppt on 2021

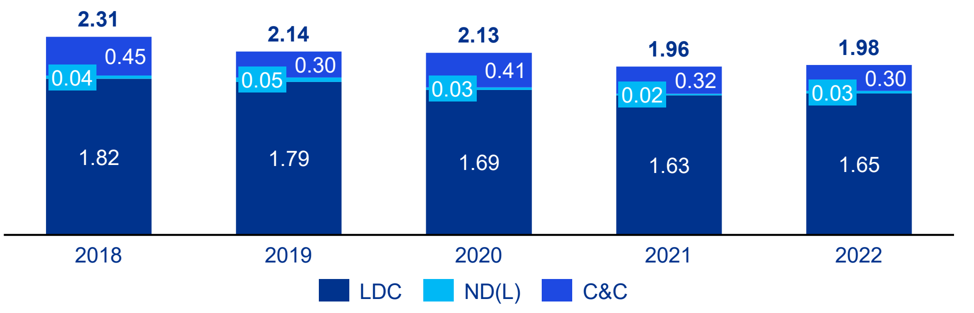
€48m

Total tax revenue lost from C&C

-€0.3m on 2021

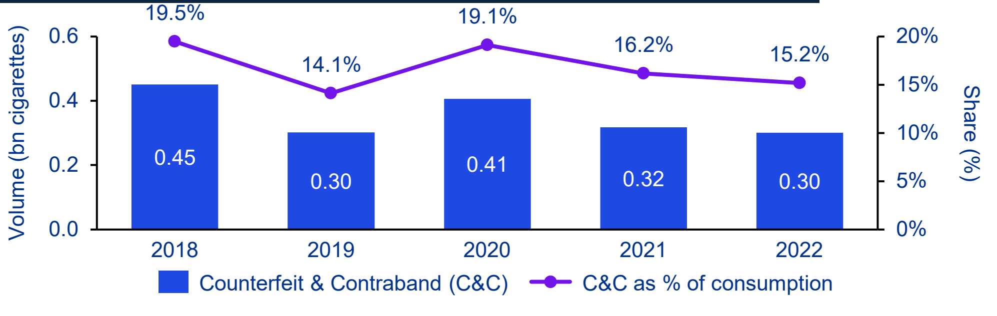
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)[1][2]

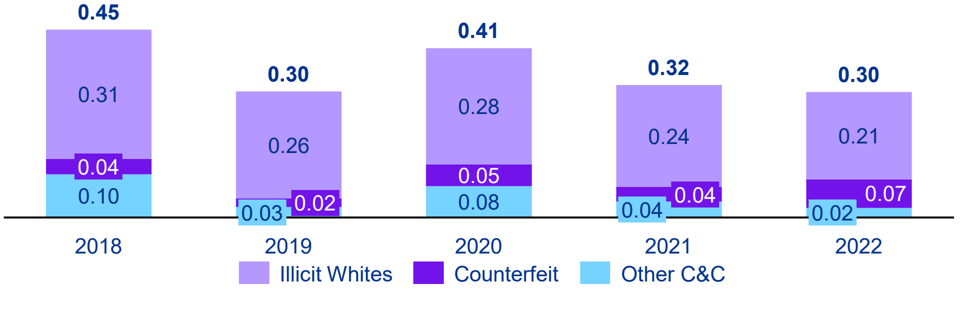


- C&C as a share of total consumption declined by 1ppt in 2022 to 15.2%. The declines in Illicit Whites and Other C&C was partly offset by an increase in Counterfeit volumes

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[1][2]



C&C consumption by type – 2018-2022 (bn cigarettes)[1][2][a]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2][b]

Total Latvia Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	1.94	1.90	1.80	1.80	1.85	2%
Outflows	(0.12)	(0.12)	(0.11)	(0.18)	(0.20)	12%
Legal Domestic Consumption (LDC)	1.82	1.79	1.69	1.63	1.65	1%
Non-Domestic Legal (ND(L))	0.04	0.05	0.03	0.02	0.03	82%
Counterfeit and Contraband (C&C)	0.45	0.30	0.41	0.32	0.30	(5%)
Total Non-Domestic	0.49	0.35	0.43	0.34	0.33	(1%)
Total Consumption	**2.31**	**2.14**	**2.13**	**1.96**	**1.98**	**1%**

- Total consumption increased by 1% in 2022. An increase in legal domestic consumption was partly offset by reduced Non-Domestic inflows
- Non-Domestic inflows remained relatively stable at 0.33bn in 2022. The decline in inflows from Belarus was offset by an increase in Counterfeit flows
- Outflows in 2022 were the highest in the reporting period, driven by larger flows to Finland

Total inflows by country of origin – 2018-2022[1][a]

Inflows to Latvia					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Belarus	0.32	0.27	0.29	0.25	0.22
Counterfeit	0.04	0.02	0.05	0.04	0.07
Other	0.13	0.06	0.09	0.05	0.05
Total Inflows	**0.49**	**0.35**	**0.43**	**0.34**	**0.33**

Total outflows by destination – 2018-2022[1][a]

Outflows from Latvia					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Finland	(0.02)	(0.02)	(0.03)	(0.05)	(0.08)
Sweden	(0.01)	(0.04)	(0.01)	(0.05)	(0.05)
Germany	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
Lithuania	(0.01)	(0.00)	(0.00)	(0.00)	(0.01)
Estonia	(0.03)	(0.01)	(0.02)	(0.01)	(0.01)
Other	(0.05)	(0.03)	(0.03)	(0.06)	(0.04)
Total Outflows	**(0.12)**	**(0.12)**	**(0.11)**	**(0.18)**	**(0.20)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows (b) Latvia LDS has been calculated using State Revenue Service data. In 2021, Latvia IMS was 1.748bn vs State Revenue Service data of 1.804bn;

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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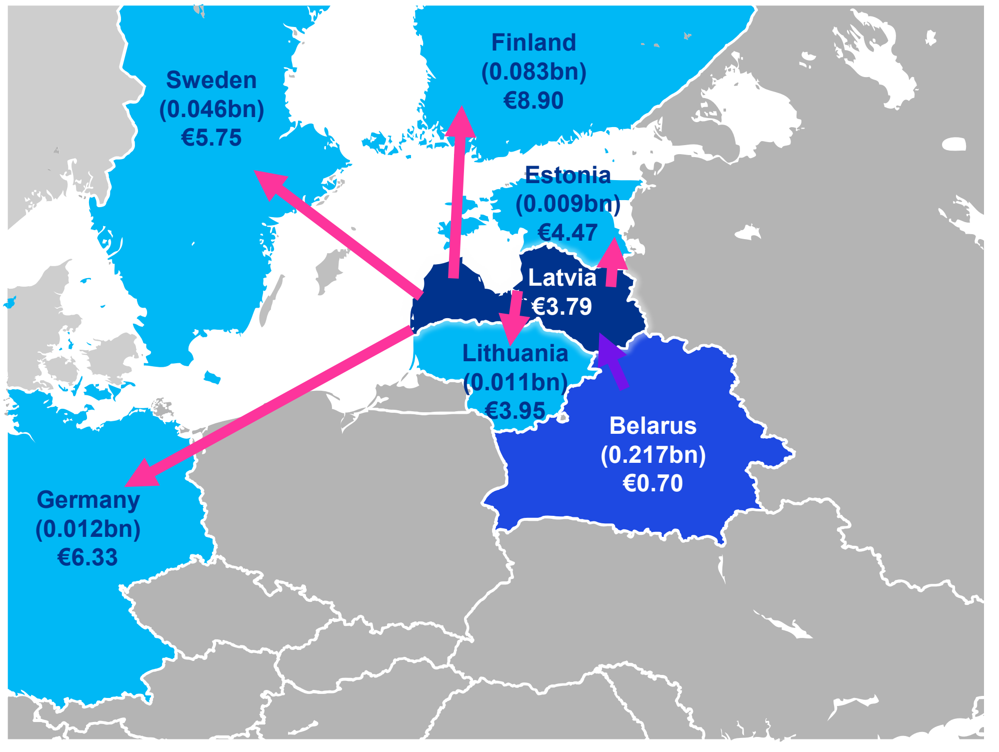
Key flows and C&C consumption patterns

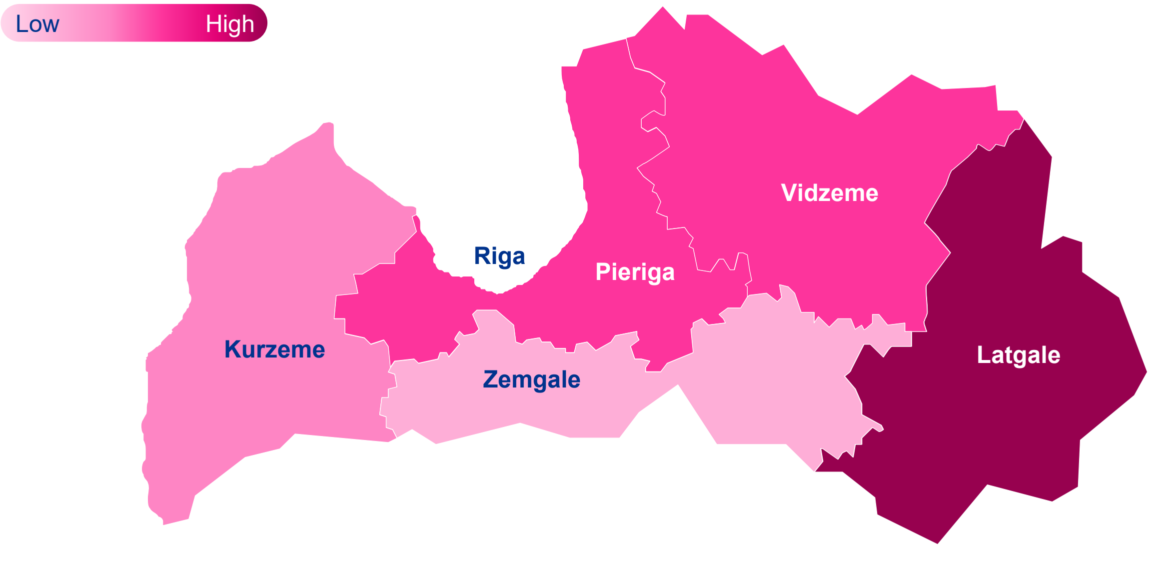
Key inflows and outflows(1)(a)

- Latvia
- Source
- Destination
- Inflow
- Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



C&C % by region(1)(b)(c)



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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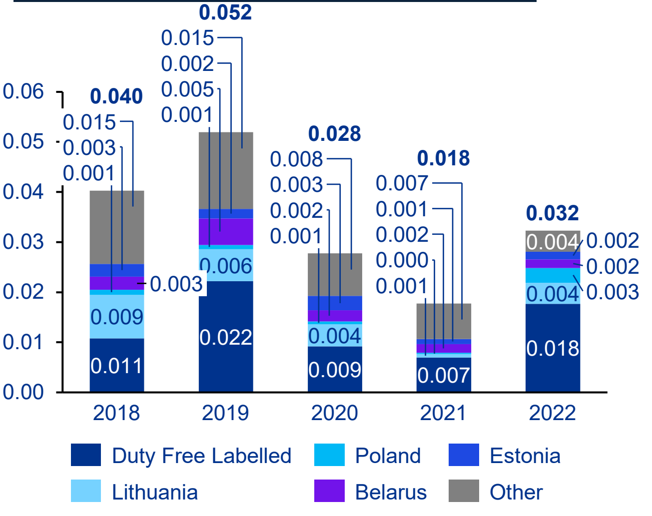
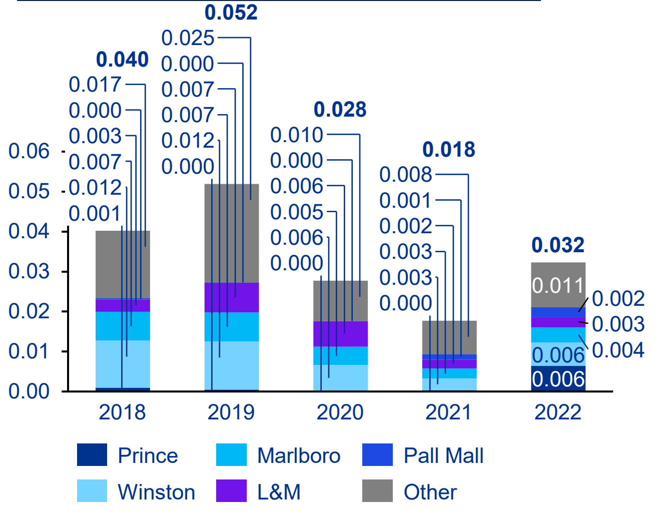
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

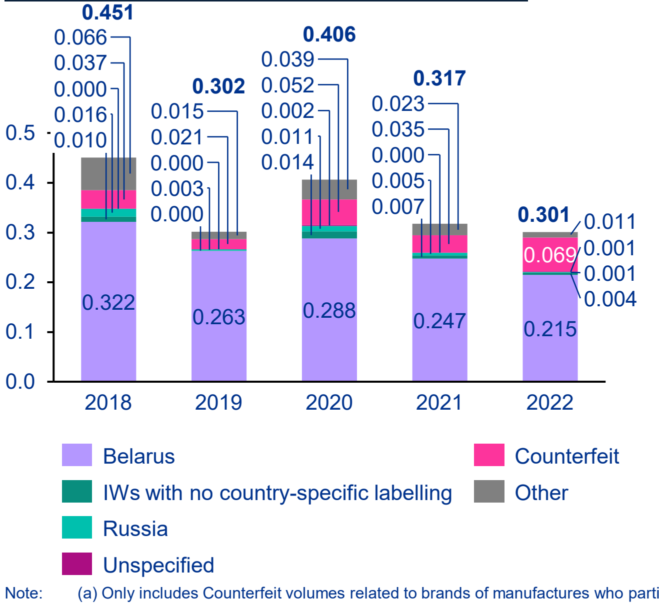


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

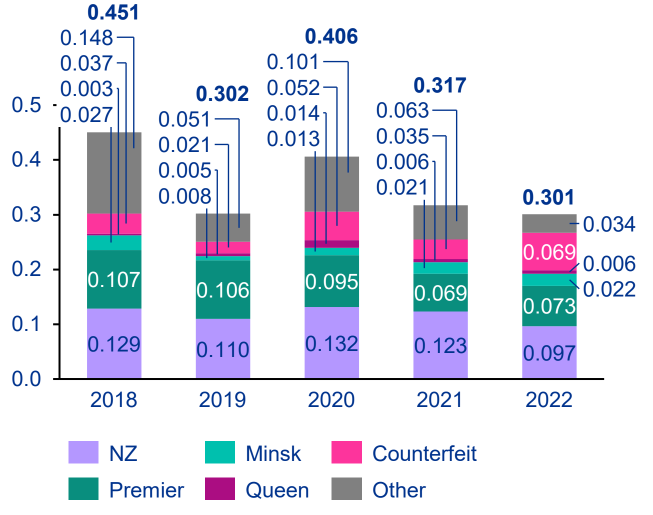


- ND(L) consumption increased as cross border travel volumes started to recover following the relaxation of COVID-19 related travel restrictions
- The majority of inflows from Belarus are considered illicit as volumes that can be legally imported from the country are relatively low due to a 40 cigarette limit per land traveller
- Counterfeit consumption was 0.07bn in 2022; the highest level observed during the reporting period
- The highest incidence of C&C was observed in the Latgale region bordering Belarus and Russia

C&C by country of origin – 2018-2022 (bn cigarettes)[1](a)



C&C by brand – 2018-2022 (bn cigarettes)[1](a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022

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Document Classification: KPMG Public

Lithuania

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C&C cigarette consumption and total consumption

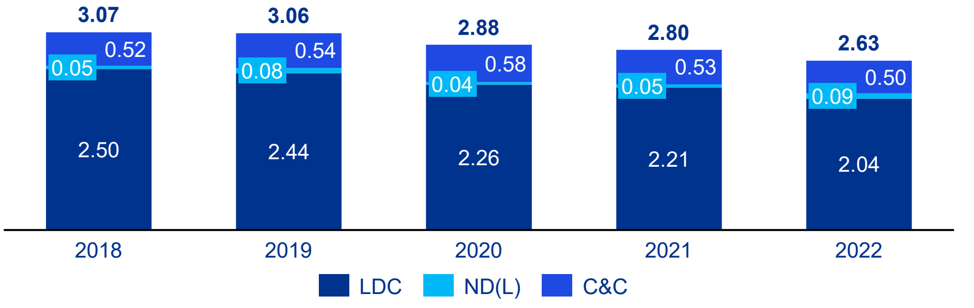
2.6bn
Cigarettes consumed
-0.2bn on 2021

0.5bn
C&C cigarettes consumed
-0.03bn on 2021

19.2%
Of total consumption was C&C
+0.2ppt on 2021

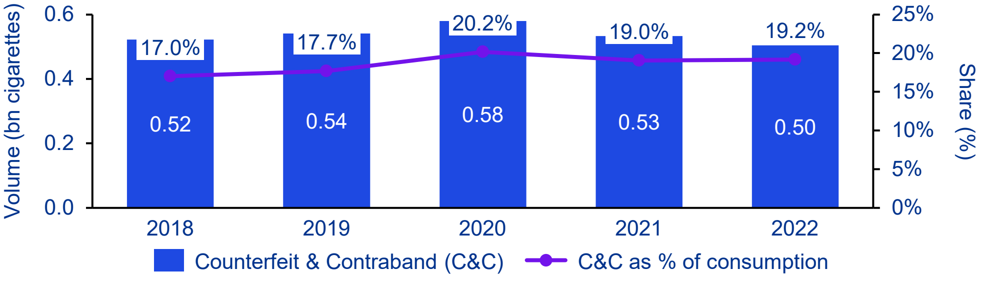
€80m
Total tax revenue lost from C&C
+€0.3m on 2021

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

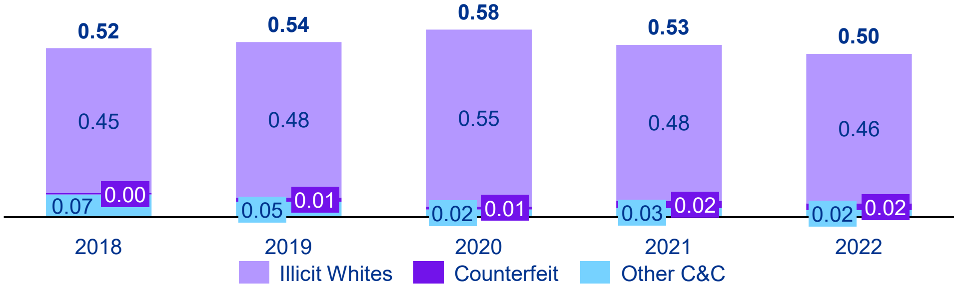


- C&C formed 19.2% of cigarette consumption in 2022 and remains higher than pre-pandemic C&C incidence levels. However, volumes of C&C have declined
- Illicit Whites accounted for over 90% of total C&C

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2]

Total Lithuania Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	2.79	2.68	2.41	2.36	2.19	(7%)
Outflows	(0.29)	(0.24)	(0.16)	(0.15)	(0.15)	4%
Legal Domestic Consumption (LDC)	2.50	2.44	2.26	2.21	2.04	(8%)
Non-Domestic Legal (ND(L))	0.05	0.08	0.04	0.05	0.09	71%
Counterfeit and Contraband (C&C)	0.52	0.54	0.58	0.53	0.50	(5%)
Total Non-Domestic	0.57	0.62	0.62	0.58	0.59	1%
Total Consumption	**3.07**	**3.06**	**2.88**	**2.80**	**2.63**	**(6%)**

- Total consumption declined by 6% in 2022, driven by a decline in Legal Domestic Sales
- Total inflows remained stable in 2022 with declining inflows from Belarus being offset by increasing inflows from smaller markets grouped under 'Other'
  - Belarus accounted for 77% of the total inflows in 2022, down from 83% in 2021
- Outflows from Lithuania have remained stable at 0.15bn, maintaining the trend observed since 2020

Total inflows by country of origin – 2018-2022[1][a]

Inflows to Lithuania					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Belarus	0.46	0.49	0.55	0.49	0.46
Other	0.11	0.14	0.07	0.10	0.13
Total Inflows	**0.57**	**0.62**	**0.62**	**0.58**	**0.59**

Total outflows by destination – 2018-2022[1][a]

Outflows from Lithuania					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Germany	(0.03)	(0.04)	(0.03)	(0.05)	(0.06)
Ireland	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)
Norway	(0.05)	(0.05)	(0.02)	(0.03)	(0.02)
UK	(0.11)	(0.07)	(0.02)	(0.01)	(0.01)
Denmark	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)
Other	(0.07)	(0.06)	(0.06)	(0.03)	(0.04)
Total Outflows	**(0.29)**	**(0.24)**	**(0.16)**	**(0.15)**	**(0.15)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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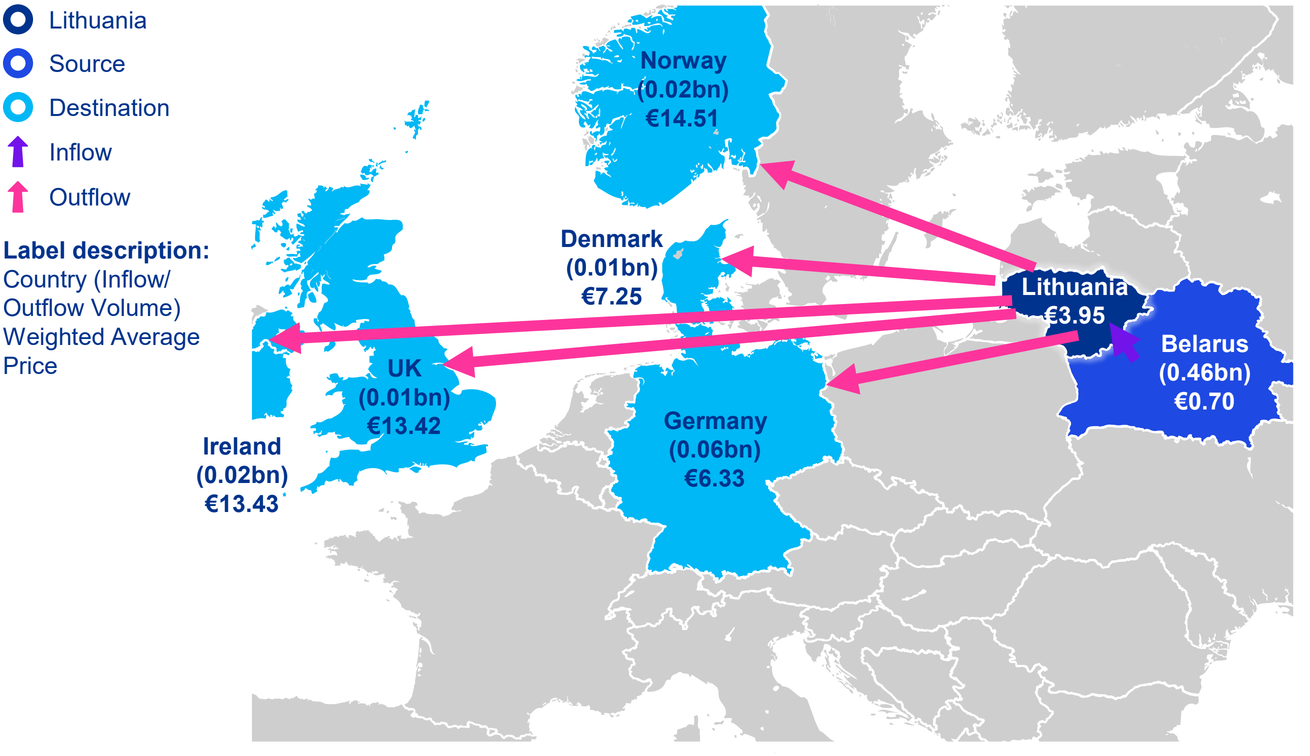
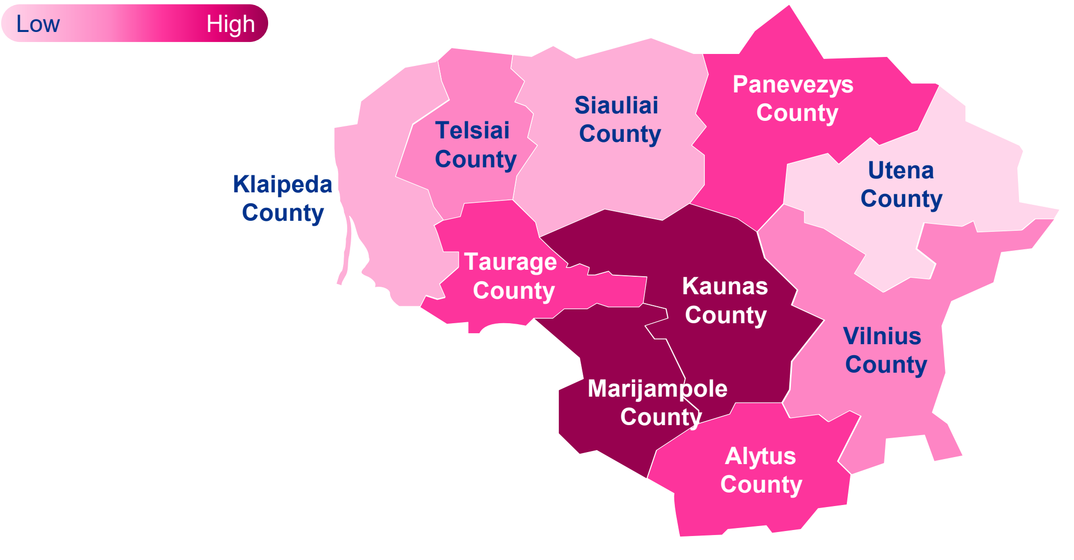
Key flows and C&C consumption patterns

Key inflows and outflows[(1)(a)]



C&C % by region[(1)(b)(c)]



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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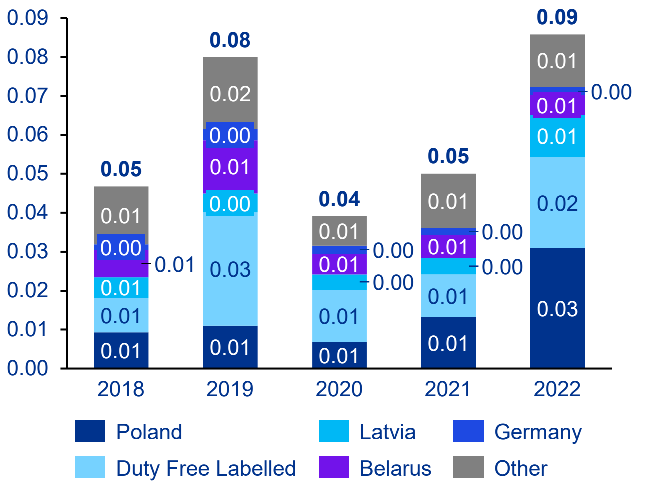
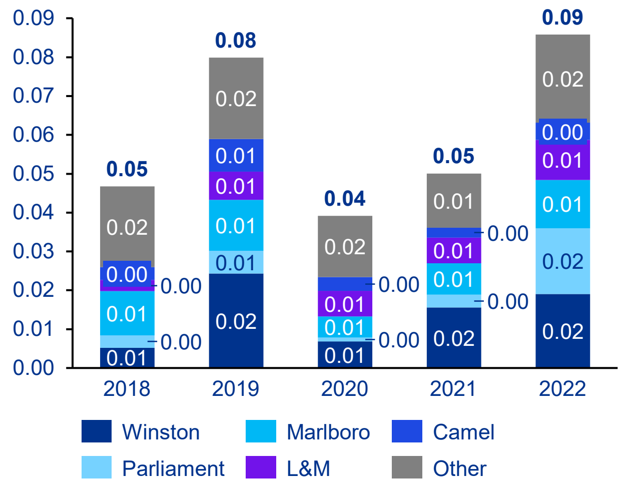
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

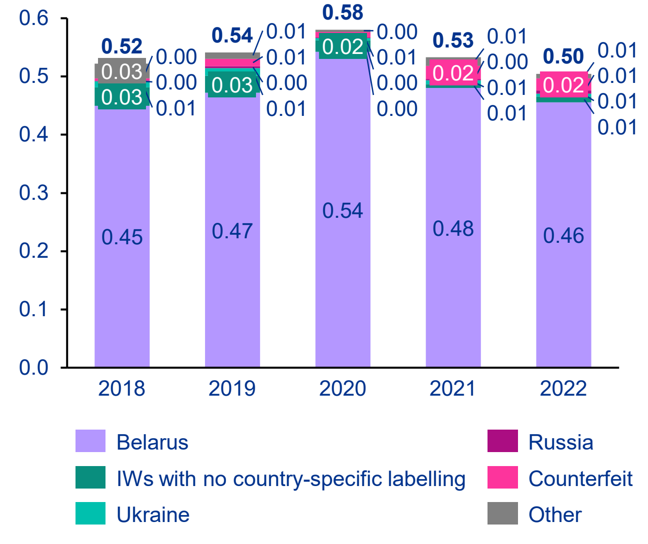


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

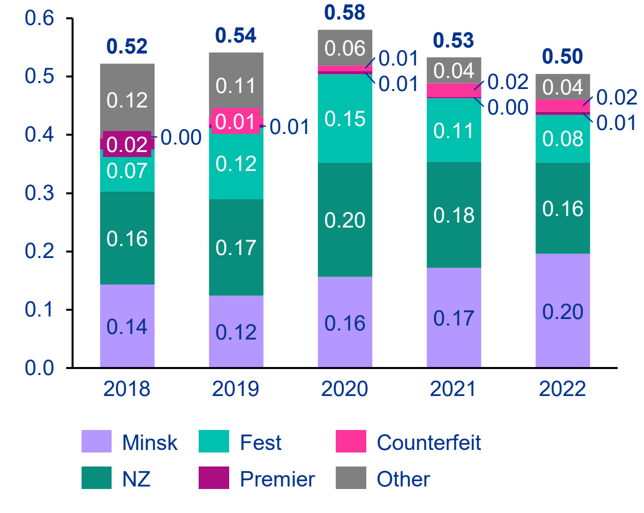


- ND(L) flows increased in 2022, driven by higher inflows from Poland and Duty Free Labelled
- Belarus continued to account for over 90% of total C&C inflows
- The highest levels of C&C were detected in the Kaunas and Marijampole counties

C&C by country of origin – 2018-2022 (bn cigarettes)[1][a]



C&C by brand – 2018-2022 (bn cigarettes)[1][a]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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Luxembourg

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Luxembourg

0.6bn

Cigarettes consumed

+0.1bn on 2021

0.0bn

C&C cigarettes consumed

-0.00bn on 2021

0.4%

Of total consumption was C&C

-0.6ppt on 2021

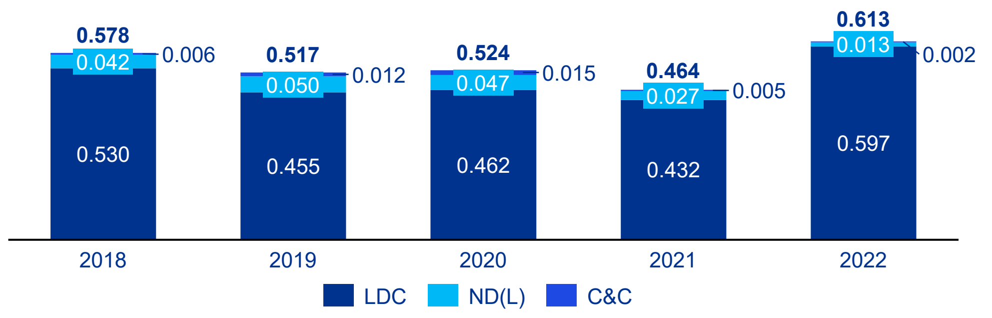
€0.4m

Total tax revenue lost from C&C

-€0.3m on 2021

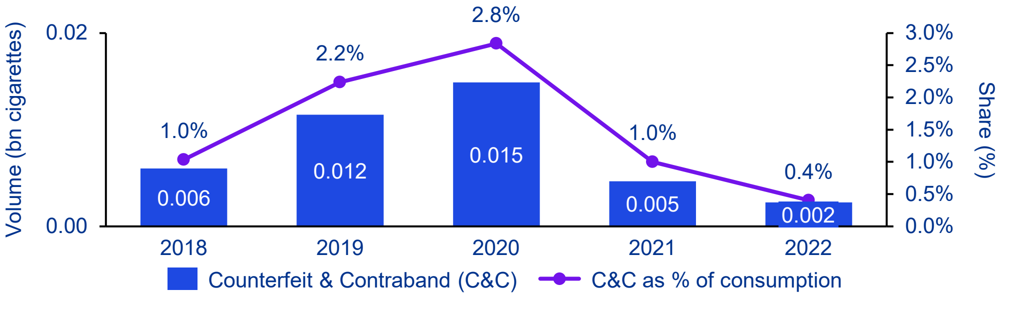
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

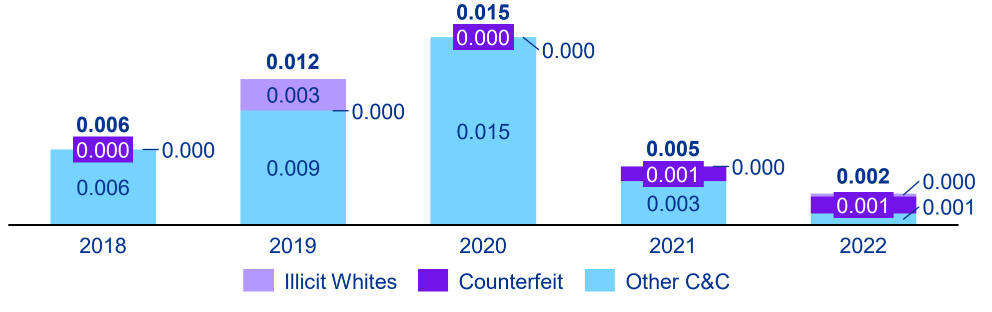


- C&C accounted for 0.4% of total cigarette consumption in 2022, the lowest share observed in the reporting period

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Luxembourg Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	3.001	3.307	3.207	3.526	4.037	15%
Outflows	(2.471)	(2.852)	(2.745)	(3.094)	(3.440)	11%
Legal Domestic Consumption (LDC)	0.530	0.455	0.462	0.432	0.597	38%
Non-Domestic Legal (ND(L))	0.042	0.050	0.047	0.027	0.013	(51%)
Counterfeit and Contraband (C&C)	0.006	0.012	0.015	0.005	0.002	(47%)
Total Non-Domestic	0.048	0.061	0.062	0.032	0.016	(51%)
Total Consumption	**0.578**	**0.517**	**0.524**	**0.464**	**0.613**	**32%**

- Total consumption increased by 32% in 2022, driven by increasing legal domestic consumption, but partially offset be declining Non-Domestic flows
- Inflows declined by ~50%, driven by decreases in inflows from France and smaller markets included in ‘Other’
- Outflows increased to 3.44bn in 2022, the highest observed in the reporting period
- Despite a decline in outflows to France, it remains the most prominent destination for outflows from Luxembourg

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Luxembourg					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Germany	0.009	0.006	0.006	0.003	0.003
Netherlands	0.002	0.000	0.000	0.000	0.002
France	0.015	0.014	0.006	0.007	0.002
Other	0.022	0.042	0.050	0.022	0.009
Total Inflows	**0.048**	**0.061**	**0.062**	**0.032**	**0.016**

Total outflows by destination – 2018-2022[(1)(2)]

Outflows from Luxembourg					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
France	(1.154)	(1.262)	(0.723)	(1.101)	(0.887)
Germany	(0.333)	(0.355)	(0.428)	(0.370)	(0.549)
Belgium	(0.102)	(0.178)	(0.263)	(0.429)	(0.428)
Other	(0.983)	(1.235)	(1.593)	(1.622)	(2.003)
Total Outflows	**(2.471)**	**(2.852)**	**(2.745)**	**(3.094)**	**(3.440)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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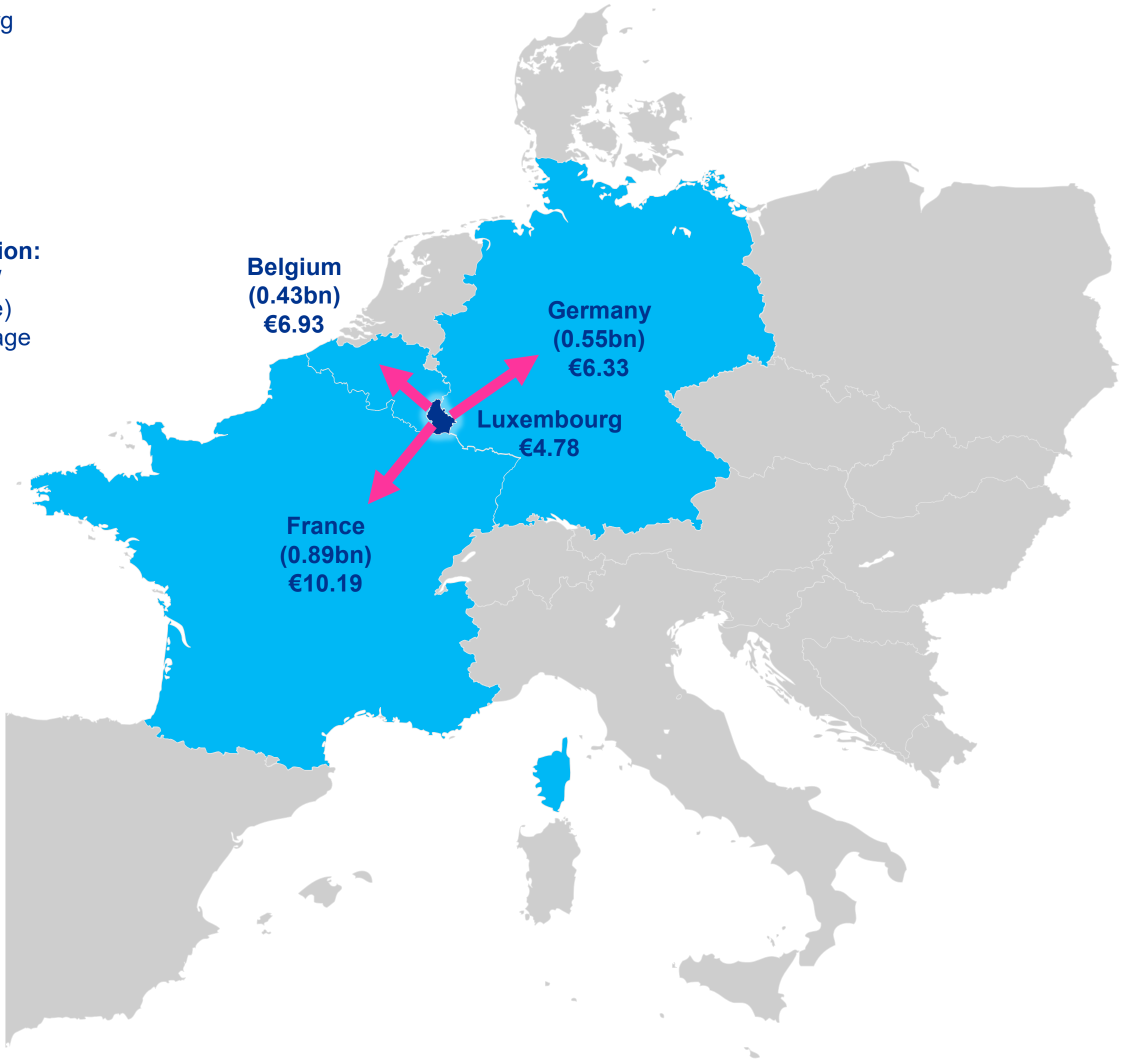
Key flows

Key inflows and outflows(1)(a)

Luxembourg
Source
Destination
Inflow
Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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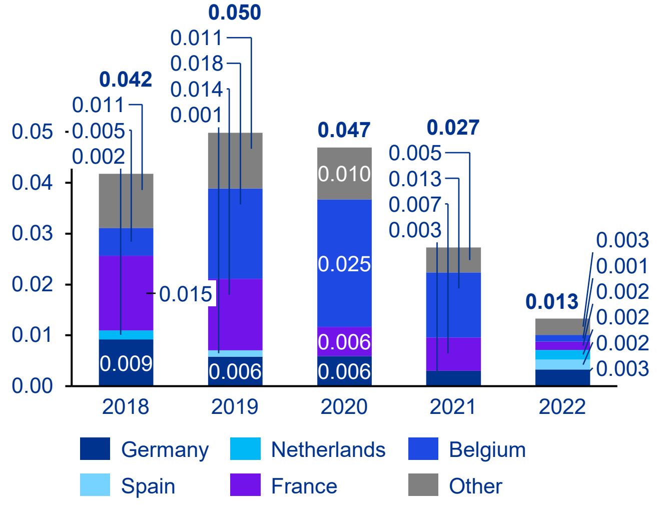
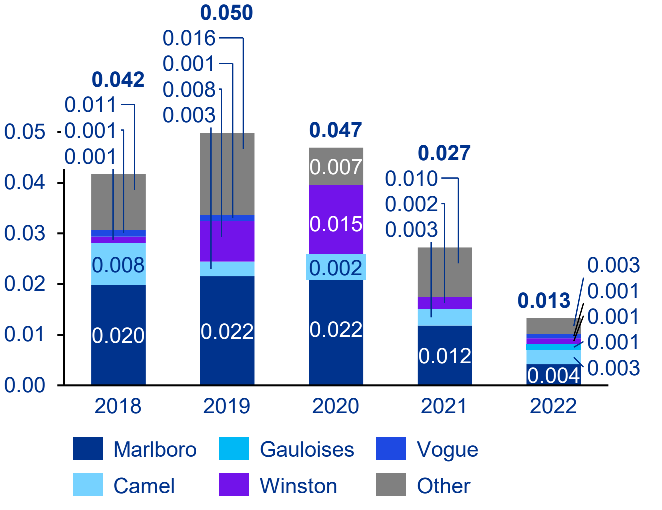
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)(1)(b)

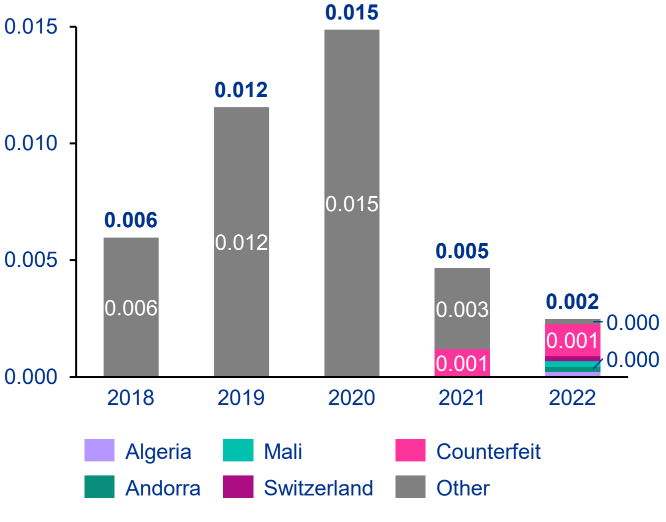


ND(L) by brand – 2018-2022 (bn cigarettes)(1)(b)

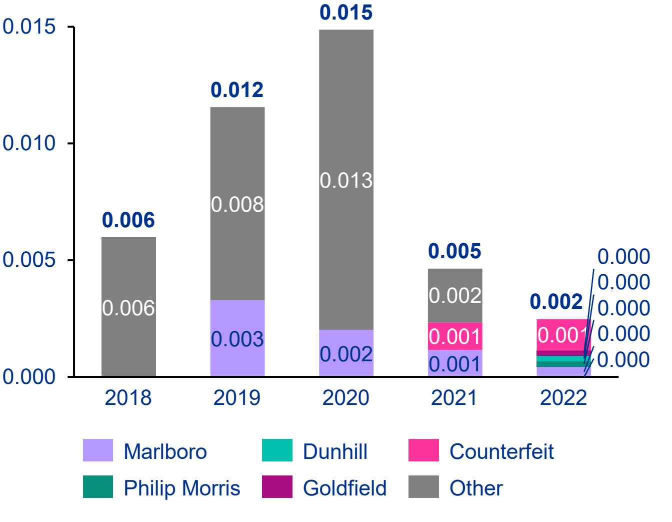


- ND(L) inflows declined by 0.014bn in 2022, to the lowest levels observed during the reporting period, driven by declines in inflows from France and Belgium
- Total C&C inflows to Luxembourg declined by 47% in 2022, driven by reduced illicit flows from smaller markets included within the 'Other' category

C&C by country of origin – 2018-2022 (bn cigarettes)(1)(a)(b)



C&C by brand – 2018-2022 (bn cigarettes)(1)(a)(b)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b) Due to rounding, segments highlighted in the charts may not add up to the total

Source: (1) KPMG EU Flows Calculation, 2018-2022

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Malta

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Malta

0.6bn
Cigarettes consumed

+0.1bn on 2021

0.0bn
C&C cigarettes consumed

-0.01bn on 2021

6.4%
Of total consumption was C&C

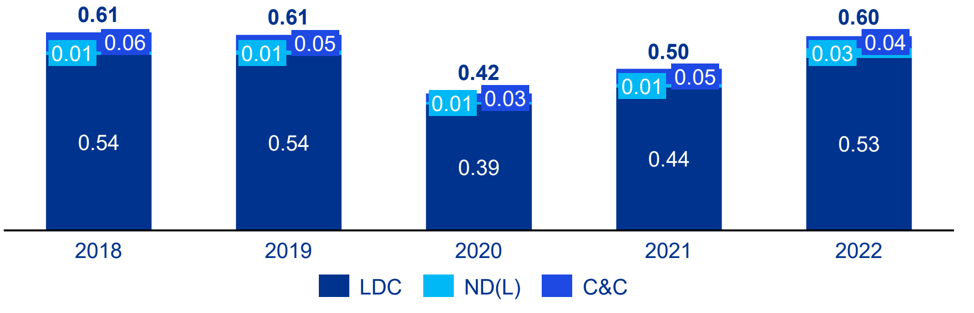
-3.1ppt on 2021

€8m
Total tax revenue lost from C&C

-€2m on 2021

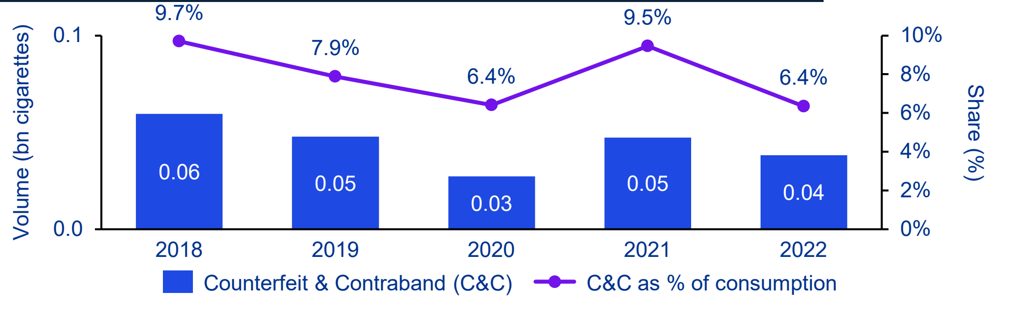
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

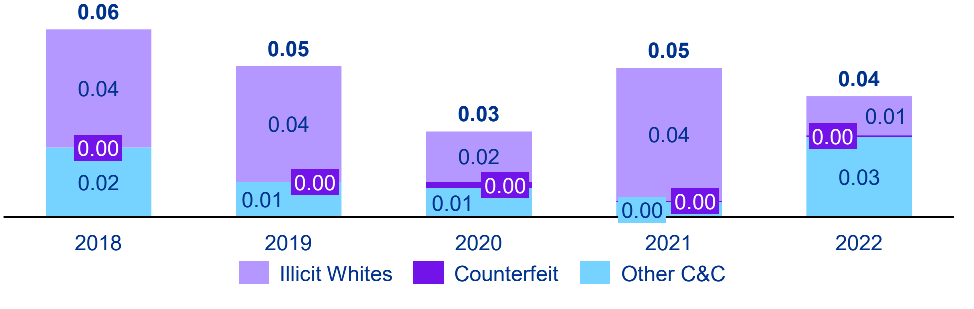


- C&C as a share of total cigarette consumption declined to 6.4% in 2022
- The decrease in C&C was driven by a decline in Illicit Whites consumption but was partly offset by an increase in Other C&C volume

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2]

Total Malta Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	0.59	0.58	0.44	0.47	0.57	22%
Outflows	(0.05)	(0.03)	(0.05)	(0.02)	(0.04)	54%
Legal Domestic Consumption (LDC)	0.54	0.54	0.39	0.44	0.53	21%
Non-Domestic Legal (ND(L))	0.01	0.01	0.01	0.01	0.03	200%
Counterfeit and Contraband (C&C)	0.06	0.05	0.03	0.05	0.04	(19%)
Total Non-Domestic	0.07	0.06	0.03	0.06	0.07	19%
Total Consumption	**0.61**	**0.61**	**0.42**	**0.50**	**0.60**	**20%**

- Total cigarette consumption increased by 0.1bn (~20%) in 2022 in line with the increase in Legal Domestic Sales
- Inflows increased by ~20% despite a 0.03bn decrease in IWs with no country-specific labelling

Total inflows by country of origin – 2018-2022[1][a]

Inflows to Malta					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Italy	0.00	0.00	0.00	0.00	0.01
IWs with no country-specific labelling	0.04	0.03	0.02	0.04	0.01
Duty Free Labelled	0.01	0.01	0.01	0.00	0.01
Other	0.02	0.02	0.01	0.01	0.04
Total Inflows	**0.07**	**0.06**	**0.03**	**0.06**	**0.07**

Total outflows by destination – 2018-2022[1][a]

Outflows from Malta					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
France	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
Italy	(0.01)	(0.00)	0.00	(0.00)	(0.01)
Other	(0.02)	(0.01)	(0.04)	(0.01)	(0.02)
Total Outflows	**(0.05)**	**(0.03)**	**(0.05)**	**(0.02)**	**(0.04)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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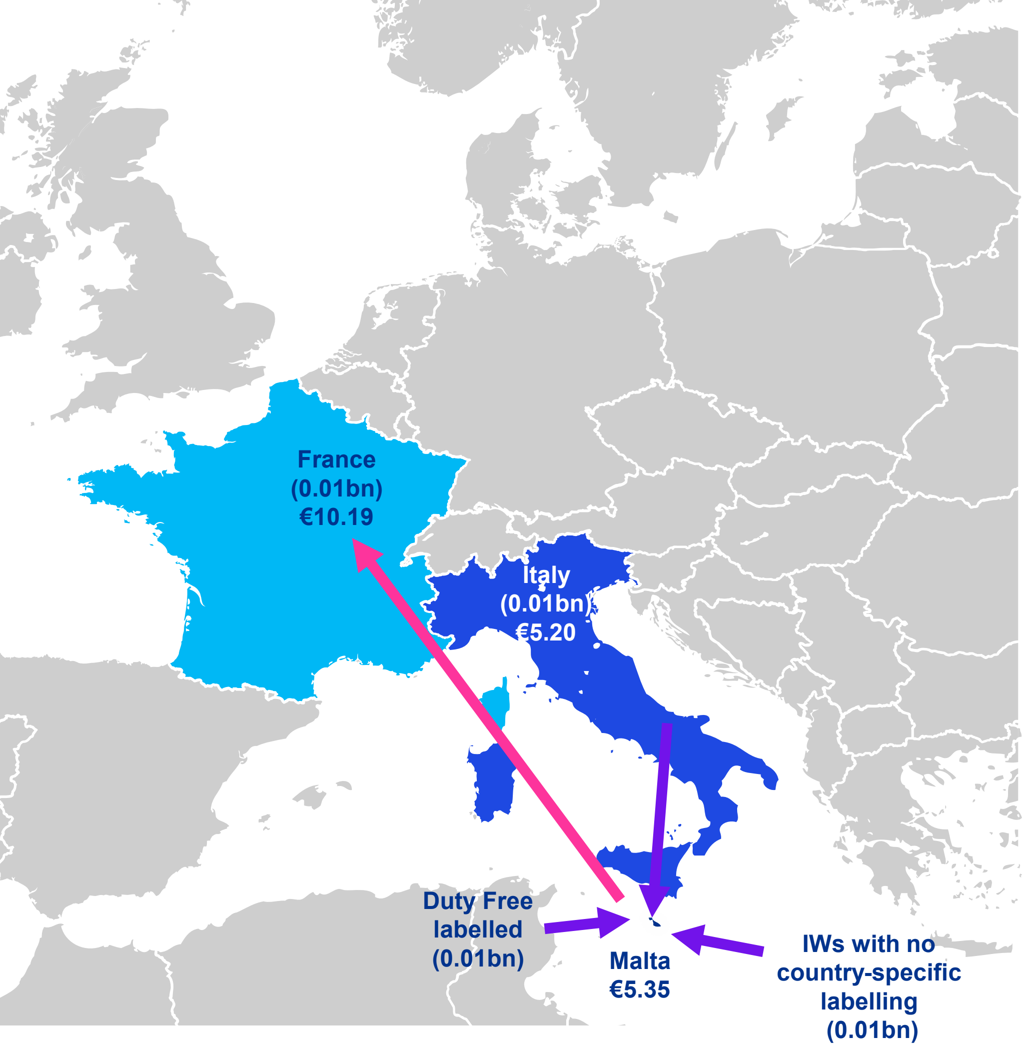
Key flows

Key inflows and outflows[1][a]

Malta
Source
Destination
Inflow
Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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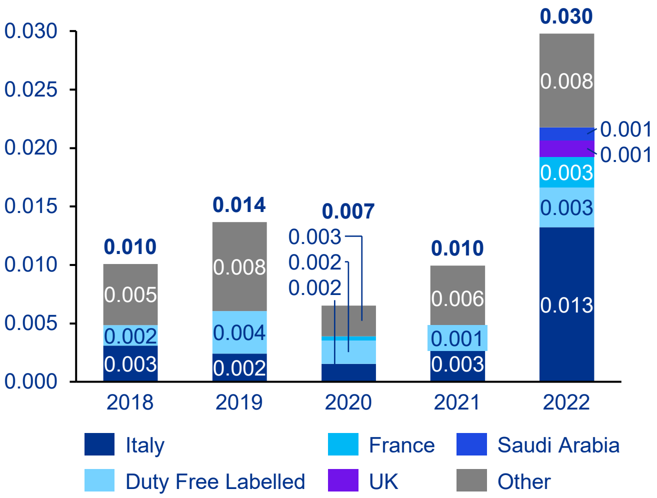
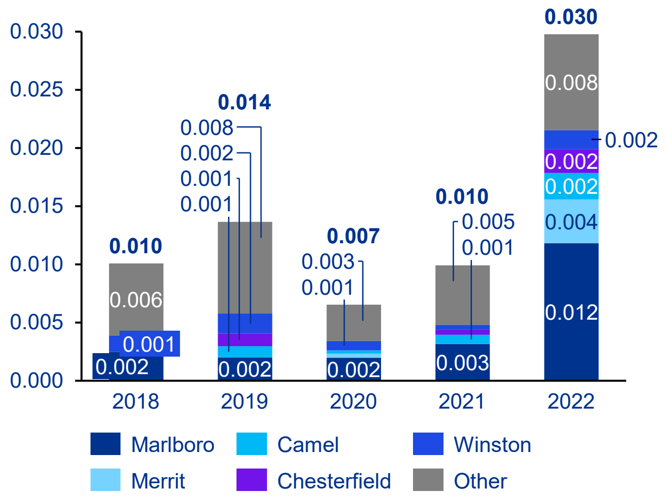
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)(1)(b)

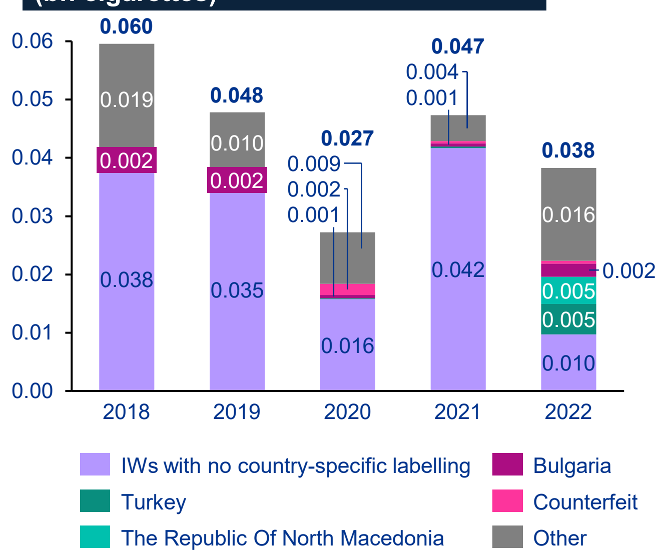


ND(L) by brand – 2018-2022 (bn cigarettes)(1)(b)

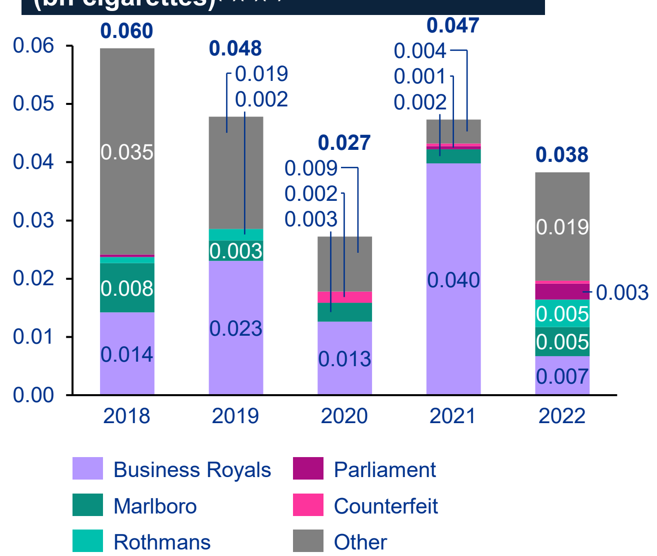


- ND(L) flows increased by ~200% to 0.03bn in 2022. ND(L) inflows from Italy increased by 0.01bn, the largest increase among the top five origins of ND(L)
- IWs with no country-specific labelling remained the largest source of illicit cigarettes in Malta despite a decline of 0.032bn in 2022

C&C by country of origin – 2018-2022 (bn cigarettes)(1)(a)(b)



C&C by brand – 2018-2022 (bn cigarettes)(1)(a)(b)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b) Due to rounding, segments highlighted in the charts may not add up to the total

Source: (1) KPMG EU Flows Calculation, 2018-2022

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Moldova

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Moldova

C&C cigarette consumption and total consumption

2.8bn

Cigarettes consumed

+0.3bn on 2021

0.2bn

C&C cigarettes consumed

+0.1bn on 2021

6.0%

Of total consumption was C&C

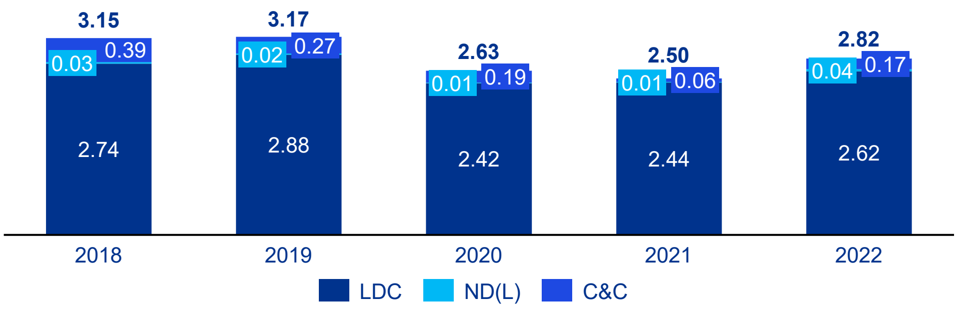
+3.7ppt on 2021

€13m

(L257m)[3]

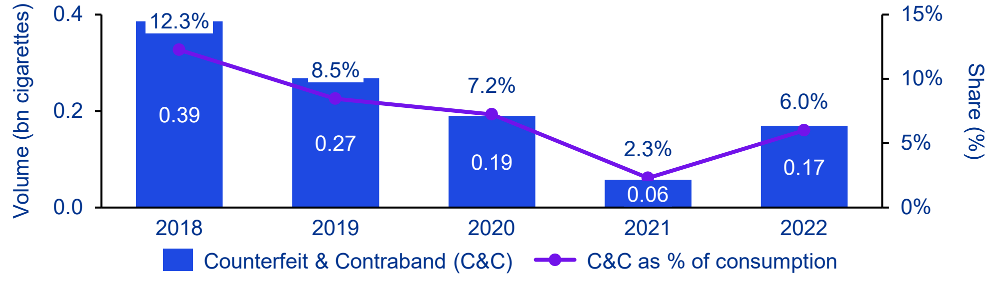
Total tax revenue lost from C&C in 2022

Total consumption – 2018-2022 (bn cigarettes)[(1)(2)]

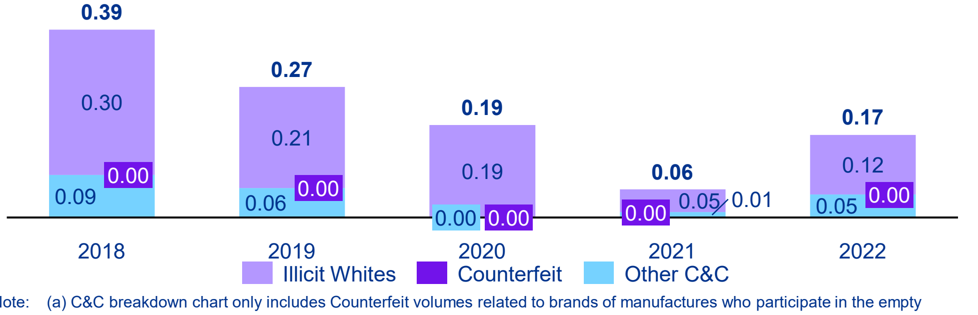


- Total cigarette consumption in Moldova increased in 2022 but remained below 2019 levels
- C&C as a share of total consumption showed a declining trend between 2018 and 2021. However, this trend reversed in 2022 with C&C increasing to 6.0% of total consumption.
- This growth in illicit consumption was mostly due to an increase in Illicit Whites and Other C&C

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[(1)(2)]



C&C consumption by type – 2018-2022 (bn cigarettes)[(1)(2)(a)]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data; (3) EUR 1 = L 19.759, InforEuro, European Commission, December 2022

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)(a)]

Total Moldova Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	4.24	3.66	2.95	2.85	2.99	5%
Outflows	(1.50)	(0.78)	(0.52)	(0.42)	(0.38)	(10%)
Legal Domestic Consumption (LDC)	2.74	2.88	2.42	2.44	2.62	7%
Non-Domestic Legal (ND(L))	0.03	0.02	0.01	0.01	0.04	242%
Counterfeit and Contraband (C&C)	0.39	0.27	0.19	0.06	0.17	195%
Total Non-Domestic	0.41	0.29	0.20	0.07	0.21	202%
Total Consumption	**3.15**	**3.17**	**2.63**	**2.50**	**2.82**	**13%**

- Total cigarette consumption increased by 13% to 2.82bn cigarettes in 2022, driven by increasing legal domestic consumption and higher Non-Domestic inflows
- Inflows increased by 0.14bn cigarettes in 2022. This was driven by increasing flows from all major categories, partly offset by lower inflows from smaller markets grouped together under ‘Other’
- Neighbouring Romania has historically been, and continues to be, the principal outflow destination from Moldova

Total inflows by country of origin – 2018-2022[(1)(b)]

Inflows to Moldova					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
IWs with no country-specific labelling	Data not comparable			0.02	0.08
Illicit Whites				0.00	0.08
Duty Free Labelled				0.01	0.03
Other				0.04	0.02
Total Inflows				**0.07**	**0.21**

In 2021, Moldova switched from a PMI-commissioned empty pack survey to pack swap surveys commissioned by Big-4 industry participants. Classification of origin of inflows in these studies is not directly comparable with the classification used in the empty pack surveys. Therefore, breakdown of inflows is only shown for 2021 and later

Total outflows by destination – 2018-2022[(1)(b)]

Outflows from Moldova					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Romania	(1.00)	(0.57)	(0.35)	(0.21)	(0.17)
France	(0.09)	(0.03)	(0.07)	(0.07)	(0.10)
Ireland	(0.05)	(0.01)	(0.02)	(0.02)	(0.03)
Other	(0.36)	(0.17)	(0.08)	(0.12)	(0.08)
Total Outflows	**(1.50)**	**(0.78)**	**(0.52)**	**(0.42)**	**(0.38)**

Note: (a) In 2021, Moldova switched from a PMI-commissioned empty pack survey to pack swap surveys commissioned by Big-4 industry participants. Therefore, given the change in methodology, trends may not be directly comparable between 2018-20 and 2021-22 (b) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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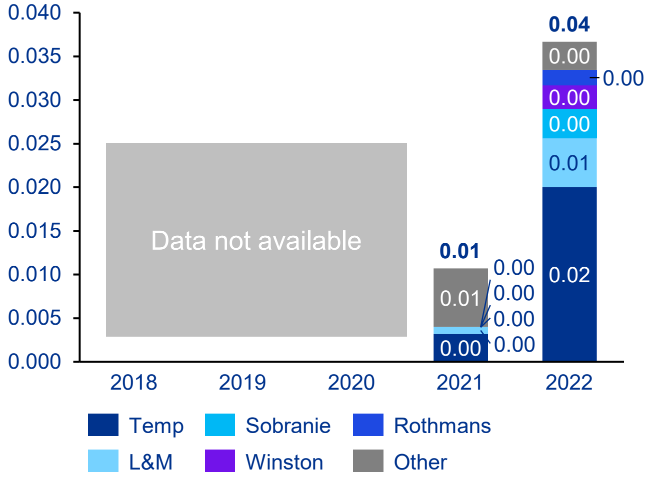
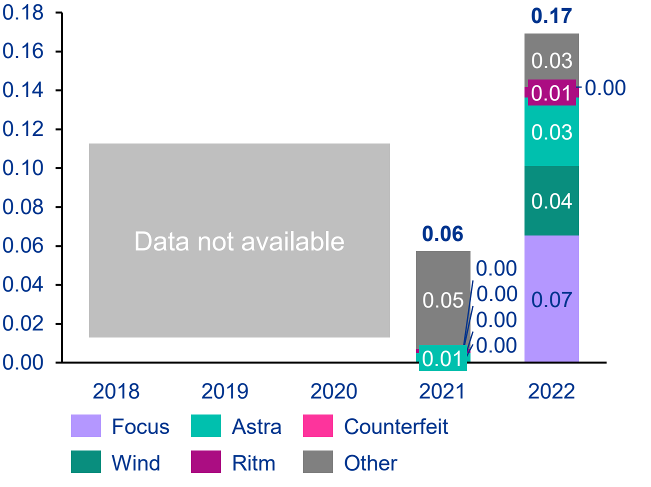
ND(L) and C&C flows

ND(L) by brand – 2018-2022 (bn cigarettes)[(1)(b)]



C&C by brand – 2018-2022 (bn cigarettes)[(1)(a)(b)]



- Both legal inflows (ND(L)) and illicit inflows (C&C) increased in 2022
  - Increased ND(L) inflows in 2022 were driven by larger legal inflows of the brands Temp and L&M
  - Increased illicit inflows in 2022 were driven by larger illicit flows of Focus, Wind and Astra, partially offset by declining flows of a number of smaller volume brands grouped together under 'Other'

Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b) In 2021, Moldova switched from a PMI-commissioned empty pack survey to pack swap surveys commissioned by Big-4 industry participants. Classification of origin of inflows in these studies is not directly comparable with the classification used in the empty pack surveys. Therefore, the breakdown of inflows is only shown for 2021 and later

Source: (1) KPMG EU Flows Calculation, 2018-2022

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Netherlands

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C&C cigarette consumption and total consumption

11.0bn

Cigarettes consumed

-0.8bn on 2021

1.2bn

C&C cigarettes consumed

-0.9bn on 2021

11.2%

Of total consumption was C&C

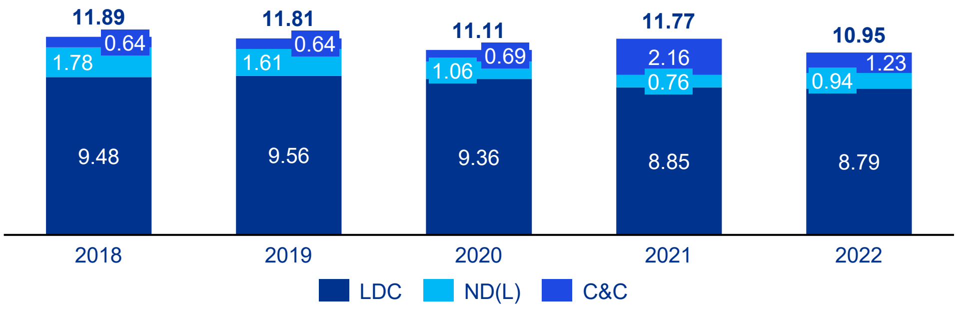
-7.1ppt on 2021

€380m

Total tax revenue lost from C&C

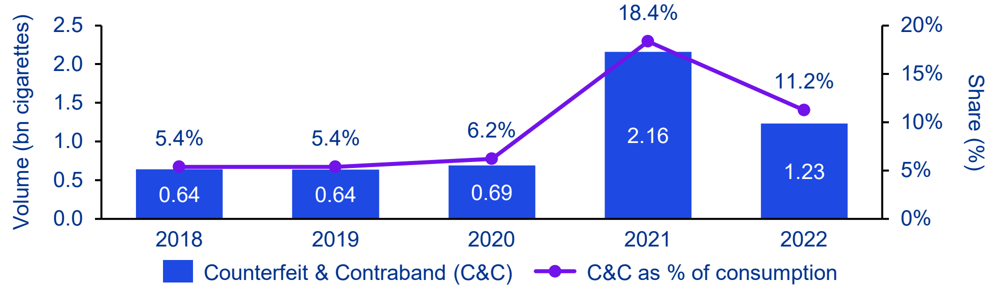
-€277m on 2021

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

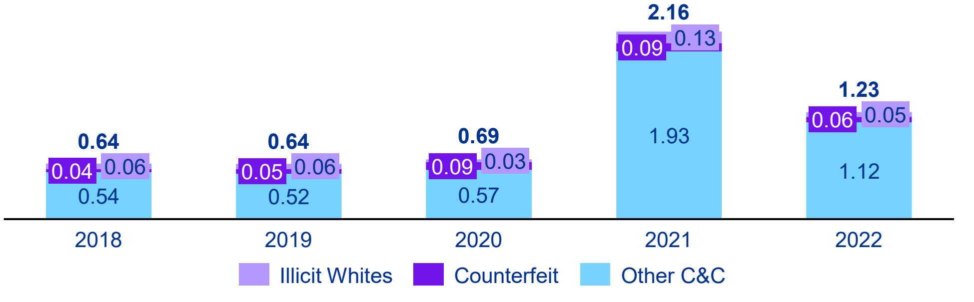


- C&C as a share of total consumption decreased by ~7.2ppt or 0.93bn cigarettes in 2022 following an increase in 2021
- This 2022 decline in C&C consumption was driven by a fall in Other C&C

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022(1)(2)

Total Netherlands Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	9.92	9.84	9.56	9.08	9.01	(1%)
Outflows	(0.45)	(0.29)	(0.20)	(0.23)	(0.22)	(3%)
Legal Domestic Consumption (LDC)	9.48	9.56	9.36	8.85	8.79	(1%)
Non-Domestic Legal (ND(L))	1.78	1.61	1.06	0.76	0.94	23%
Counterfeit and Contraband (C&C)	0.64	0.64	0.69	2.16	1.23	(43%)
Total Non-Domestic	2.42	2.25	1.75	2.92	2.17	(26%)
Total Consumption	**11.89**	**11.81**	**11.11**	**11.77**	**10.95**	**(7%)**

- Total consumption decreased by 7% in 2022, driven by a decline in illicit inflows (C&C)
- Non-Domestic inflows declined by 26%, driven by a decline in inflows from Bulgaria and Belgium
- Outflows from Netherlands declined by 3% and remained comparable to 2021 volumes

Total inflows by country of origin – 2018-2022(1)(a)

Inflows to Netherlands					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Belgium	0.18	0.21	0.34	0.91	0.73
Duty Free Labelled	0.37	0.35	0.14	0.21	0.19
Germany	0.35	0.38	0.22	0.23	0.19
Poland	0.08	0.08	0.08	0.11	0.18
Bulgaria	0.05	0.05	0.10	0.76	0.15
Other	1.38	1.18	0.87	0.70	0.74
Total Inflows	**2.42**	**2.25**	**1.75**	**2.92**	**2.17**

Total outflows by destination – 2018-2022(1)(a)

Outflows from Netherlands					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
France	(0.05)	(0.04)	(0.03)	(0.11)	(0.06)
Belgium	(0.20)	(0.07)	(0.06)	(0.04)	(0.05)
Germany	(0.08)	(0.08)	(0.06)	(0.04)	(0.04)
Other	(0.12)	(0.09)	(0.05)	(0.04)	(0.08)
Total Outflows	**(0.45)**	**(0.29)**	**(0.20)**	**(0.23)**	**(0.22)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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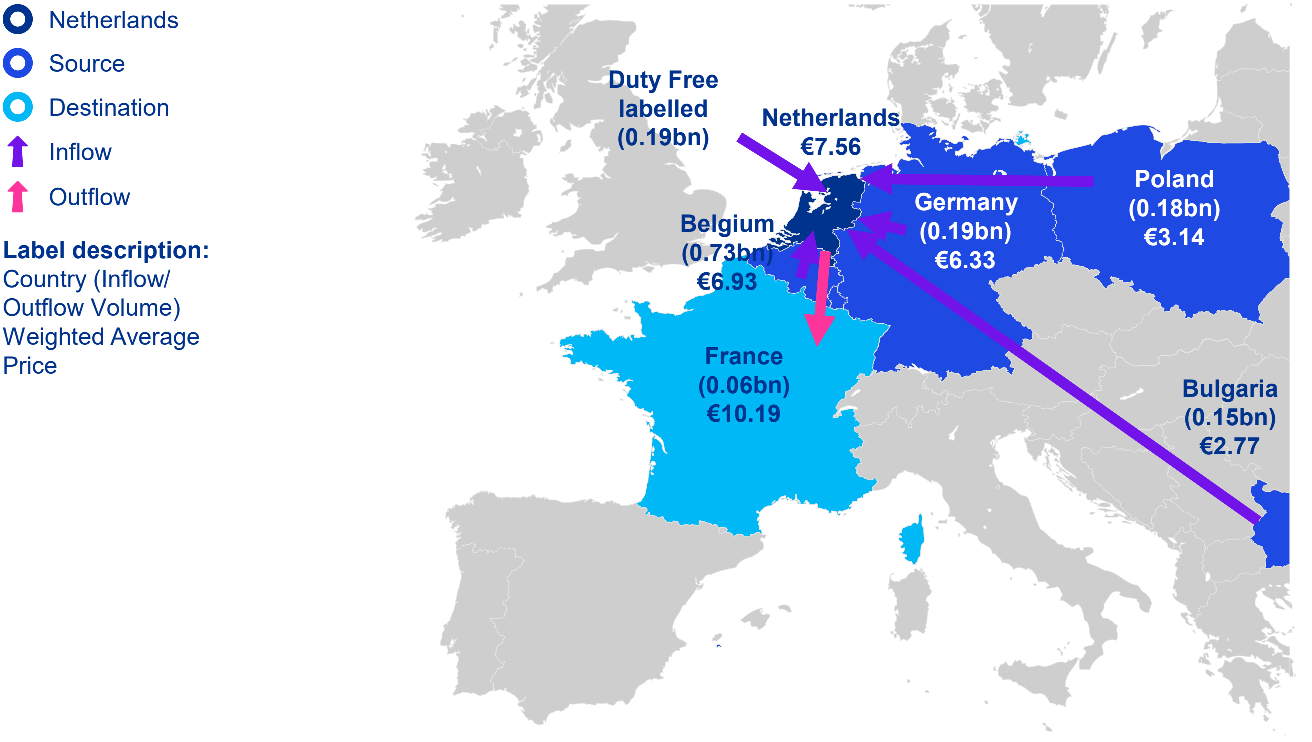
Key flows and C&C consumption patterns

Key inflows and outflows[1][a]



C&C % by region[1][b][c]

Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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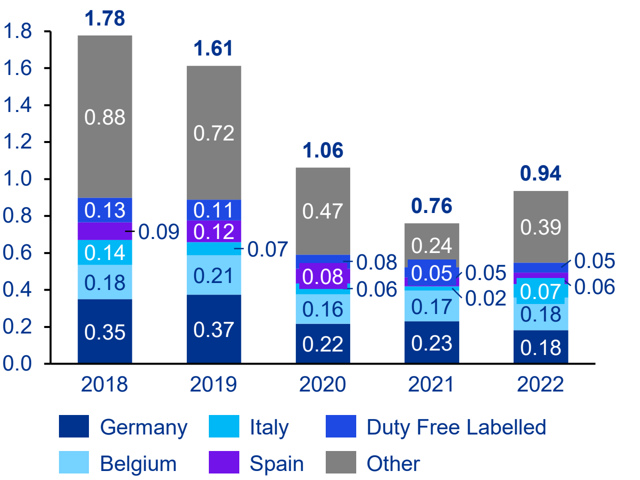
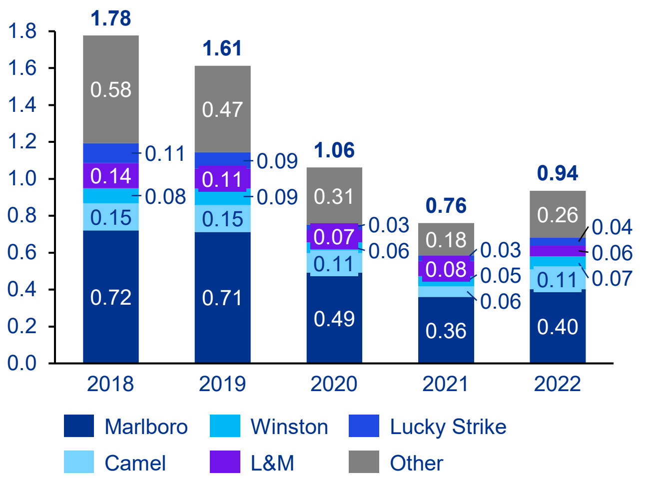
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

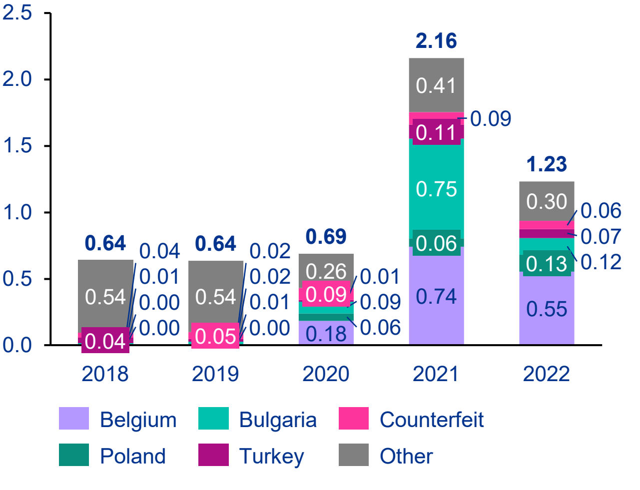


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

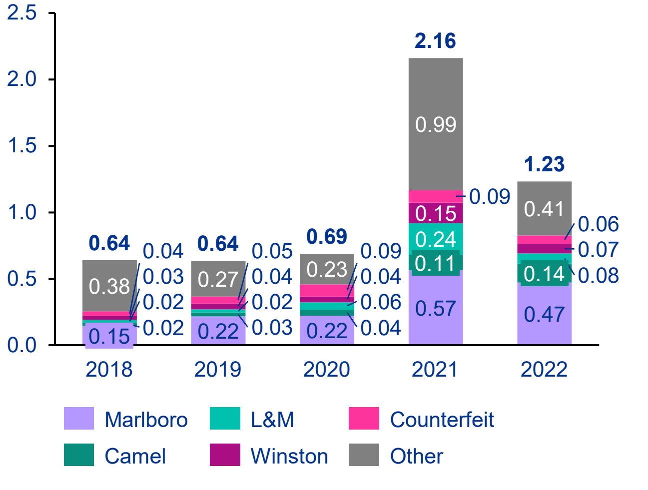


- Non-Domestic legal inflows increased in 2022, primarily driven by an increase in flows from Italy and smaller markets grouped together under 'Other', partly offset by a reduction in flows from Germany
- Illicit flows decreased in 2022, primarily driven by reduced flows from Belgium and Bulgaria

C&C by country of origin – 2018-2022 (bn cigarettes)[1](a)



C&C by brand – 2018-2022 (bn cigarettes)[1](a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022

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Norway

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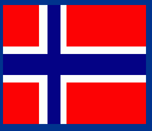
Norway



2.0bn

Cigarettes consumed

-0.5bn on 2021

0.2bn

C&C cigarettes consumed

-0.1bn on 2021

12.4%

Of total consumption was C&C

-0.4ppt on 2021

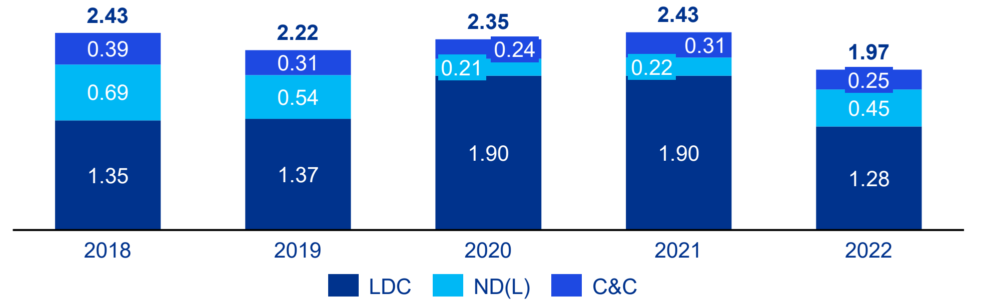
€111m

Total tax revenue lost from C&C

-€18m on 2021

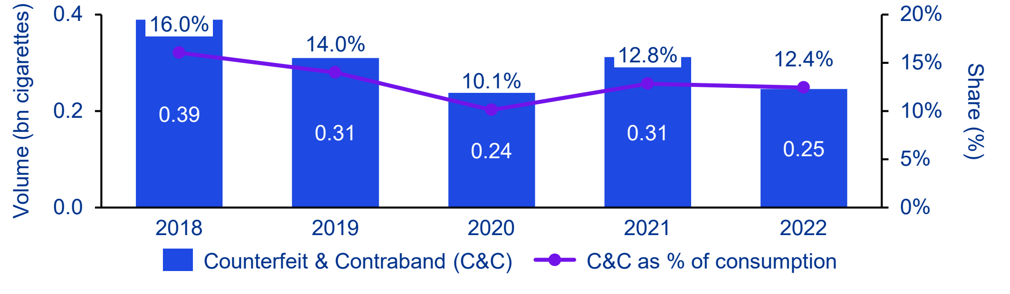
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)[(1)(2)]

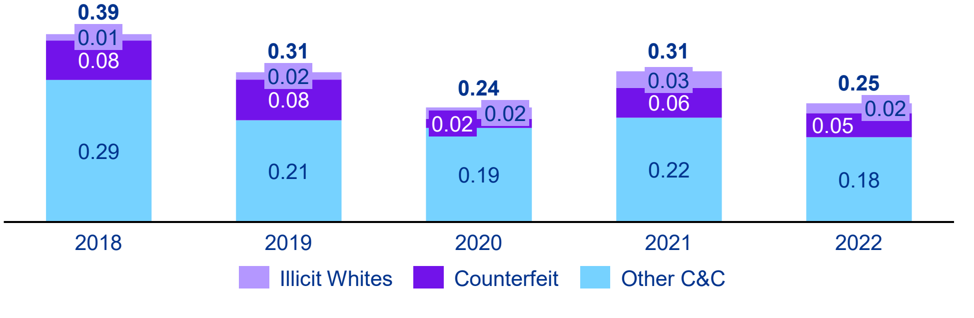


- C&C decreased by 0.4ppt (0.06bn cigarettes) in 2022. This decline was driven by a reduction in all components of illicit consumption

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[(1)(2)]



C&C consumption by type – 2018-2022 (bn cigarettes)[(1)(2)(a)]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2]

Total Norway Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	1.39	1.41	1.91	1.91	1.29	(33%)
Outflows	(0.03)	(0.04)	(0.01)	(0.01)	(0.01)	(1%)
Legal Domestic Consumption (LDC)	1.35	1.37	1.90	1.90	1.28	(33%)
Non-Domestic Legal (ND(L))	0.69	0.54	0.21	0.22	0.45	103%
Counterfeit and Contraband (C&C)	0.39	0.31	0.24	0.31	0.25	(21%)
Total Non-Domestic	1.08	0.85	0.45	0.54	0.70	31%
Total Consumption	**2.43**	**2.22**	**2.35**	**2.43**	**1.97**	**(19%)**

- Total cigarette consumption decreased by ~19% in 2022, as a 33% decline in legal domestic consumption was partly offset by a 31% increase in Non-Domestic inflows
- The increase in Non-Domestic inflows was primarily due to a ~0.12bn increase in Duty Free Labelled inflows and a ~0.08bn increase in Swedish inflows

Total inflows by country of origin – 2018-2022[1][a]

Inflows to Norway					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Duty Free Labelled	0.34	0.28	0.16	0.09	0.21
Sweden	0.21	0.16	0.02	0.09	0.17
Poland	0.09	0.06	0.12	0.11	0.07
Counterfeit	0.08	0.08	0.02	0.06	0.05
Romania	0.06	0.05	0.01	0.01	0.03
Other	0.29	0.20	0.12	0.16	0.17
Total Inflows	**1.08**	**0.85**	**0.45**	**0.54**	**0.70**

Total outflows by destination – 2018-2022[1][a]

Outflows from Norway					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Denmark	(0.00)	(0.01)	0.00	(0.01)	(0.00)
Sweden	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
Poland	0.00	(0.00)	(0.00)	(0.00)	(0.00)
Other	(0.02)	(0.02)	(0.01)	(0.01)	(0.00)
Total Outflows	**(0.03)**	**(0.04)**	**(0.01)**	**(0.01)**	**(0.01)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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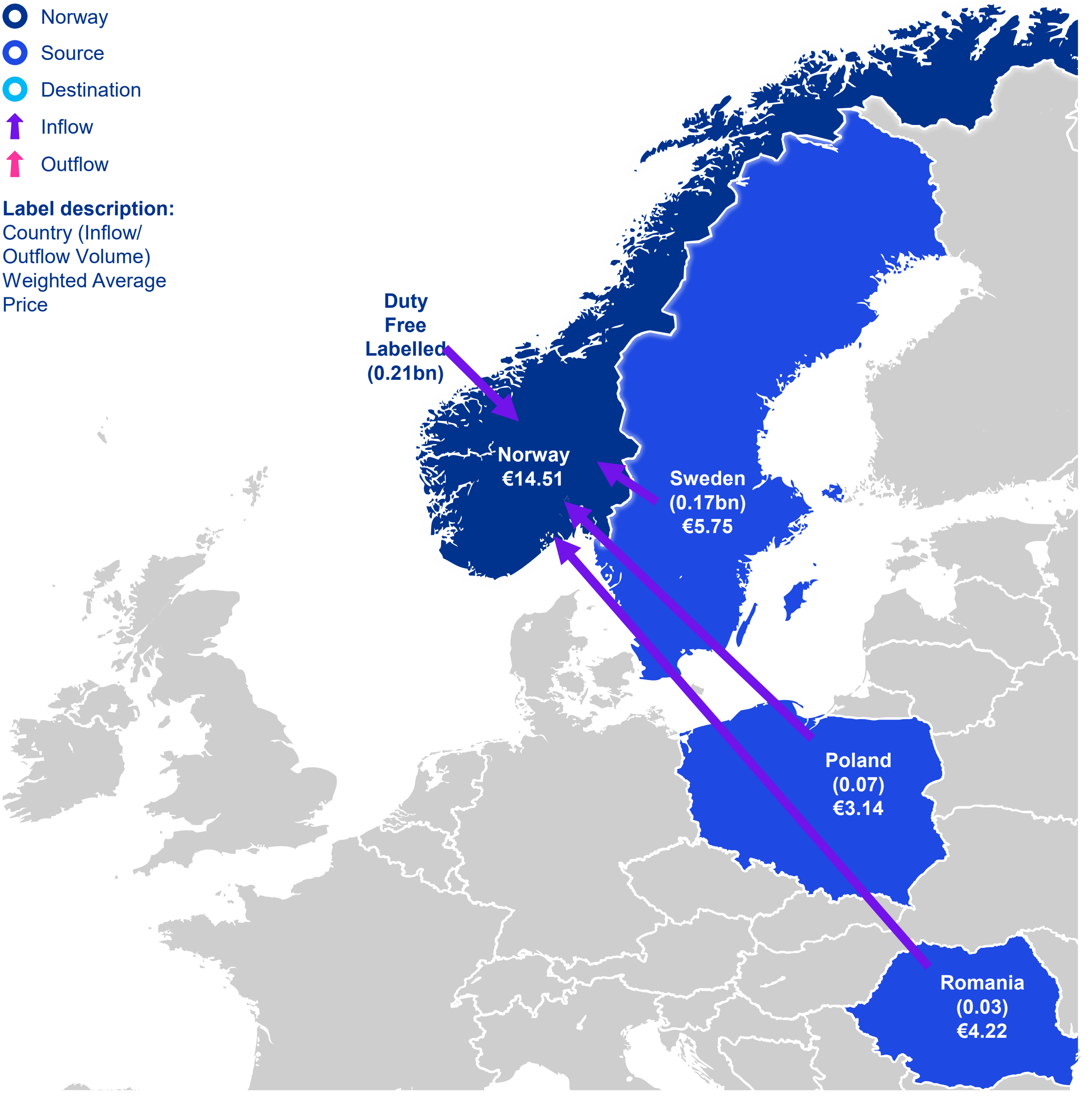
Key flows

Key inflows and outflows[1][a]



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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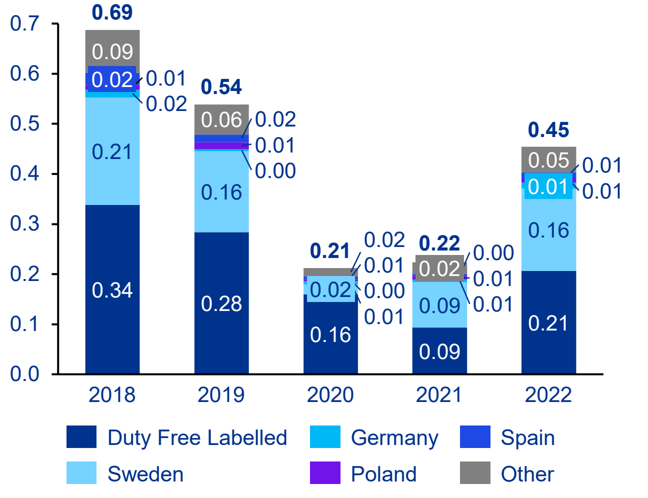
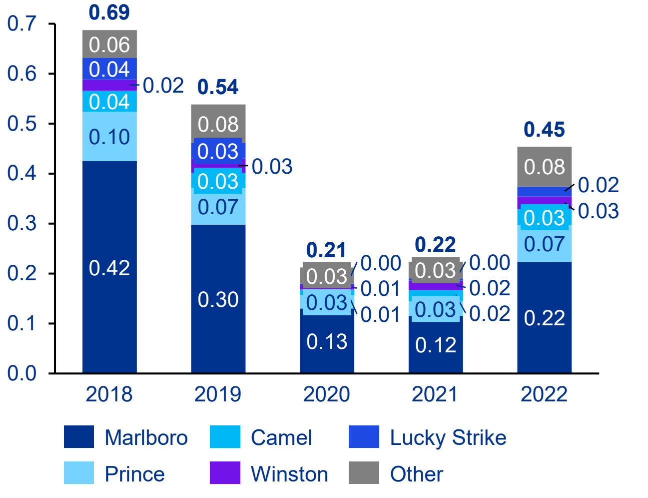
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[(1)]

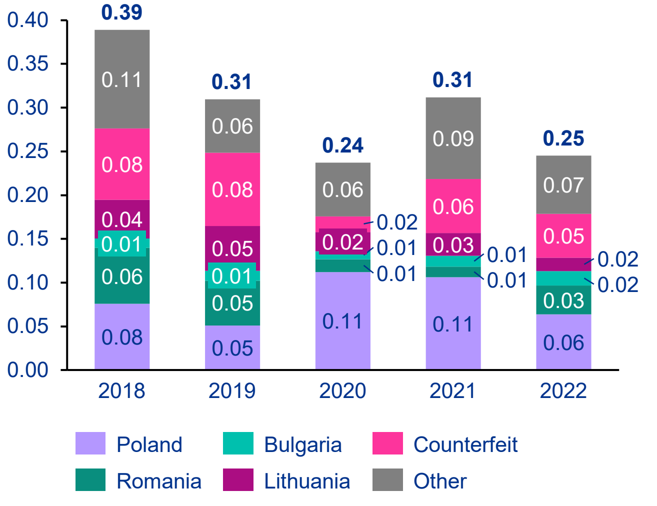


ND(L) by brand – 2018-2022 (bn cigarettes)[(1)]

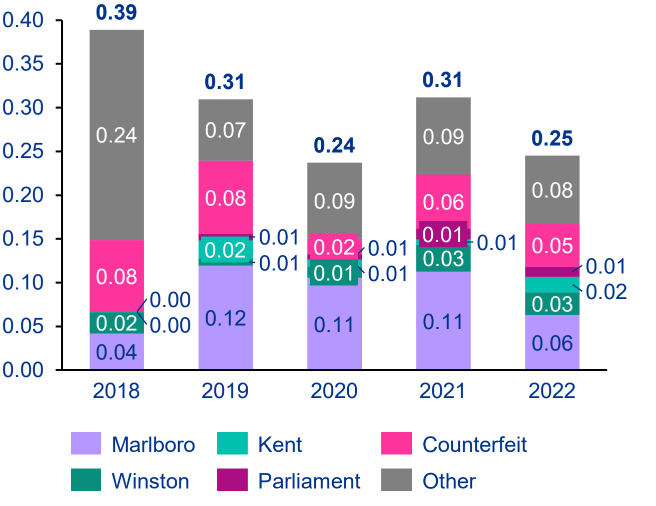


- ND(L) flows increased by 0.23bn in 2022, driven by increases in flows of Duty Free Labelled and Swedish ND(L). Despite this increase, the total ND(L) volume remained below pre-pandemic levels
- A decline in C&C inflows was primarily due to the ~0.05bn decline in flows from Poland

C&C by country of origin – 2018-2022 (bn cigarettes)[(1)(a)]



C&C by brand – 2018-2022 (bn cigarettes)[(1)(a)]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys
Source: (1) KPMG EU Flows Calculation, 2018-2022

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Poland

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Poland

43.9bn

Cigarettes consumed

+2.0bn on 2021

1.8bn

C&C cigarettes consumed

-0.2bn on 2021

4.2%

Of total consumption was C&C

-0.7ppt on 2021

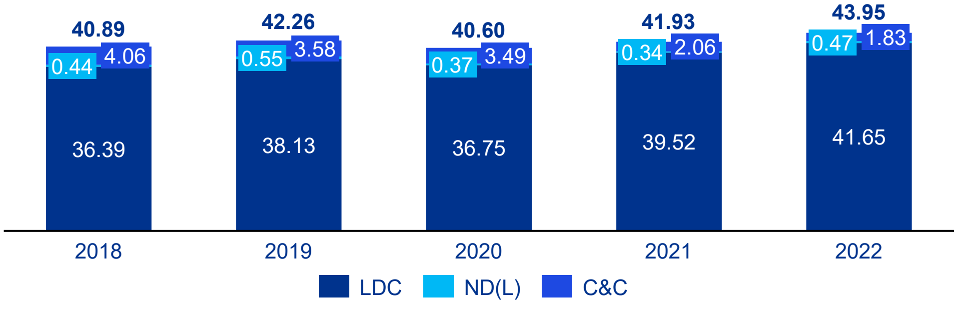
€235m

Total tax revenue lost from C&C

-€43m on 2021

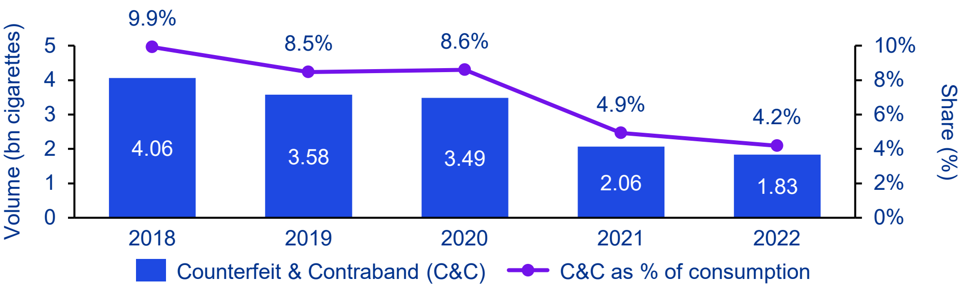
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

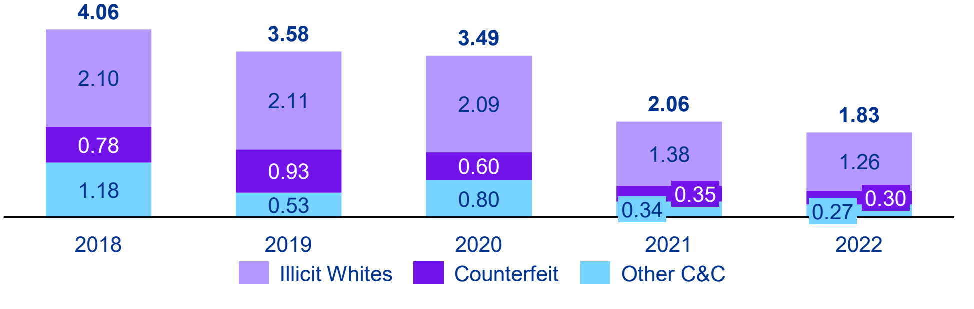


- C&C as a share of total consumption declined to 4.2%, the lowest incidence in the reporting period
- All categories of C&C declined in 2022, with Illicit Whites declining by the most (0.12bn or 8.5%)

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2]

Total Poland Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	42.85	44.99	43.17	45.54	49.39	8%
Outflows	(6.46)	(6.85)	(6.42)	(6.03)	(7.75)	29%
Legal Domestic Consumption (LDC)	36.39	38.13	36.75	39.52	41.65	5%
Non-Domestic Legal (ND(L))	0.44	0.55	0.37	0.34	0.47	35%
Counterfeit and Contraband (C&C)	4.06	3.58	3.49	2.06	1.83	(11%)
Total Non-Domestic	4.50	4.12	3.85	2.41	2.30	(5%)
Total Consumption	**40.89**	**42.26**	**40.60**	**41.93**	**43.95**	**5%**

- Total cigarette consumption increased by 5% to 43.95bn in 2022, the highest level observed during the reporting period, primarily driven by an increase in Legal Domestic Sales
- Total Non-Domestic inflows declined by 0.11bn sticks, as flows from Belarus and Ukraine declined
- Outflows to Germany, France and smaller markets grouped under ‘Other’ increased. Outflows to Germany and France accounted for ~75% of the total outflows

Total inflows by country of origin – 2018-2022[1][a]

Inflows to Poland					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Belarus	1.30	1.08	1.52	1.01	0.89
IWs with no country-specific labelling	0.86	0.96	0.33	0.30	0.30
Counterfeit	0.78	0.93	0.60	0.35	0.30
Ukraine	0.86	0.55	0.88	0.34	0.22
Other	0.70	0.60	0.54	0.42	0.59
Total Inflows	**4.50**	**4.12**	**3.85**	**2.41**	**2.30**

Total outflows by destination – 2018-2022[1][a]

Outflows from Poland					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Germany	(4.20)	(4.94)	(4.66)	(3.82)	(4.66)
France	(0.09)	(0.08)	(0.10)	(0.63)	(1.17)
Other	(2.17)	(1.84)	(1.66)	(1.57)	(1.92)
Total Outflows	**(6.46)**	**(6.85)**	**(6.42)**	**(6.03)**	**(7.75)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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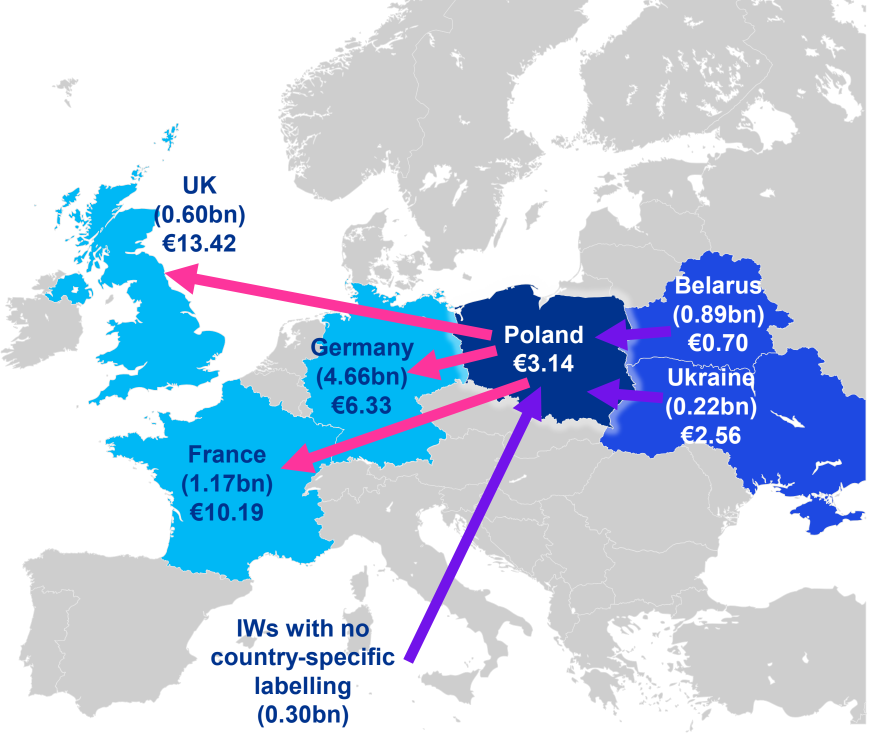
Key flows and C&C consumption patterns

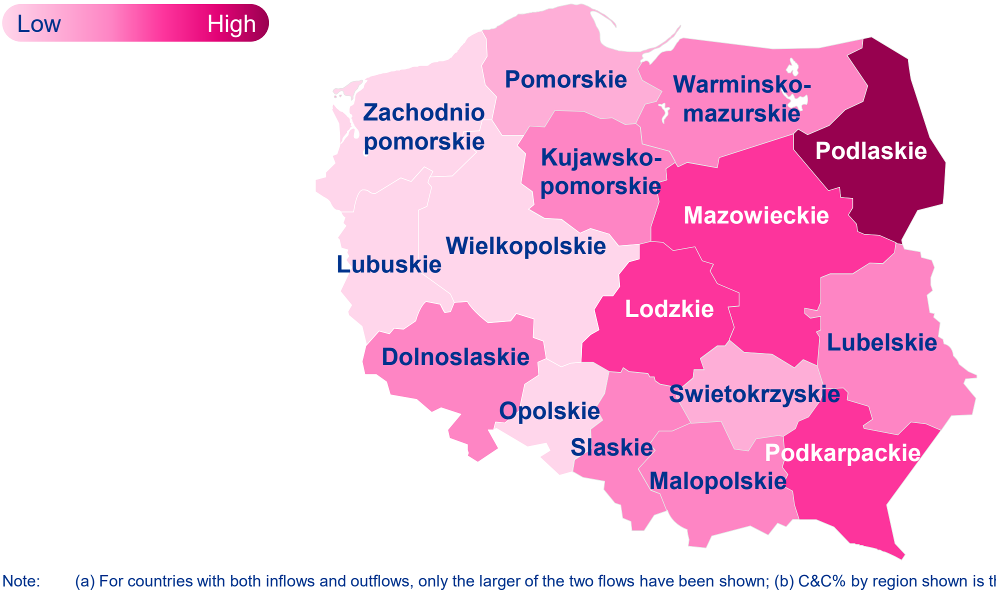
Key inflows and outflows[1](a)

Poland
Source
Destination
Inflow
Outflow

Label description:
Country (Inflow/
Outflow Volume)
Weighted Average
Price



C&C % by region[1](b)(c)



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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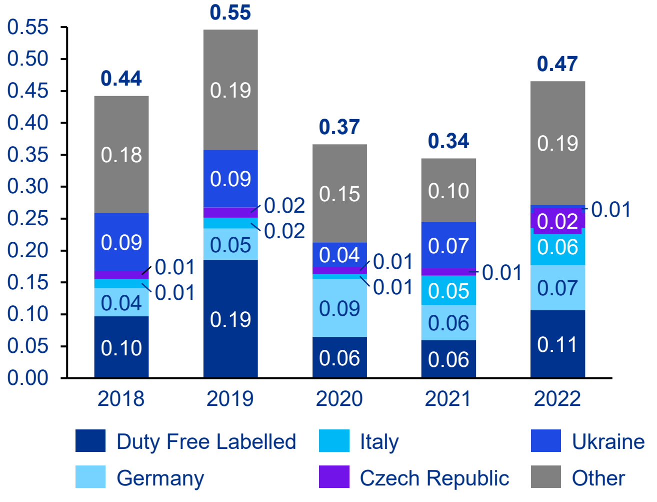
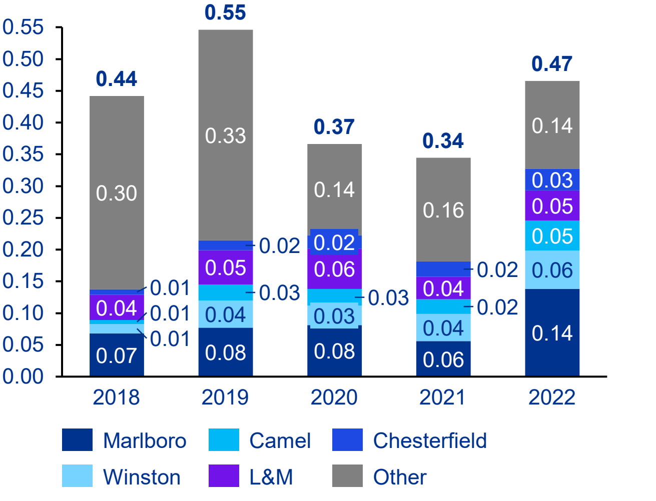
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[(1)]

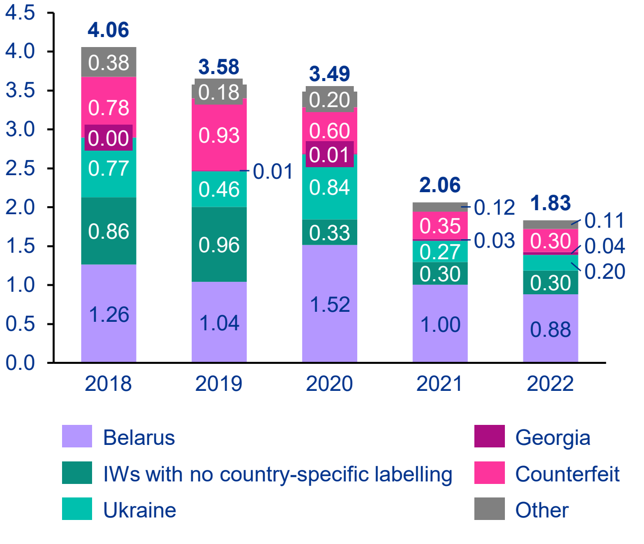


ND(L) by brand – 2018-2022 (bn cigarettes)[(1)]

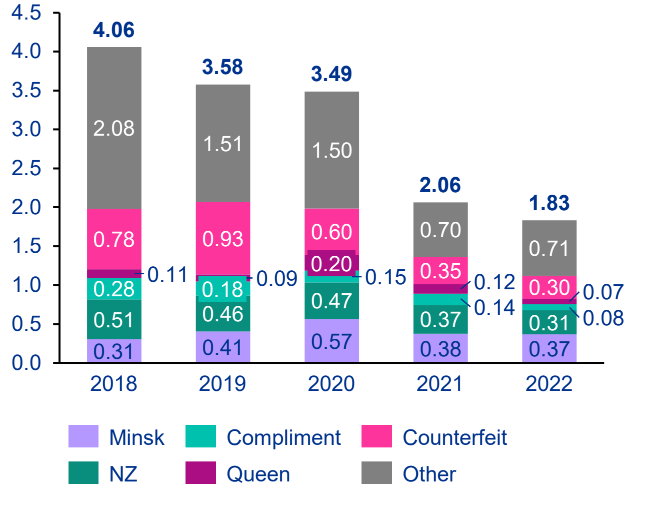


- Non-Domestic legal flows increased by 0.13bn (35%) cigarettes in 2022. Legal inflows of Duty Free Labelled products increased by 0.05bn, the largest increase amongst all origins
- C&C flows continued to decline, reaching 1.83bn in 2022. C&C flows from Belarus and Ukraine were the primary drivers of this decline (0.12bn and 0.07bn respectively)
  - Inflows from Belarus and Ukraine have a larger share of C&C because travellers from these countries are only allowed to carry 40 cigarettes when they visit Poland

C&C by country of origin – 2018-2022 (bn cigarettes)[(1)(a)]



C&C by brand – 2018-2022 (bn cigarettes)[(1)(a)]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022

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Portugal

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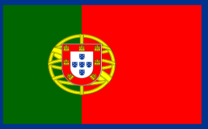


8.6bn
Cigarettes consumed

-0.6bn on 2021

0.2bn
C&C cigarettes consumed

-0.5bn on 2021

2.1%
Of total consumption was C&C

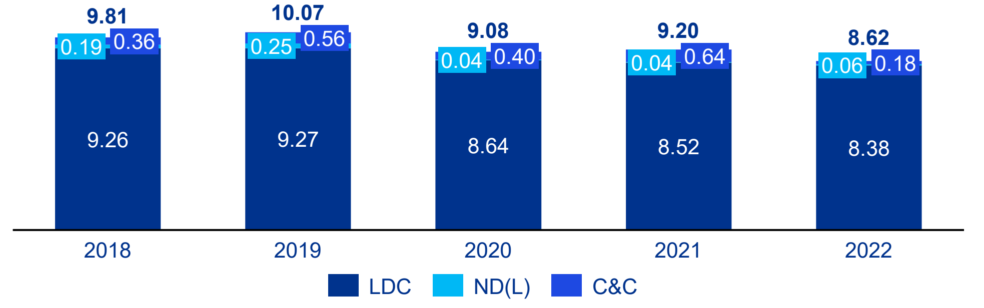
-4.9ppt on 2021

€32m
Total tax revenue lost from C&C

-€82m on 2021

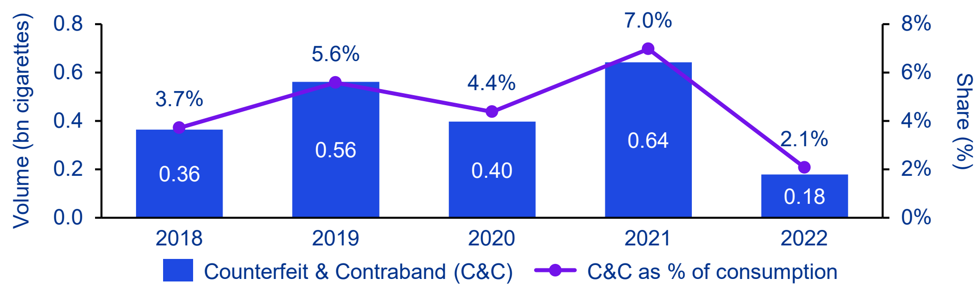
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

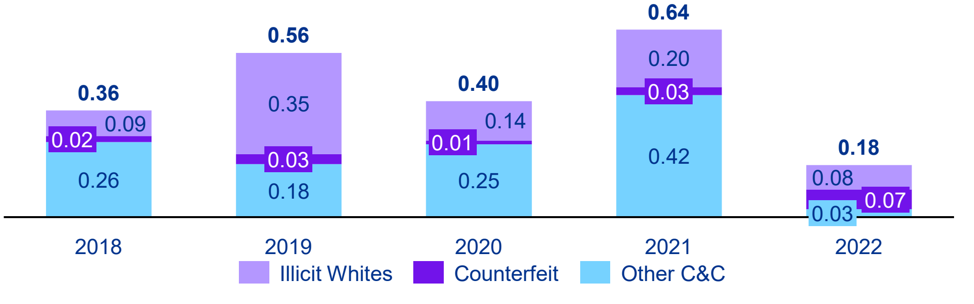


- C&C accounted for 2.1% of total cigarette consumption in 2022, a decline of 4.9ppt
- This decline was primarily driven by decreases in Other C&C and Illicit Whites, partially offset by an increase in Counterfeit consumption

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Portugal Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	9.68	9.77	8.99	8.77	8.68	(1%)
Outflows	(0.42)	(0.51)	(0.35)	(0.25)	(0.30)	21%
Legal Domestic Consumption (LDC)	9.26	9.27	8.64	8.52	8.38	(2%)
Non-Domestic Legal (ND(L))	0.19	0.25	0.04	0.04	0.06	47%
Counterfeit and Contraband (C&C)	0.36	0.56	0.40	0.64	0.18	(72%)
Total Non-Domestic	0.56	0.81	0.43	0.68	0.24	(65%)
Total Consumption	**9.81**	**10.07**	**9.08**	**9.20**	**8.62**	**(6%)**

- Total cigarette consumption decreased by 6% in 2022, driven by declines in both Legal Domestic Consumption and Non-Domestic inflows
- Decreased inflows were mainly due to lower flows of IWs with no country-specific labelling and smaller markets grouped under ‘Other’
  - Inflows from Unspecified origins, which was the largest source of Non-Domestic inflows in 2021, reduced to zero in 2022
- Outflows increased by ~21% in 2022. France remained the largest outflow destination, accounting for ~50% of total outflows, as Portugal is a popular holiday destination for French holidaymakers

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Portugal					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Counterfeit	0.02	0.03	0.01	0.03	0.07
IWs with no country-specific labelling	0.14	0.31	0.13	0.20	0.06
Duty Free Labelled	0.03	0.06	0.02	0.04	0.03
Other	0.36	0.41	0.27	0.42	0.08
Total Inflows	**0.56**	**0.81**	**0.43**	**0.68**	**0.24**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from Portugal					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
France	(0.24)	(0.22)	(0.20)	(0.13)	(0.15)
Spain	(0.01)	(0.02)	(0.01)	(0.03)	(0.04)
UK	(0.04)	(0.13)	(0.07)	(0.02)	(0.03)
Other	(0.13)	(0.13)	(0.07)	(0.07)	(0.09)
Total Outflows	**(0.42)**	**(0.51)**	**(0.35)**	**(0.25)**	**(0.30)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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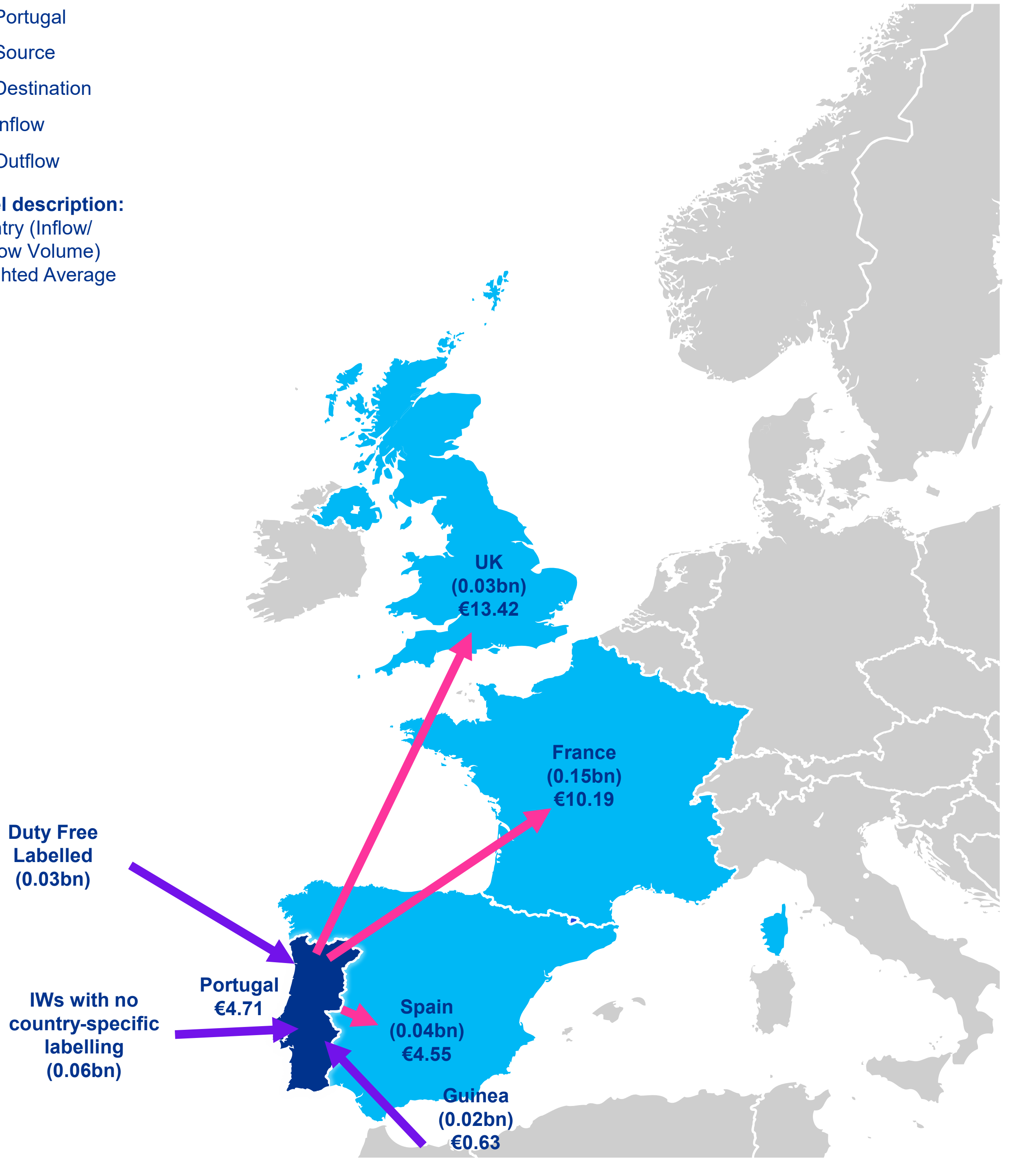
Key flows

Key inflows and outflows[1][a]

Portugal
Source
Destination
Inflow
Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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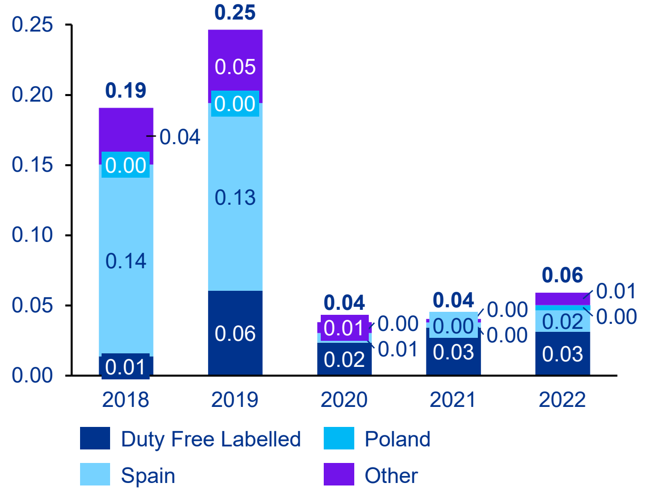
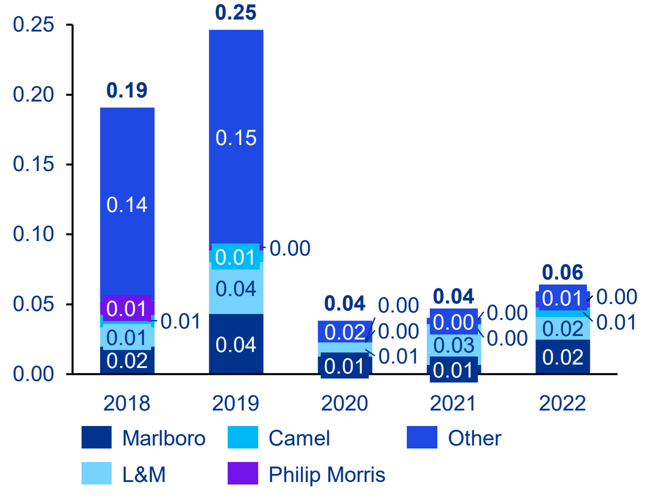
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

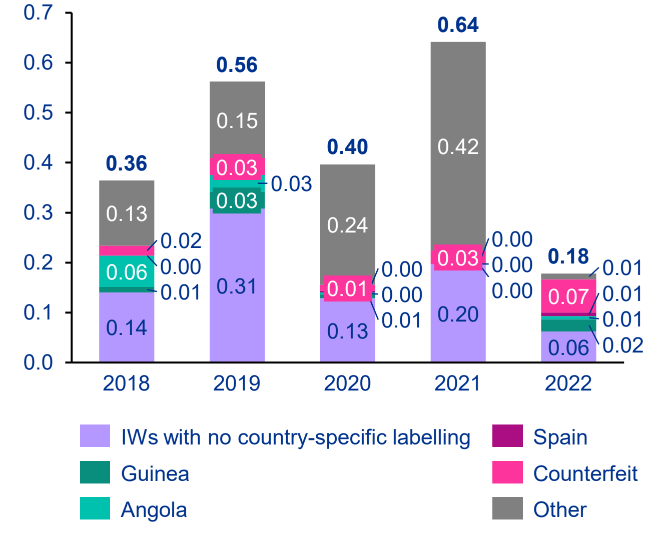


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

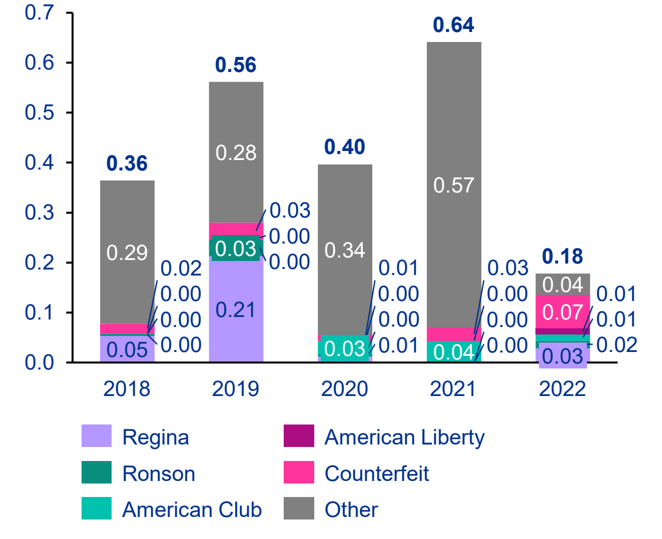


- ND(L) inflows increased by 0.02bn sticks in 2022, but remained well below the pre-pandemic levels
- C&C flows declined by ~72%, due to declines in illicit flows of IWs with no country-specific labelling and illicit flows from smaller markets grouped under 'Other'
  - The share of illicit flows from 'Other' smaller markets has declined from 65% in 2021 to ~6% in 2022

C&C by country of origin – 2018-2022 (bn cigarettes)[1](a)



C&C by brand – 2018-2022 (bn cigarettes)[1](a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022

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Romania

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Romania

27.5bn

Cigarettes consumed

+0.9bn on 2021

1.8bn

C&C cigarettes consumed

-0.4bn on 2021

6.4%

Of total consumption was C&C

-1.5ppt on 2021

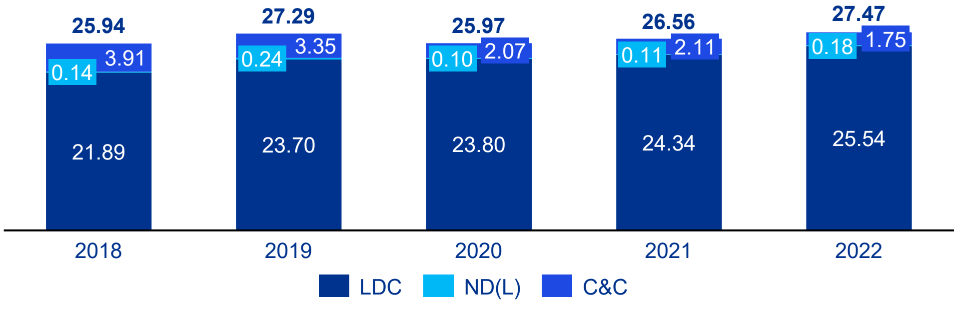
€259m

Total tax revenue lost from C&C

-€52m on 2021

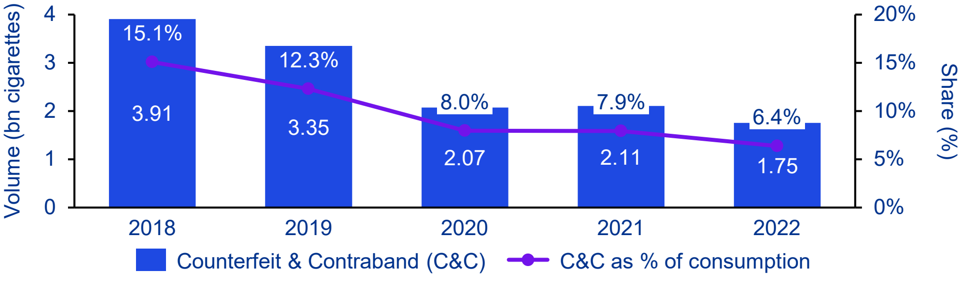
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

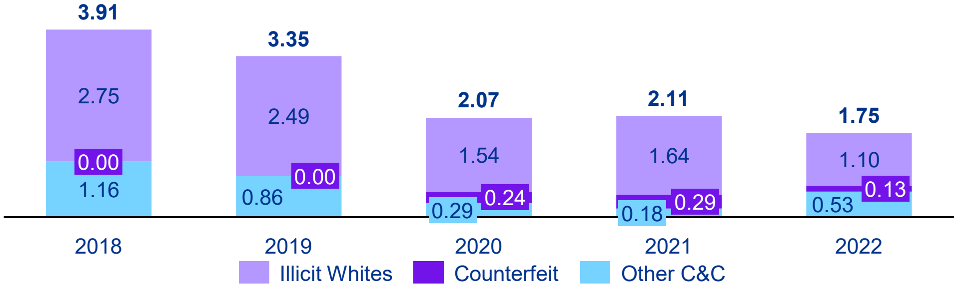


- C&C as a share of total consumption declined by 1.5ppt to 6.4%, the lowest incidence in the reporting period
- The decline in flows of Illicit Whites and Counterfeit was partially offset by an increase in flows of Other C&C

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Romania Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	24.23	25.14	24.90	25.70	27.45	7%
Outflows	(2.34)	(1.44)	(1.10)	(1.36)	(1.91)	41%
Legal Domestic Consumption (LDC)	21.89	23.70	23.80	24.34	25.54	5%
Non-Domestic Legal (ND(L))	0.14	0.24	0.10	0.11	0.18	54%
Counterfeit and Contraband (C&C)	3.91	3.35	2.07	2.11	1.75	(17%)
Total Non-Domestic	4.05	3.58	2.17	2.22	1.93	(13%)
Total Consumption	**25.94**	**27.29**	**25.97**	**26.56**	**27.47**	**3%**

- Total cigarette consumption increased by 3% or 0.91bn, driven by increasing legal domestic consumption. This was partially offset by declining Non-Domestic flows
- Inflows decreased in 2022, driven by declining flows from IWs with no country-specific labelling and 'Other' smaller markets. Inflows of Duty Free Labelled products increased
- Outflows increased in 2022 primarily due to increased flows to the UK, France and Ireland

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Romania					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
IWs with no country-specific labelling	2.35	2.13	1.10	1.40	0.93
Duty Free Labelled	0.17	0.25	0.19	0.17	0.52
Other	1.53	1.20	0.87	0.64	0.48
Total Inflows	**4.05**	**3.58**	**2.17**	**2.22**	**1.93**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from Romania					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
UK	(1.06)	(0.44)	(0.16)	(0.34)	(0.58)
France	(0.31)	(0.20)	(0.29)	(0.31)	(0.53)
Ireland	(0.17)	(0.11)	(0.19)	(0.15)	(0.26)
Germany	(0.22)	(0.22)	(0.20)	(0.19)	(0.18)
Other	(0.58)	(0.48)	(0.26)	(0.36)	(0.37)
Total Outflows	**(2.34)**	**(1.44)**	**(1.10)**	**(1.36)**	**(1.91)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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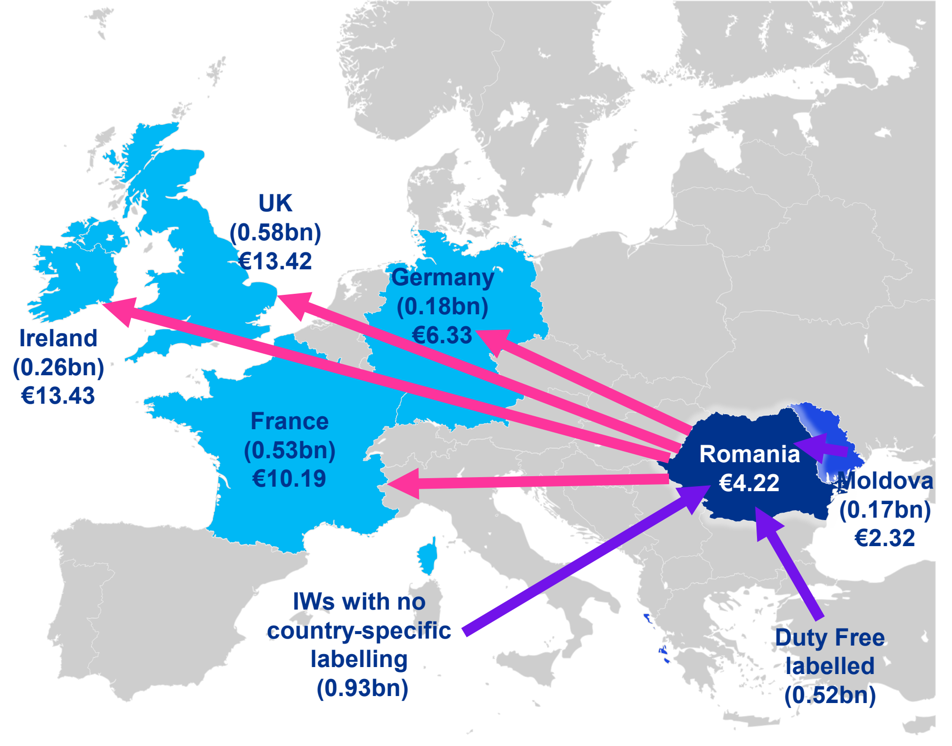
Key flows and C&C consumption patterns

Key inflows and outflows[(1)(a)]

- Romania
- Source
- Destination
- Inflow
- Outflow

Label description:
Country (Inflow/ Outflow Volume) Weighted Average Price



C&C % by region[(1)(b)(c)]

Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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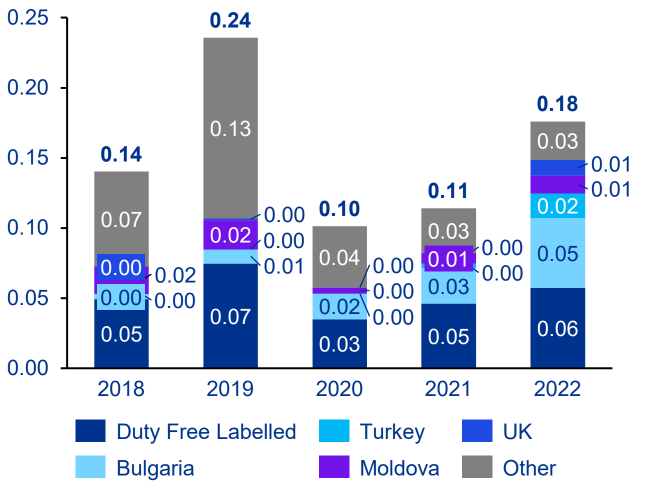
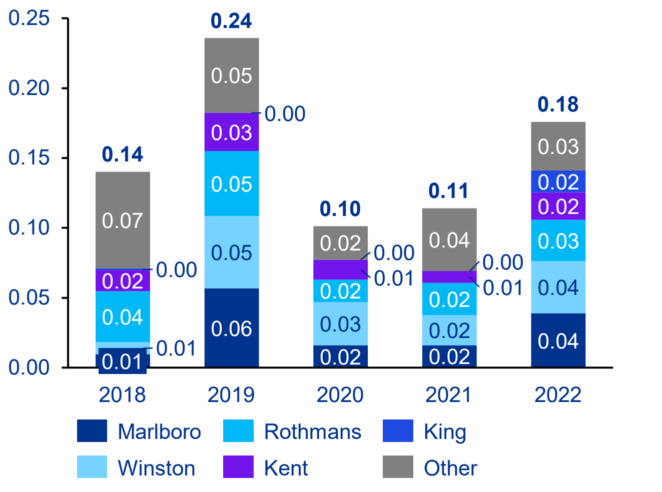
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

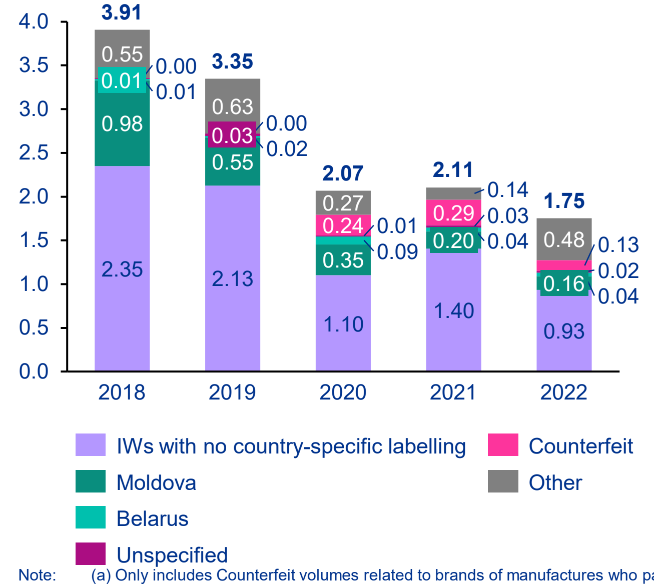


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

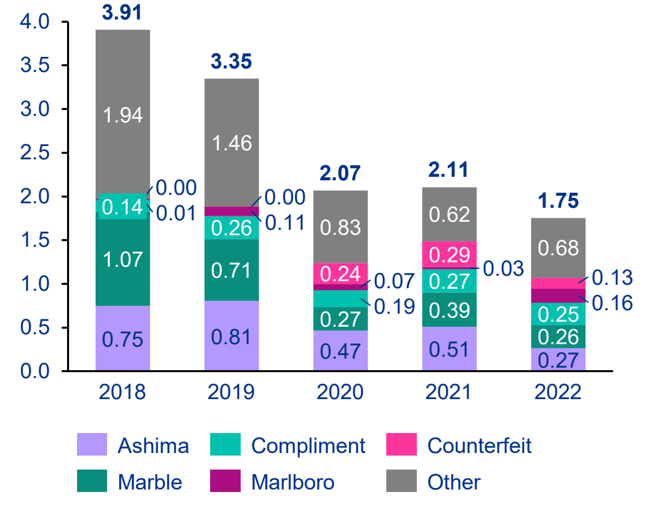


- ND(L) flows increased by 54% (~0.07bn) in 2022, driven by higher inflows from all major source markets
- Illicit consumption declined by 0.36bn in 2022 to the lowest volume observed during the reporting period, driven by reduced flows of IWs with no country-specific labelling and Counterfeit products
- Regional C&C was the highest in Suceava and Botosani regions bordering Moldova and Ukraine

C&C by country of origin – 2018-2022 (bn cigarettes)[1](a)



C&C by brand – 2018-2022 (bn cigarettes)[1](a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022

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Slovakia

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C&C cigarette consumption and total consumption

6.1bn

Cigarettes consumed

-0.2bn on 2021

0.2bn

C&C cigarettes consumed

+0.00bn on 2021

2.8%

Of total consumption was C&C

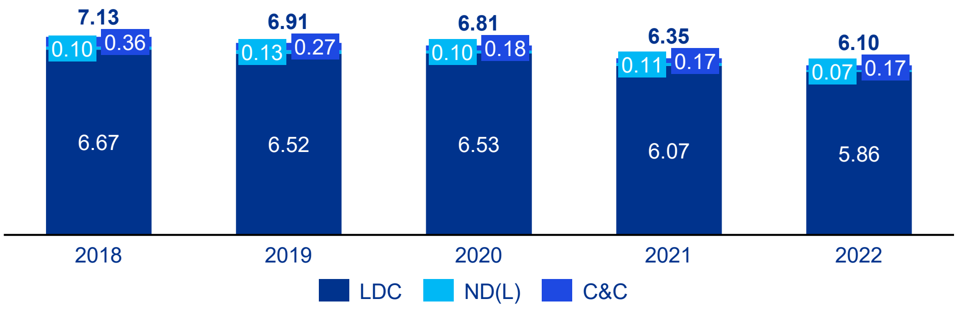
+0.1ppt on 2021

€27m

Total tax revenue lost from C&C

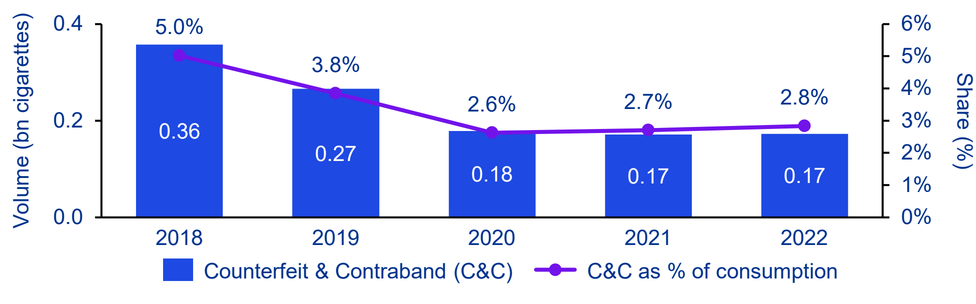
+€3m on 2021

Total consumption – 2018-2022 (bn cigarettes)[1][2]

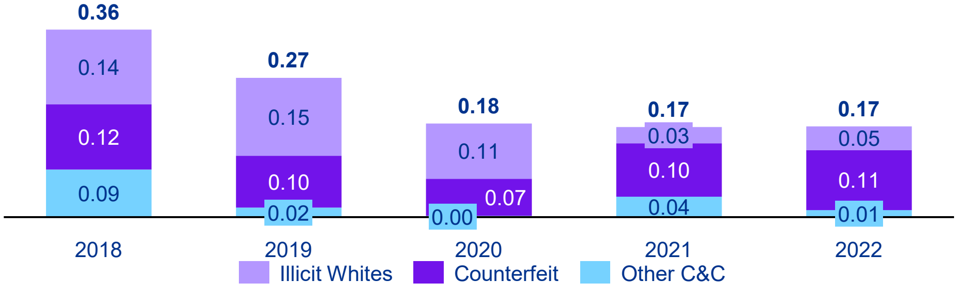


- C&C accounted for 2.8% of total cigarette consumption in 2022. After a decline in 2020, C&C incidence has remained relatively stable in 2021 and 2022
- Total C&C remained at 0.17bn as a decline in flows of Other C&C was offset by an increase in Illicit Whites and Counterfeit

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[1][2]



C&C consumption by type – 2018-2022 (bn cigarettes)[1][2][a]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Slovakia Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	7.13	7.08	6.90	6.36	6.17	(3%)
Outflows	(0.46)	(0.57)	(0.37)	(0.29)	(0.32)	10%
Legal Domestic Consumption (LDC)	6.67	6.52	6.53	6.07	5.86	(4%)
Non-Domestic Legal (ND(L))	0.10	0.13	0.10	0.11	0.07	(30%)
Counterfeit and Contraband (C&C)	0.36	0.27	0.18	0.17	0.17	1%
Total Non-Domestic	0.46	0.39	0.28	0.28	0.25	(11%)
Total Consumption	**7.13**	**6.91**	**6.81**	**6.35**	**6.10**	**(4%)**

- Total cigarette consumption declined by ~4% (0.25bn), as both LDC and Non-Domestic consumption declined
- Total inflows decreased in 2022, driven by decline in flows from Czech Republic and ‘Other’ smaller markets
- Austria, Germany and Czech Republic remained the main outflow markets

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Slovakia					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Counterfeit	0.12	0.10	0.07	0.10	0.11
IWs with no country-specific labelling	0.14	0.13	0.07	0.03	0.04
Poland	0.01	0.01	0.01	0.01	0.02
Czech Republic	0.02	0.06	0.06	0.05	0.02
Other	0.16	0.10	0.07	0.09	0.06
Total Inflows	**0.46**	**0.39**	**0.28**	**0.28**	**0.25**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from Slovakia					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Austria	(0.18)	(0.28)	(0.15)	(0.13)	(0.12)
Germany	(0.08)	(0.10)	(0.10)	(0.06)	(0.07)
Czech Republic	(0.07)	(0.10)	(0.03)	(0.05)	(0.06)
Other	(0.13)	(0.09)	(0.08)	(0.04)	(0.06)
Total Outflows	**(0.46)**	**(0.57)**	**(0.37)**	**(0.29)**	**(0.32)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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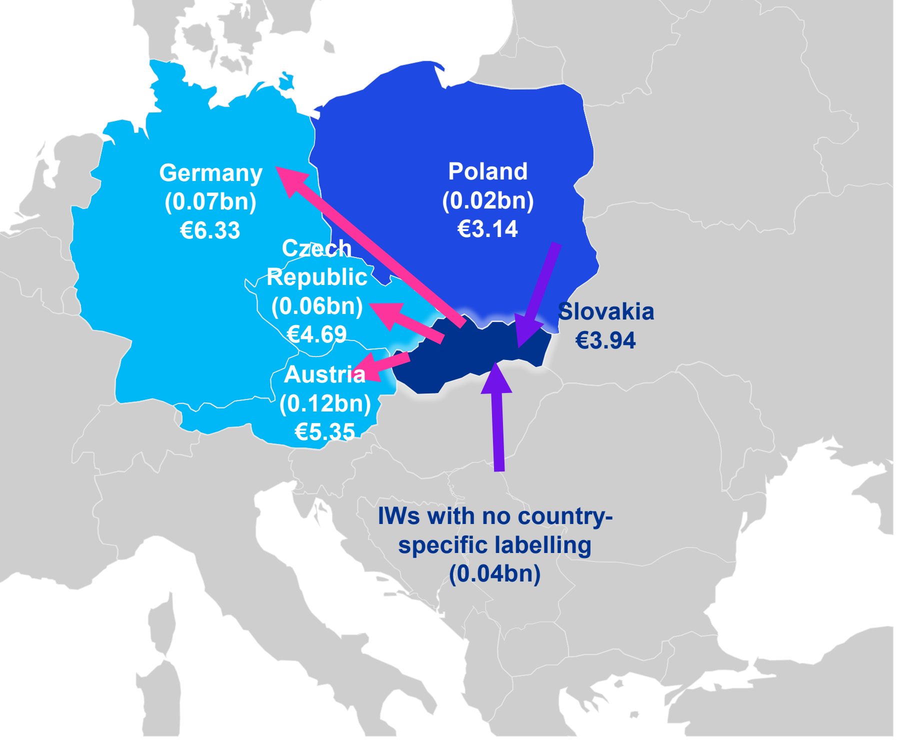
Key flows and C&C consumption patterns

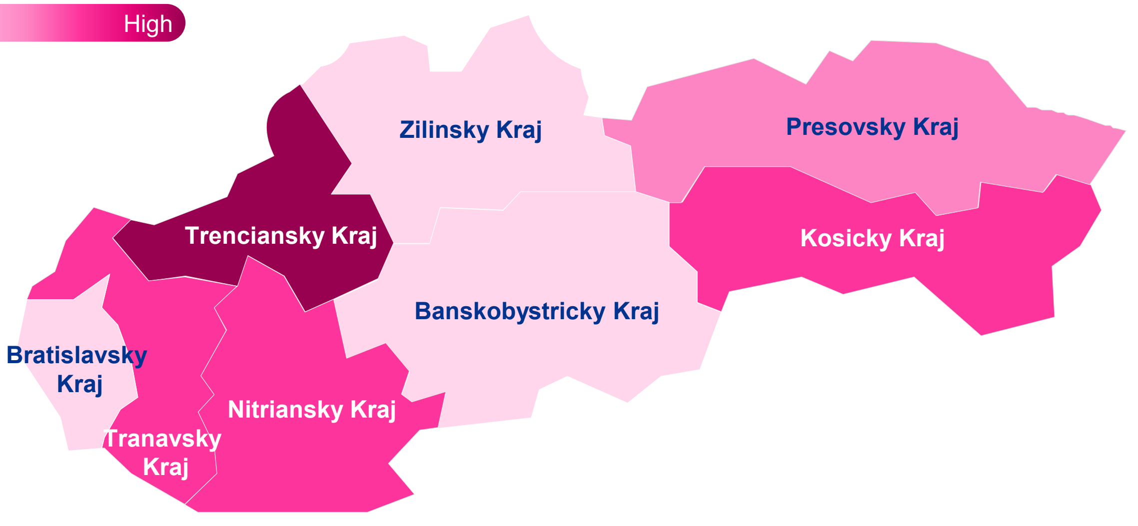
Key inflows and outflows(1)(a)

Slovakia
Source
Destination
Inflow
Outflow

Label description:
Country (Inflow/
Outflow Volume)
WAP



C&C % by region(1)(b)(c)



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022

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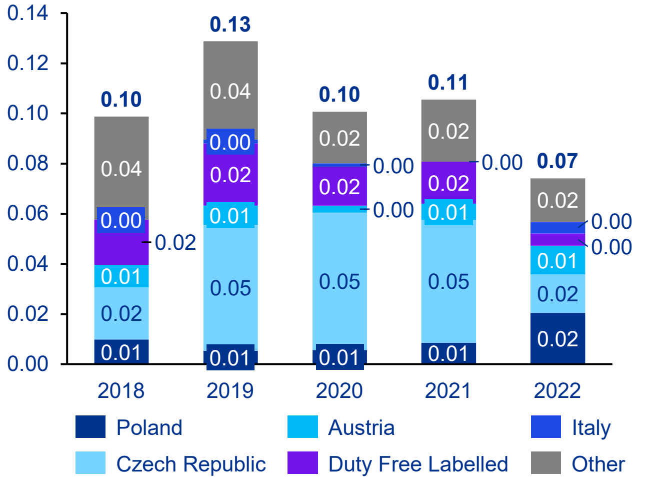
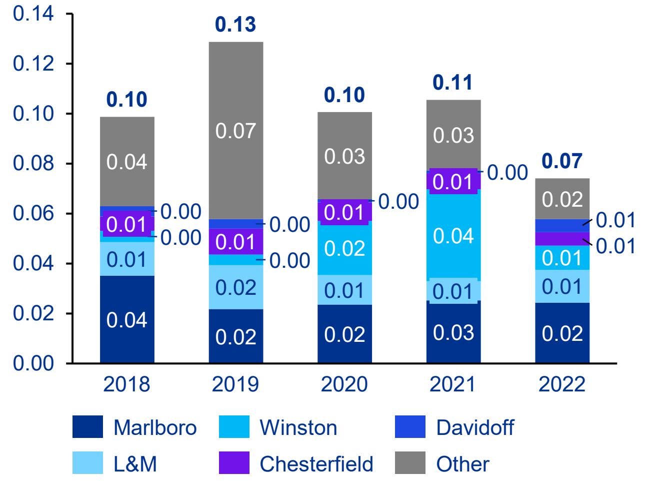
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)(1)

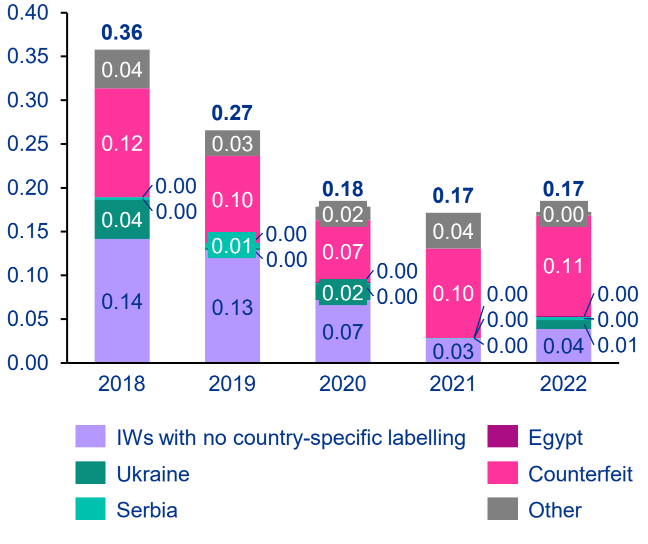


ND(L) by brand – 2018-2022 (bn cigarettes)(1)

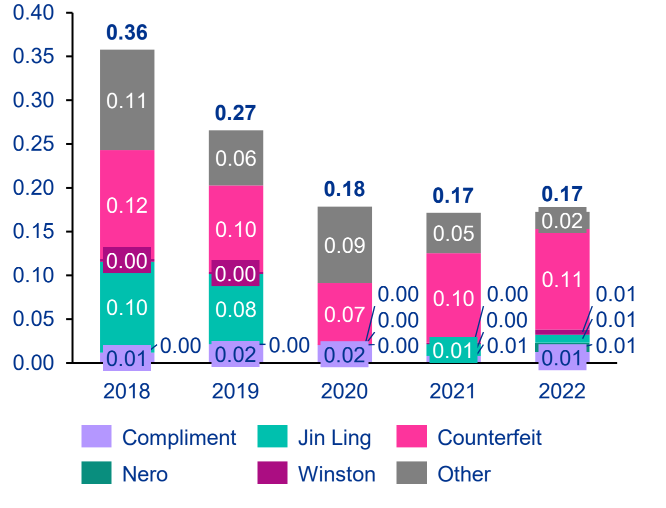


- ND(L) inflows declined in 2022, driven by declining legal flows of Czech Republic and Duty Free Labelled products
- Illicit consumption was largely in line with 2021 as an increase in flows from Serbia, Counterfeit and IWs with no country-specific labelling was offset by declining C&C volumes from 'Other' smaller markets

C&C by country of origin – 2018-2022 (bn cigarettes)(1)(a)



C&C by brand – 2018-2022 (bn cigarettes)(1)(a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys
Source: (1) KPMG EU Flows Calculation, 2018-2022

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Slovenia

KPMG
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Slovenia

2.7bn

Cigarettes consumed

-0.1bn on 2021

0.1bn

C&C cigarettes consumed

-0.1bn on 2021

3.6%

Of total consumption was C&C

-4.0ppt on 2021

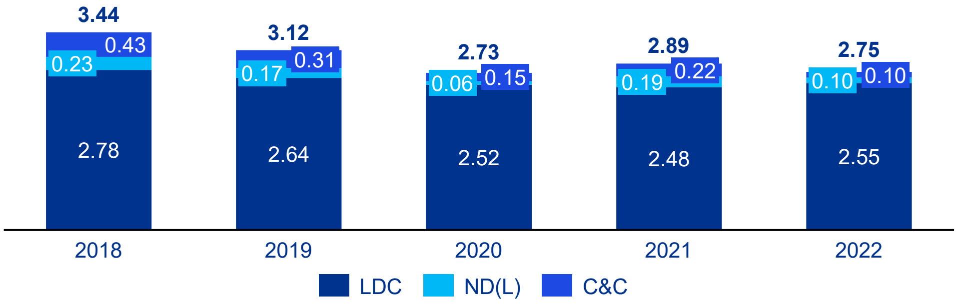
€16m

Total tax revenue lost from C&C

-€18m on 2021

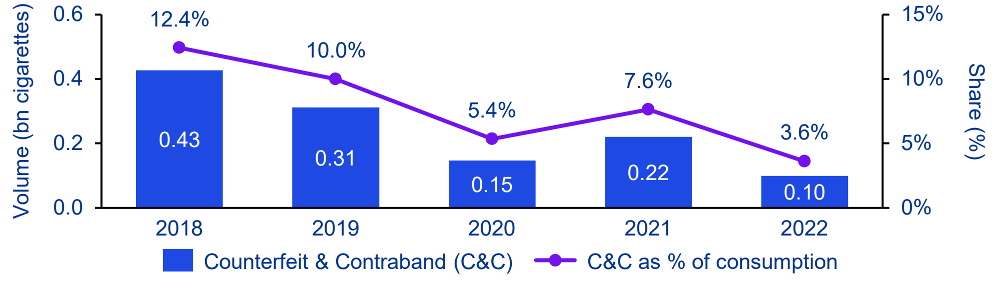
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)[(1)(2)]

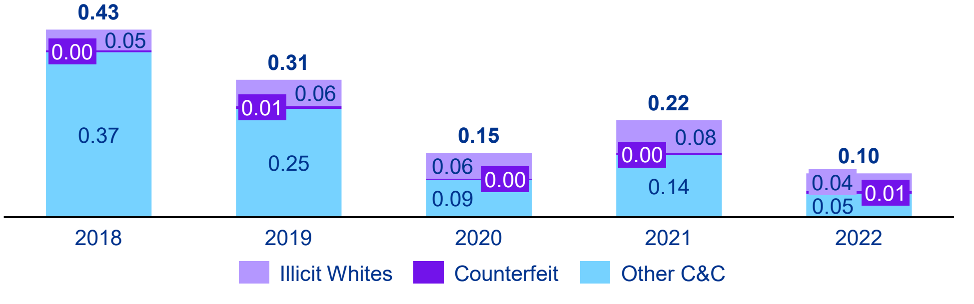


- C&C as a share of total cigarette consumption decreased by 4ppt to 3.6%, driven by a decline in Other C&C and Illicit Whites

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[(1)(2)]



C&C consumption by type – 2018-2022 (bn cigarettes)[(1)(2)(a)]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total Slovenia Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	3.48	3.37	3.21	3.19	3.33	4%
Outflows	(0.70)	(0.73)	(0.68)	(0.71)	(0.78)	10%
Legal Domestic Consumption (LDC)	2.78	2.64	2.52	2.48	2.55	3%
Non-Domestic Legal (ND(L))	0.23	0.17	0.06	0.19	0.10	(49%)
Counterfeit and Contraband (C&C)	0.43	0.31	0.15	0.22	0.10	(55%)
Total Non-Domestic	0.66	0.48	0.21	0.41	0.20	(52%)
Total Consumption	**3.44**	**3.12**	**2.73**	**2.89**	**2.75**	**(5%)**

- Total consumption decreased by ~5% or 0.14bn cigarettes and remains below pre-pandemic levels
- Non-Domestic inflows decreased by 52% as inflows from four out of the five top origins and smaller markets grouped under 'Other' declined
- Outflows from Slovenia increased by 10%, as a 42% increase in outflows to Italy was partially offset by declining flows to Austria

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to Slovenia					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Bosnia And Herzegovina	0.12	0.12	0.03	0.05	0.02
Kosovo	0.01	0.01	0.01	0.02	0.02
Hungary	0.03	0.00	0.01	0.00	0.02
Romania	0.09	0.00	0.01	0.06	0.02
IWs with no country-specific labelling	0.04	0.05	0.06	0.06	0.02
Other	0.37	0.30	0.10	0.22	0.09
Total Inflows	**0.66**	**0.48**	**0.21**	**0.41**	**0.20**

Total outflows by destination – 2018-2022[(1)(2)]

Outflows from Slovenia					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Italy	(0.18)	(0.41)	(0.45)	(0.32)	(0.46)
Austria	(0.39)	(0.20)	(0.11)	(0.24)	(0.20)
Other	(0.13)	(0.12)	(0.12)	(0.14)	(0.12)
Total Outflows	**(0.70)**	**(0.73)**	**(0.68)**	**(0.71)**	**(0.78)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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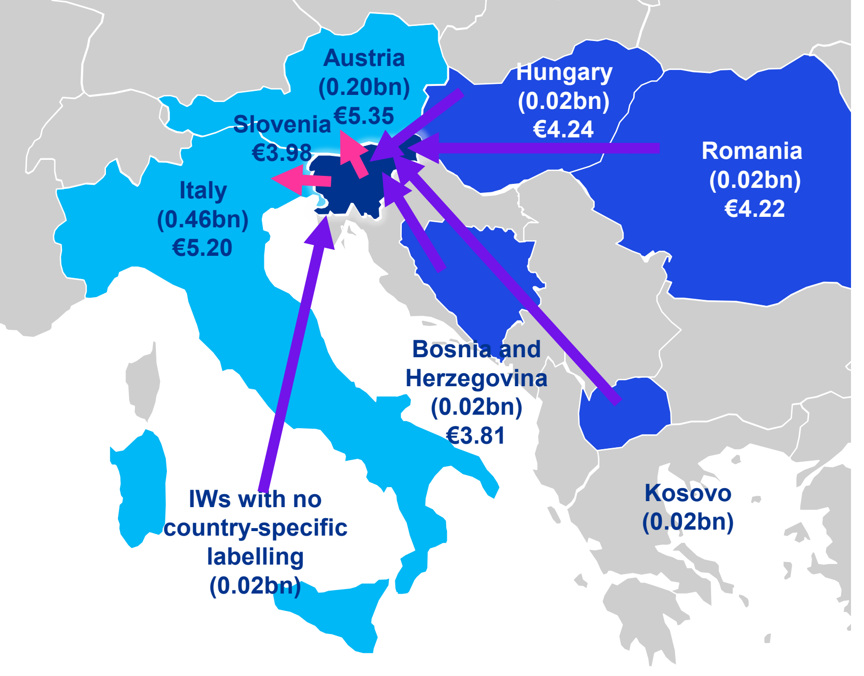
Key flows and C&C consumption patterns

Key inflows and outflows[(1)(a)]

Slovenia
Source
Destination
Inflow
Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



C&C % by region[(1)(b)(c)]

Low High

Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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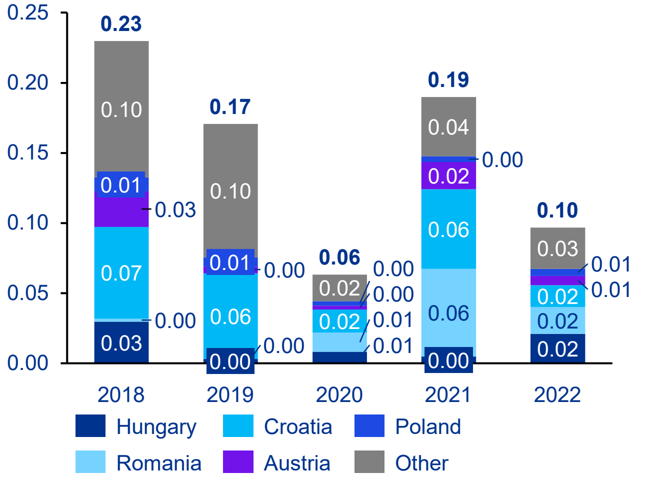
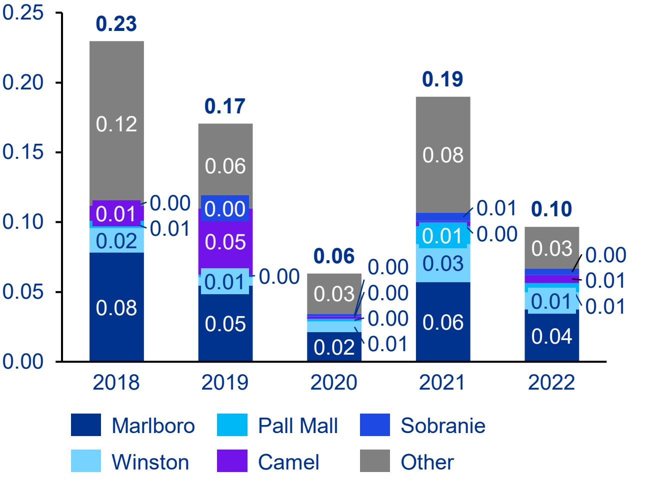
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

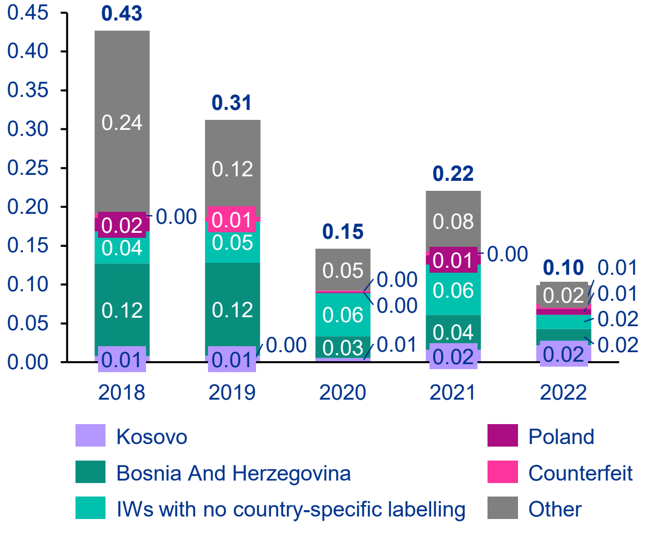


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

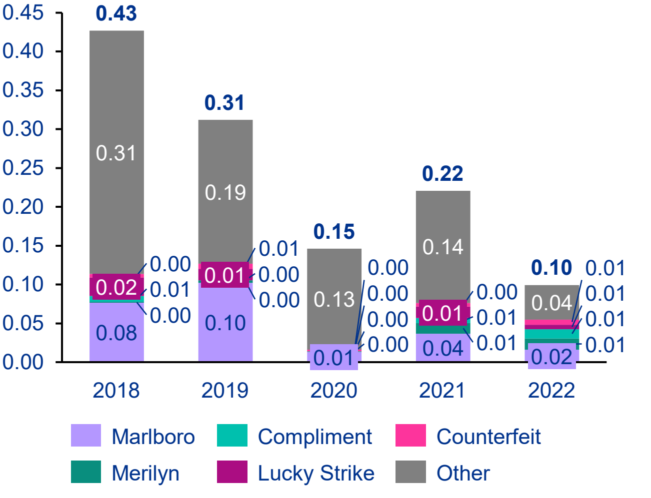


- Non-Domestic legal flows declined by 0.09bn (~49%), mainly driven by reduced flows from Romania and Croatia
- Illicit consumption declined to 0.1bn in 2022 driven by lower inflows of IWs with no country-specific labelling and flows from smaller markets grouped under 'Other'
- Jugovzhodna Slovenija region had the highest proportion of C&C consumption in 2022

C&C by country of origin – 2018-2022 (bn cigarettes)[1][a]



C&C by brand – 2018-2022 (bn cigarettes)[1][a]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022

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Spain

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Spain

43.2bn

Cigarettes consumed

+1.2n on 2021

1.6bn

C&C cigarettes consumed

+0.2bn on 2021

3.7%

Of total consumption was C&C

+0.4ppt on 2021

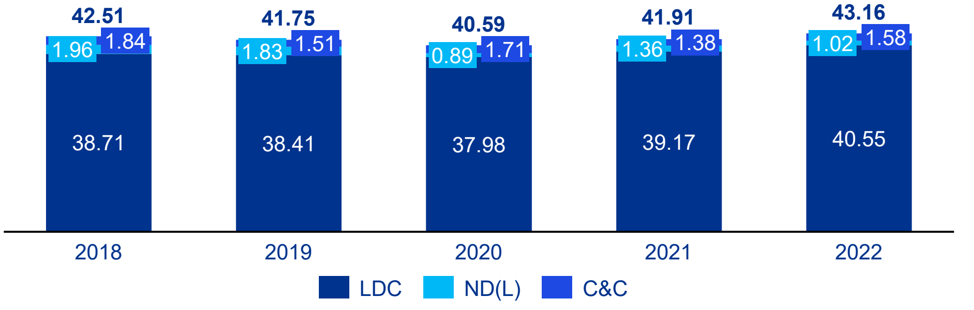
€286m

Total tax revenue lost from C&C

+€38m on 2021

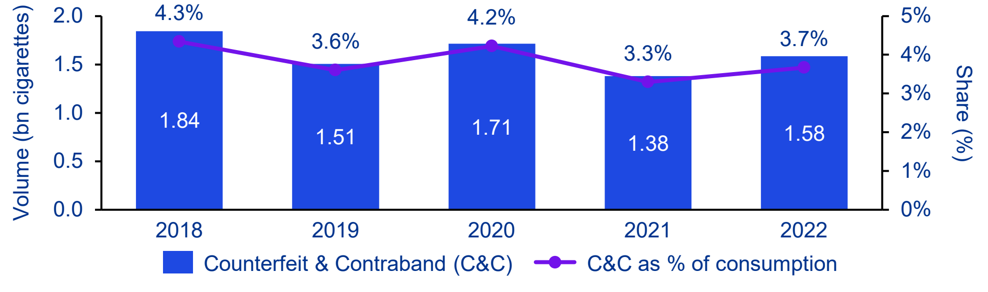
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)(1)(2)

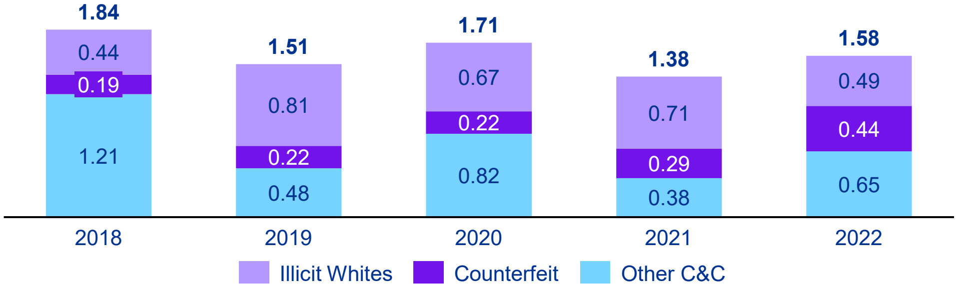


- C&C as a share of total consumption increased to 3.7% in 2022
- This increase was driven by an increase in Other C&C and Counterfeit inflows, partially offset by a decline in Illicit Whites

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022(1)(2)



C&C consumption by type – 2018-2022 (bn cigarettes)(1)(2)(a)



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2]

Total Spain Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	44.62	45.02	41.40	42.12	43.79	4%
Outflows	(5.91)	(6.61)	(3.42)	(2.95)	(3.24)	10%
Legal Domestic Consumption (LDC)	38.71	38.41	37.98	39.17	40.55	4%
Non-Domestic Legal (ND(L))	1.96	1.83	0.89	1.36	1.02	(25%)
Counterfeit and Contraband (C&C)	1.84	1.51	1.71	1.38	1.58	15%
Total Non-Domestic	3.80	3.33	2.61	2.74	2.61	(5%)
Total Consumption	**42.51**	**41.75**	**40.59**	**41.91**	**43.16**	**3%**

- Total cigarette consumption increased by 3% (1.25bn) in 2022, driven by increased Legal Domestic Sales
- Non-Domestic flows declined, driven by a decline in flows of IWs with no country specific labelling and a number of smaller volume markets grouped under ‘Other’. This was partly offset by an increase in flows from Unspecified origins and Counterfeit packs. In 2022, over 94% of Unspecified origin packs (0.49bn cigarettes) were of the brand Ducal. This brand has in prior years predominantly borne Gibraltarian labelling
- Outflows increased by 10% to 3.24bn in 2022, with neighbouring France accounting for the majority (81% of total outflows)

Total inflows by country of origin – 2018-2022[1][a]

Inflows to Spain					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Unspecified	0.04	0.00	0.00	0.06	0.52
IWs with no country-specific labelling	0.50	0.59	0.64	0.65	0.46
Counterfeit	0.19	0.22	0.22	0.29	0.44
Other	3.08	2.52	1.74	1.74	1.18
Total Inflows	**3.80**	**3.33**	**2.61**	**2.74**	**2.61**

Total outflows by destination – 2018-2022[1][a]

Outflows from Spain					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
France	(3.61)	(4.08)	(2.77)	(2.56)	(2.62)
Other	(2.31)	(2.52)	(0.65)	(0.39)	(0.62)
Total Outflows	**(5.91)**	**(6.61)**	**(3.42)**	**(2.95)**	**(3.24)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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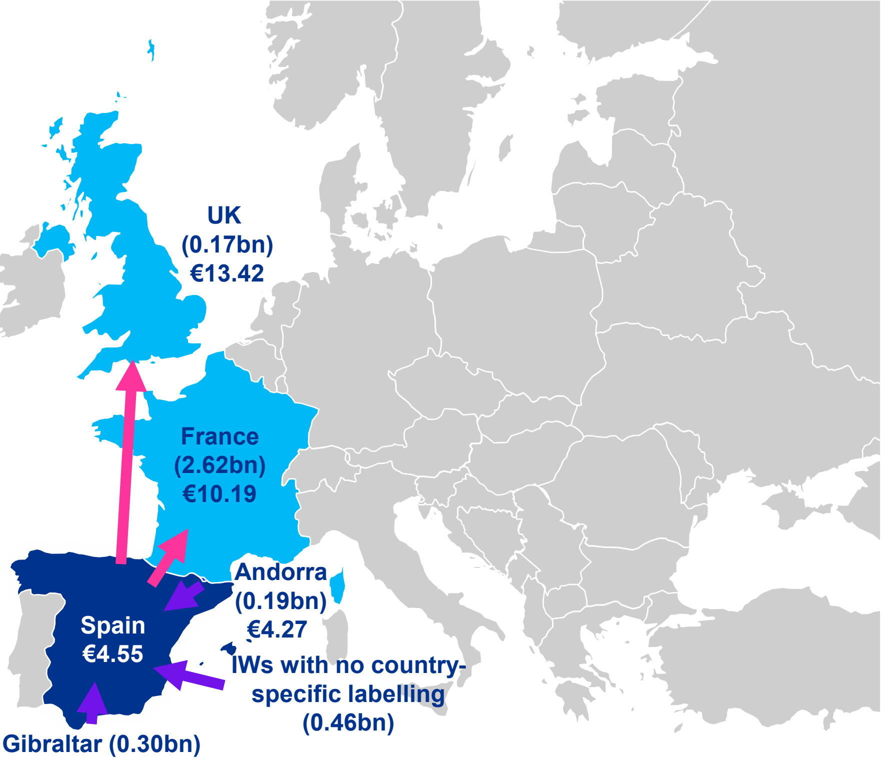
Key flows and C&C consumption patterns

Key inflows and outflows[(1)(a)]

- Spain
- Source
- Destination
- Inflow
- Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



C&C % by region[(1)(b)(c)]

Low High

Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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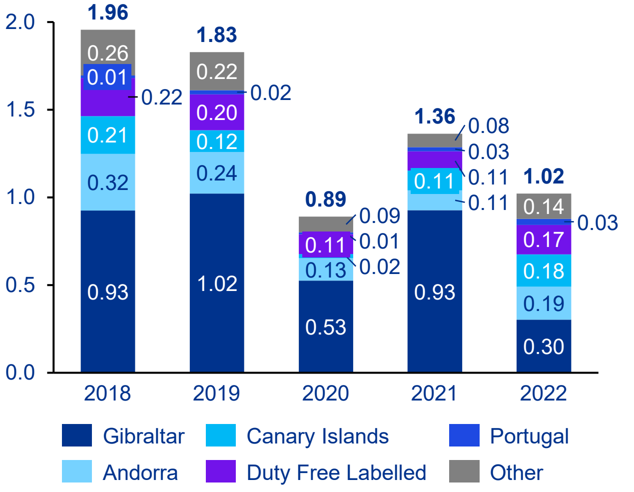
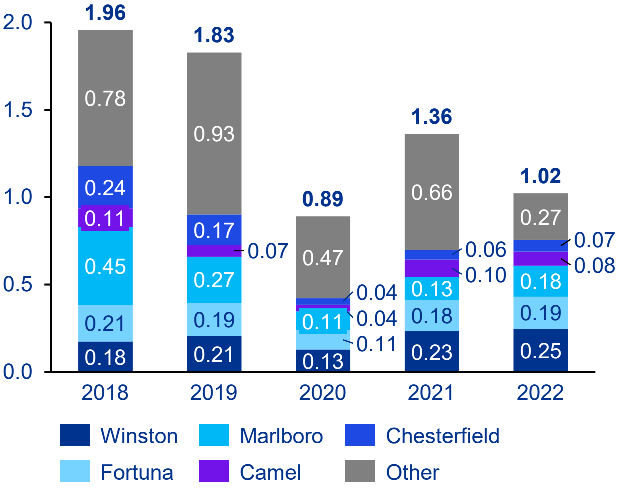
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

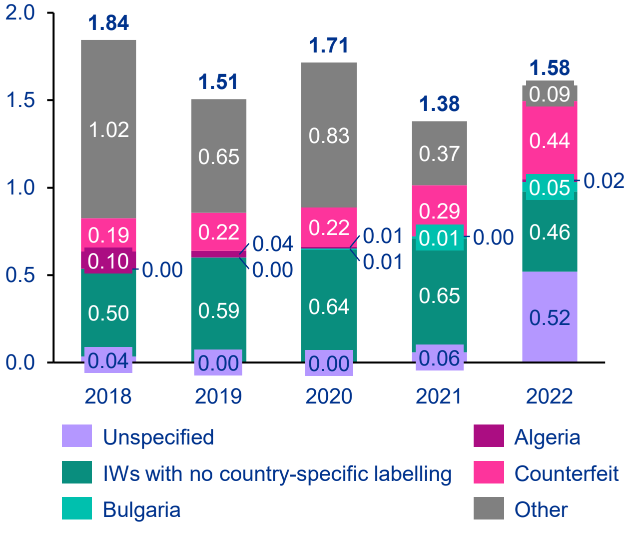


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

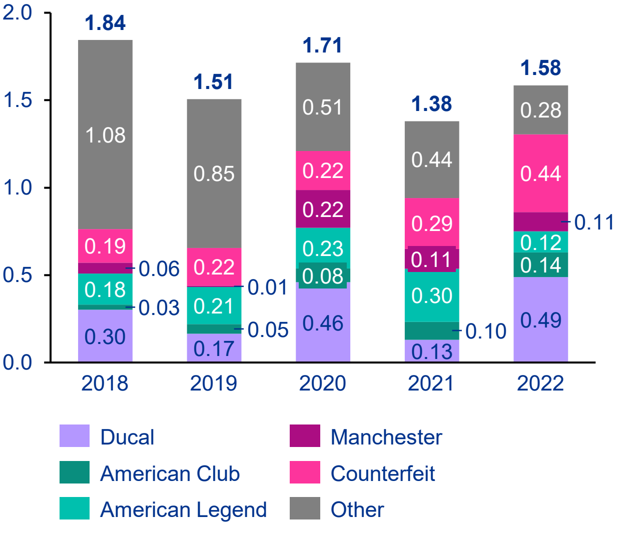


- Legal inflows (ND(L)) decreased by 25% or 0.34bn, primarily driven by lower flows of Gibraltar labelled products. This decline was primarily due to a higher proportion of Ducal inflows bearing the labelling of Unspecified origins. In prior years these predominantly had Gibraltar labelling. This ND(L) decrease was partially offset by increasing flows from Andorra, Canary Islands and Duty Free Labelled products, gradually returning to pre-pandemic levels
- C&C inflows increased in 2022, primarily driven by an increase in flows from unspecified origins and flows of Counterfeit products
- The highest level of C&C incidence was observed in Andalucia, in the South of Spain

C&C by country of origin – 2018-2022 (bn cigarettes)[1](a)



C&C by brand – 2018-2022 (bn cigarettes)[1](a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022

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Sweden

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Sweden

C&C cigarette consumption and total consumption

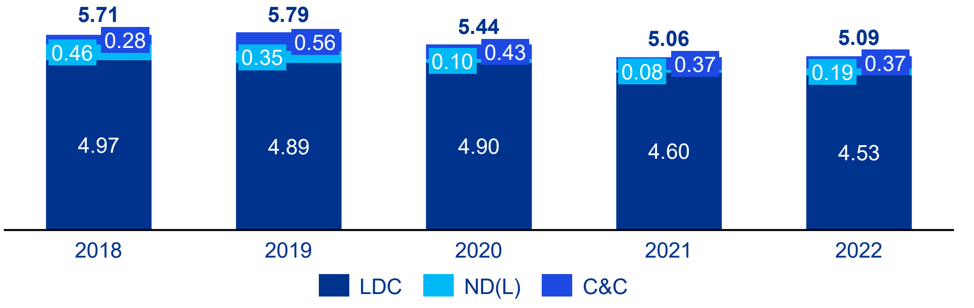
5.1bn
Cigarettes consumed
+0.03bn on 2021

0.4bn
C&C cigarettes consumed
+0.00bn on 2021

7.3%
Of total consumption was C&C
+0.00ppt on 2021

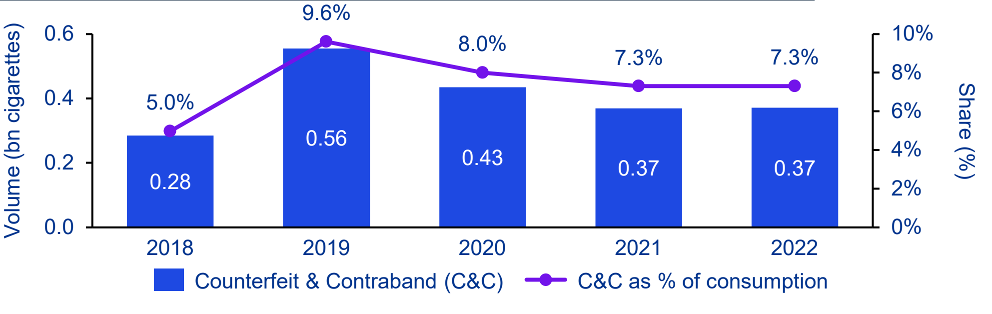
€78m
(SEK850m)[3]
Total tax revenue lost from C&C
-€1m on 2021

Total consumption – 2018-2022 (bn cigarettes)[(1)(2)]

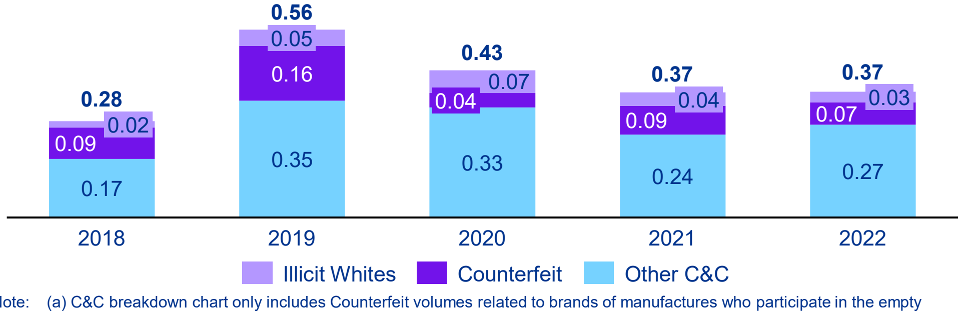


- C&C as a share of total consumption remained stable at 7.3%, in line with 2021
- A decline in Counterfeit and Illicit Whites was offset by an increase in Other C&C

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[(1)(2)]



C&C consumption by type – 2018-2022 (bn cigarettes)[(1)(2)(a)]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data; (3) EUR 1 = SEK 10.901, InforEuro, European Commission, December 2022

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2]

Total Sweden Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	5.31	5.18	5.01	4.79	4.79	0%
Outflows	(0.34)	(0.29)	(0.11)	(0.18)	(0.26)	46%
Legal Domestic Consumption (LDC)	4.97	4.89	4.90	4.60	4.53	(2%)
Non-Domestic Legal (ND(L))	0.46	0.35	0.10	0.08	0.19	122%
Counterfeit and Contraband (C&C)	0.28	0.56	0.43	0.37	0.37	1%
Total Non-Domestic	0.74	0.90	0.54	0.45	0.56	23%
Total Consumption	**5.71**	**5.79**	**5.44**	**5.06**	**5.09**	**1%**

- Total cigarette consumption remained relatively stable in 2022, with an increase in outflows largely offset by an increase in Non-Domestic inflows
- Increased inflows were due to higher flows from Duty Free Labelled products and Poland, partly offset by a decrease in Counterfeit
- Total outflows increased by 46%, principally driven by increased outflows to neighbouring Norway against a backdrop of increased cross-border travel and shopping as COVID-19 restrictions eased

Total inflows by country of origin – 2018-2022[1][a]

Inflows to Sweden					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Duty Free Labelled	0.23	0.26	0.17	0.07	0.15
Poland	0.05	0.10	0.07	0.07	0.09
Counterfeit	0.09	0.16	0.04	0.09	0.07
Latvia	0.01	0.04	0.01	0.05	0.05
Turkey	0.00	0.01	0.02	0.01	0.02
Other	0.36	0.33	0.23	0.17	0.18
Total Inflows	**0.74**	**0.90**	**0.54**	**0.45**	**0.56**

Total outflows by destination – 2018-2022[1][a]

Outflows from Sweden					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Norway	(0.21)	(0.16)	(0.02)	(0.09)	(0.17)
Denmark	(0.03)	(0.08)	(0.03)	(0.07)	(0.05)
Other	(0.10)	(0.04)	(0.06)	(0.02)	(0.04)
Total Outflows	**(0.34)**	**(0.29)**	**(0.11)**	**(0.18)**	**(0.26)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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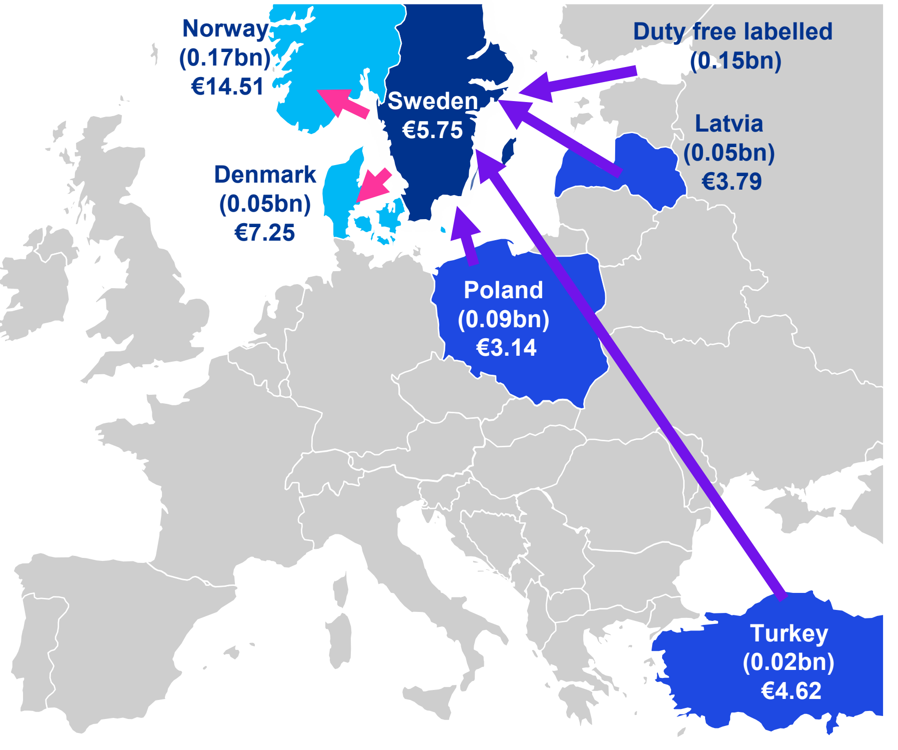
Key flows and C&C consumption patterns

Key inflows and outflows[1](a)

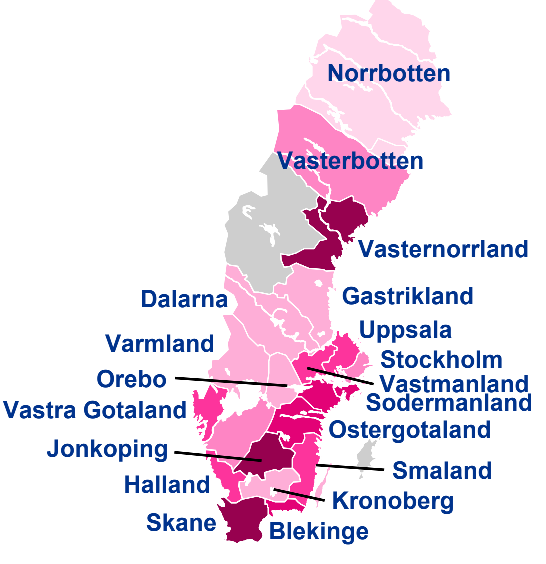
- Sweden
- Source
- Destination
- Inflow
- Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



C&C % by region[1](b)(c)

Low High



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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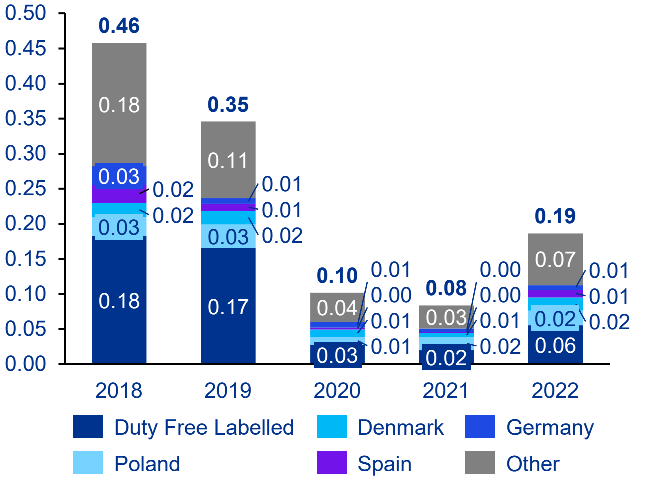
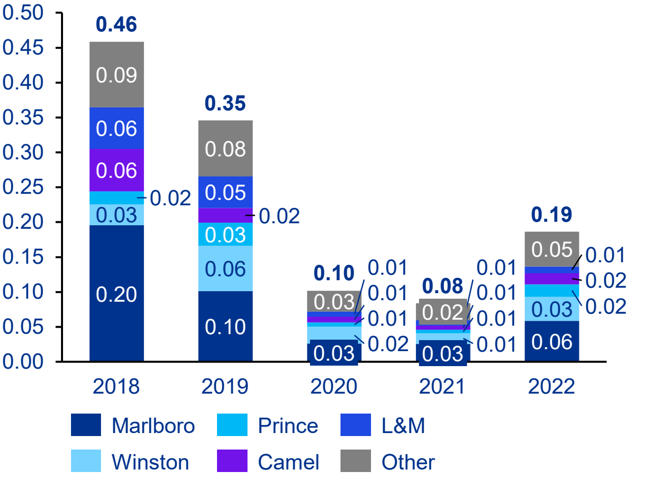
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

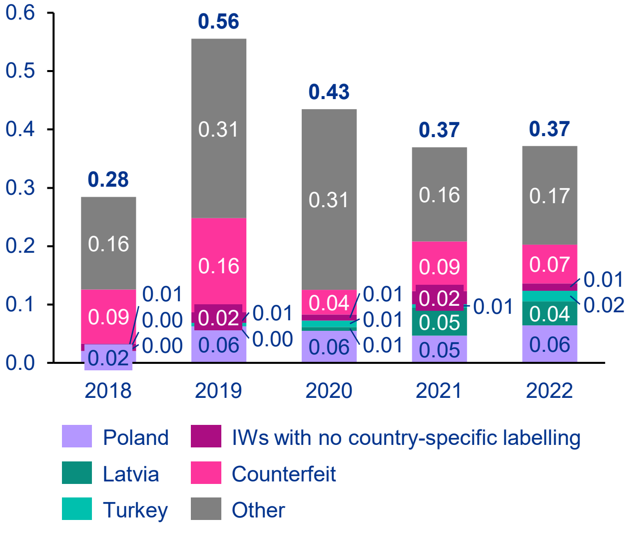


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

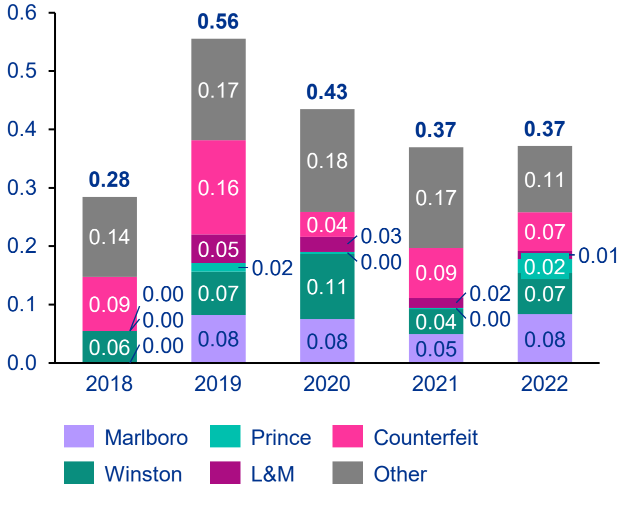


- Non-Domestic legal flows increased to 0.19bn in 2022, but remained below pre-pandemic levels. This increase was primarily driven by larger flows of Duty Free Labelled products and flows from a number of smaller markets grouped under the 'Other' category
- Illicit consumption (C&C) remained largely in line with 2021 levels

C&C by country of origin – 2018-2022 (bn cigarettes)[1](a)



C&C by brand – 2018-2022 (bn cigarettes)[1](a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys
Source: (1) KPMG EU Flows Calculation, 2018-2022

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Switzerland

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Switzerland

9.0bn

Cigarettes consumed

-0.7bn on 2021

0.1bn

C&C cigarettes consumed

-0.2bn on 2021

1.2%

Of total consumption was C&C

-1.8ppt on 2021

€28m

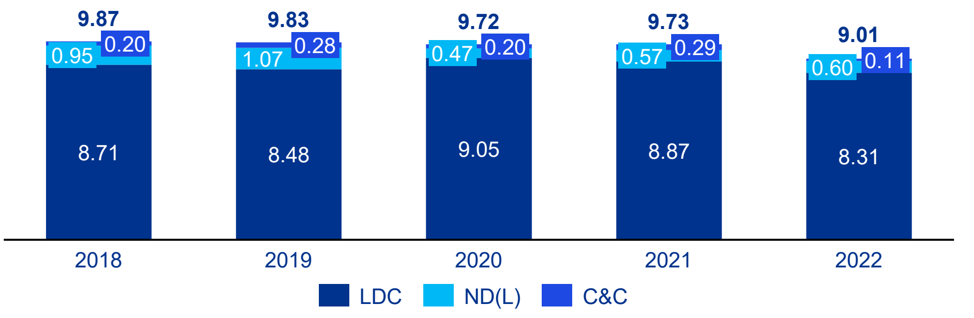
(CHf28m)[3]

Total tax revenue lost from C&C

-€43m on 2021

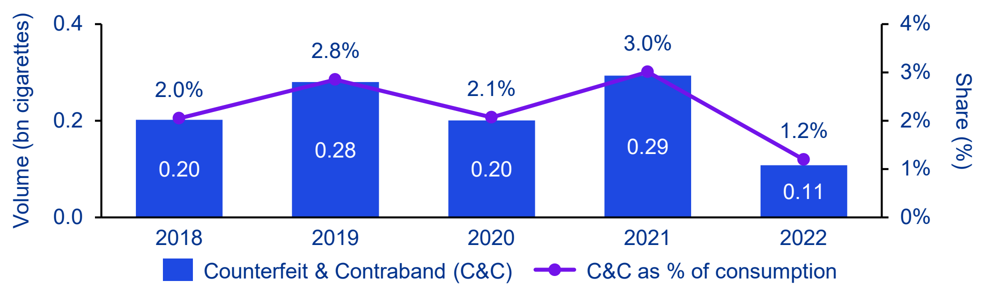
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)[(1)(2)]

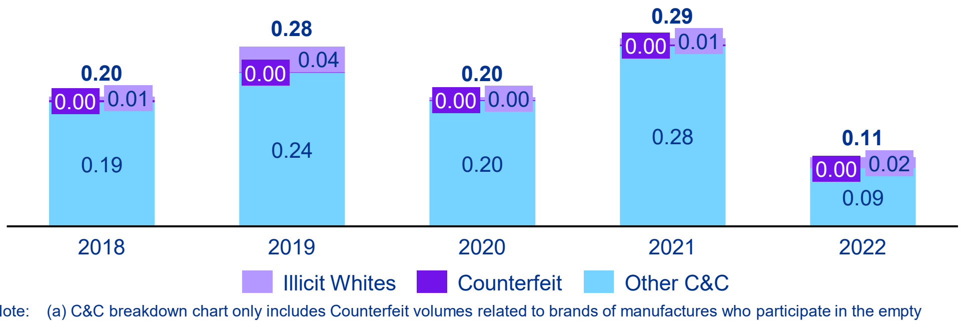


- Counterfeit and contraband (C&C) decreased to 1.2% of total cigarette consumption, the lowest level observed in the reporting period
- This C&C decrease was largely driven by a decline in Other C&C inflows

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[(1)(2)]



C&C consumption by type – 2018-2022 (bn cigarettes)[(1)(2)(a)]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data; (3) EUR 1 = CHF 0.986, InforEuro, European Commission, December 2022

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[1][2]

Total Switzerland Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	9.07	8.77	9.19	8.94	8.46	(5%)
Outflows	(0.35)	(0.29)	(0.15)	(0.07)	(0.15)	105%
Legal Domestic Consumption (LDC)	8.71	8.48	9.05	8.87	8.31	(6%)
Non-Domestic Legal (ND(L))	0.95	1.07	0.47	0.57	0.60	4%
Counterfeit and Contraband (C&C)	0.20	0.28	0.20	0.29	0.11	(63%)
Total Non-Domestic	1.16	1.35	0.68	0.87	0.71	(19%)
Total Consumption	**9.87**	**9.83**	**9.72**	**9.73**	**9.01**	**(7%)**

- Total consumption decreased by 7% in 2022, largely driven by a decline in Legal Domestic Sales and, to a lesser extent, Non-Domestic inflows
- With the exception of Duty Free Labelled products where an increase in inflows was observed, inflows from all other major source markets remained stable or decreased
  - As Switzerland is not in the EU27, travellers can purchase Duty Free cigarettes while traveling to other EU27 and non-EU27 countries by air
- Outflows increased by 0.08bn in 2022, with higher outflows to all major destination markets

Total inflows by country of origin – 2018-2022[1][a]

Inflows to Switzerland					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Duty Free Labelled	0.38	0.34	0.14	0.22	0.27
Germany	0.19	0.21	0.16	0.10	0.09
Italy	0.10	0.06	0.03	0.07	0.07
France	0.07	0.29	0.06	0.07	0.05
Kosovo	0.02	0.05	0.01	0.07	0.03
Other	0.40	0.40	0.28	0.33	0.19
Total Inflows	**1.16**	**1.35**	**0.68**	**0.87**	**0.71**

Total outflows by destination – 2018-2022[1][a]

Outflows from Switzerland					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Germany	(0.06)	(0.07)	(0.04)	(0.02)	(0.03)
Italy	(0.08)	(0.03)	(0.01)	(0.02)	(0.03)
France	(0.08)	(0.09)	(0.05)	(0.02)	(0.03)
Netherlands	(0.06)	(0.04)	(0.03)	(0.01)	(0.02)
Other	(0.08)	(0.06)	(0.02)	(0.02)	(0.04)
Total Outflows	**(0.35)**	**(0.29)**	**(0.15)**	**(0.07)**	**(0.15)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows
Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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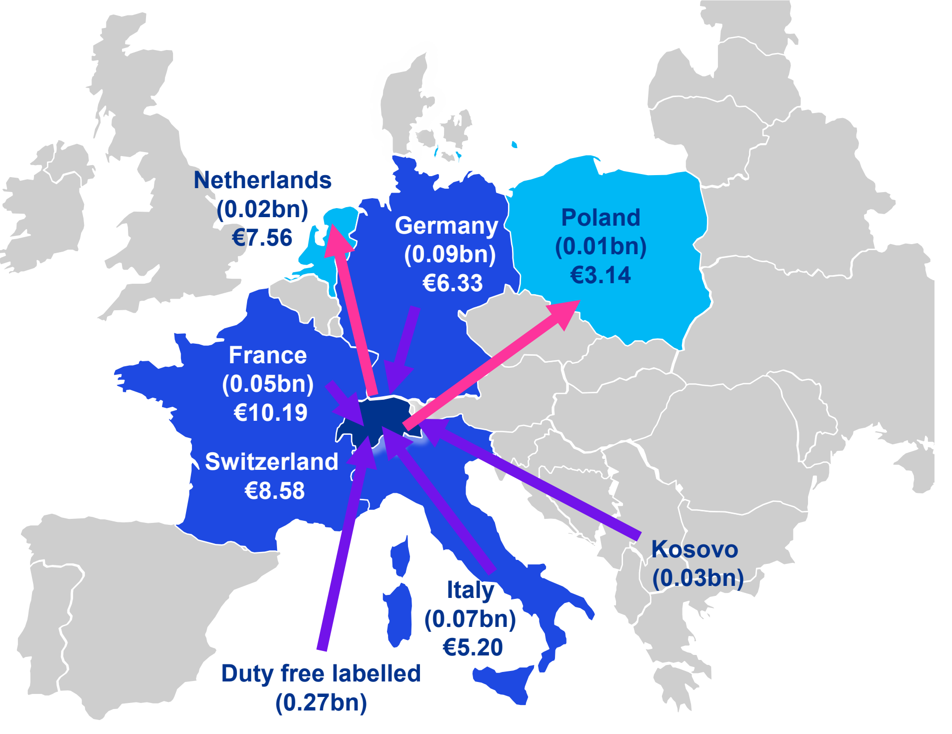
Key flows and C&C consumption patterns

Key inflows and outflows[1](a)

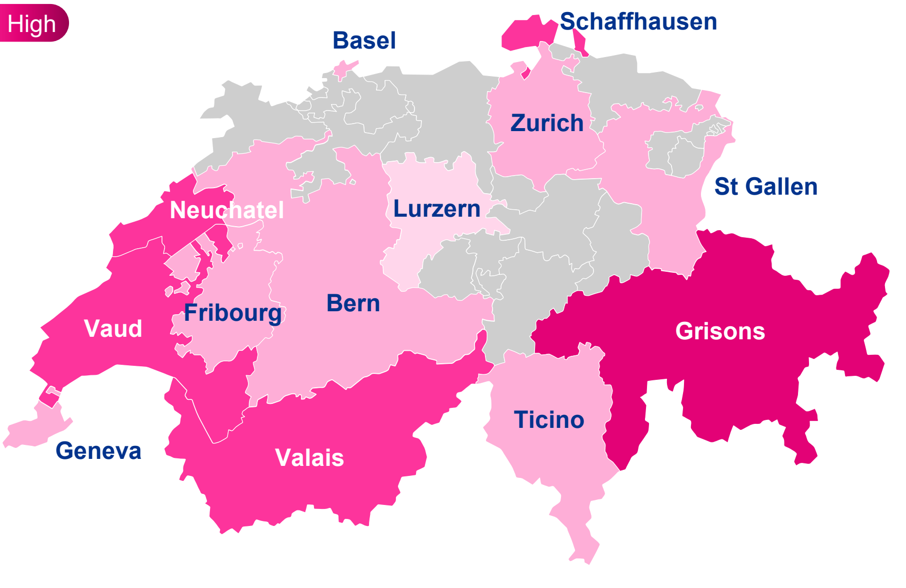
Switzerland
Source
Destination
Inflow
Outflow

Label description:
Country (Inflow/ Outflow Volume)
Weighted Average Price



C&C % by region[1](b)(c)

Low High



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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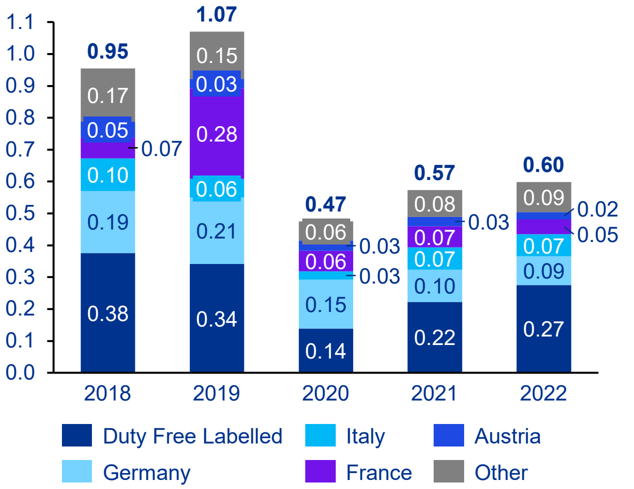
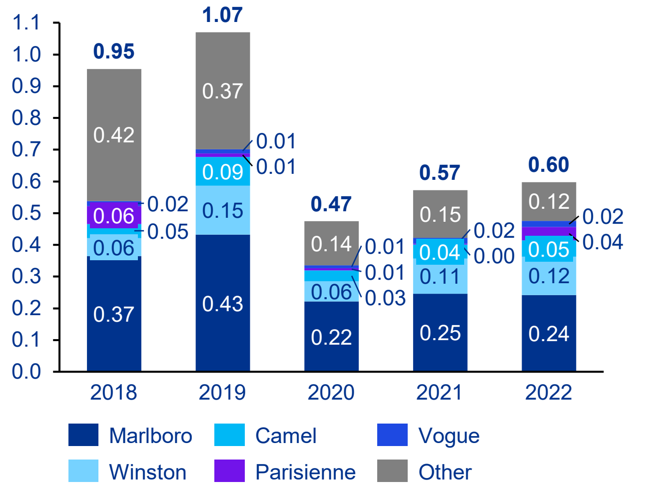
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[1]

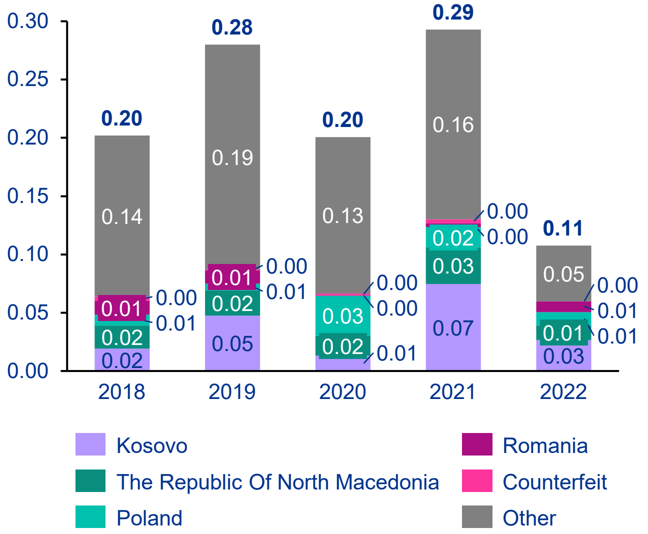


ND(L) by brand – 2018-2022 (bn cigarettes)[1]

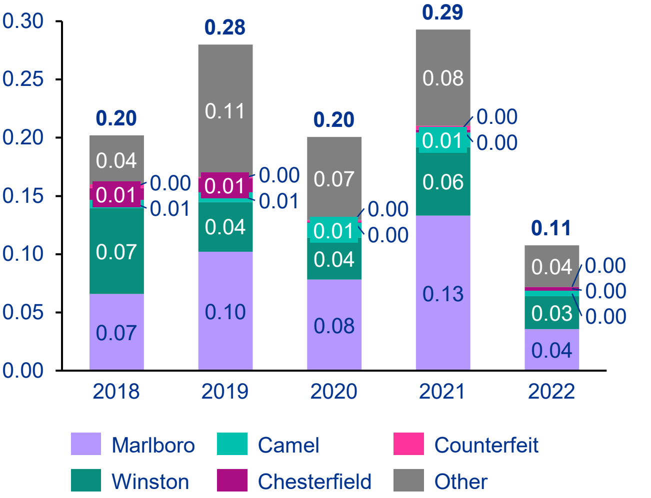


- Legal inflows (ND(L)) increased marginally in 2022 but remained below pre-pandemic levels. This was primarily driven by increased flows of Duty Free Labelled products and partly offset by smaller declines in inflows from Germany, France and Austria
- C&C flows declined in 2022 to the lowest volume over the reporting period. This was due to declining flows from Kosovo, The Republic of North Macedonia and a number of smaller markets grouped together under 'Other'
- Grisons showed the highest regional C&C incidence, albeit C&C incidence overall in Switzerland is relatively low compared to other markets in this Report

C&C by country of origin – 2018-2022 (bn cigarettes)[1](a)



C&C by brand – 2018-2022 (bn cigarettes)[1](a)



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022

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Ukraine

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C&C cigarette consumption and total consumption

36.9bn
Cigarettes consumed

-7.3bn on 2021

7.4bn
C&C cigarettes consumed

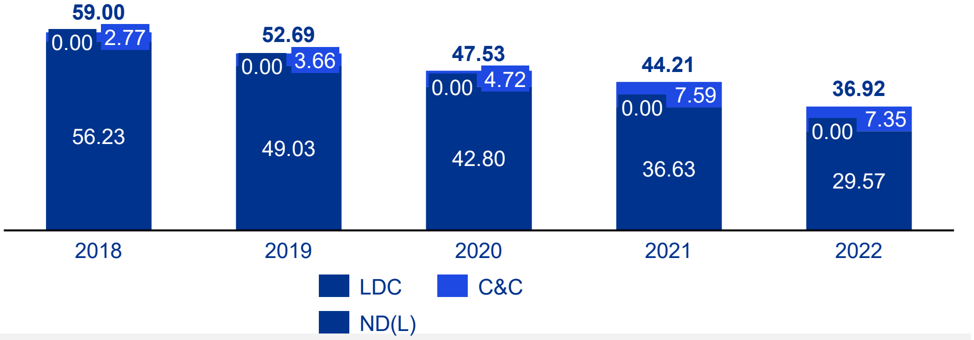
-0.2bn on 2021

19.9%
Of total consumption was C&C

+2.8ppt on 2021

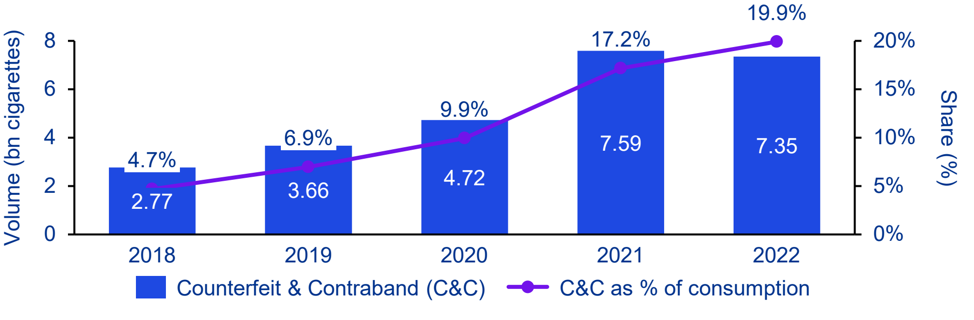
€636m
(UAH25,937m)[4]
Total tax revenue lost from C&C in 2022

Total measured consumption – 2018-2022 (bn cigarettes)[1][2][a]

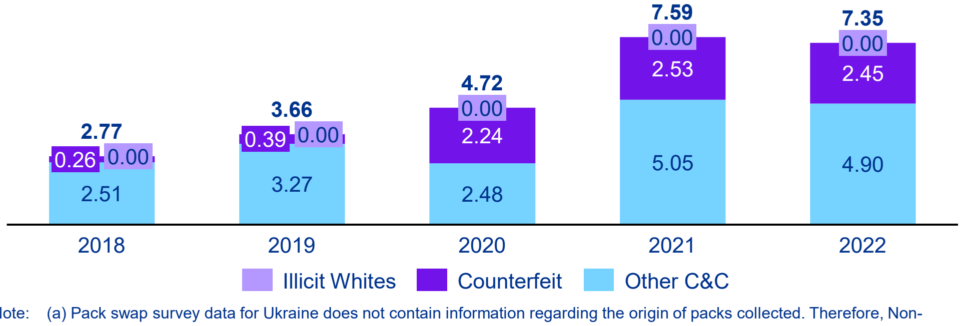


- C&C as a share of total measured consumption has followed an increasing trend since 2018, reaching a 19.9% share in 2022
- Despite a growing share of C&C consumption, C&C volumes declined in 2022, reflecting an accelerated decline in total measured cigarette consumption against the backdrop of the war in Ukraine and large scale migration out of the country[3]

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[1][2]



C&C consumption by type – 2018-2022 (bn cigarettes)[1][2][b]



Note: (a) Pack swap survey data for Ukraine does not contain information regarding the origin of packs collected. Therefore, Non-Domestic Legal (ND(L)) inflows cannot be estimated. Refer to the Methodology section for further details; (b) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (c)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (d) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data; (3) United Nations, Refugees from Ukraine recorded across Europe (4) EUR 1 = UAH 40.781, InforEuro, European Commission, December 2022

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Manufactured cigarette consumption, inflows and outflows

Total measured manufactured cigarette consumption – 2018-2022[(1)(2)(a)]

Total measured Ukraine Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	60.66	51.76	44.37	37.50	30.27	(19%)
Outflows	(4.43)	(2.73)	(1.56)	(0.87)	(0.71)	(19%)
Legal Domestic Consumption (LDC)	56.23	49.03	42.80	36.63	29.57	(19%)
Non-Domestic Legal (ND(L))	n/a	n/a	n/a	n/a	n/a	n/a
Counterfeit and Contraband (C&C)	2.77	3.64	4.72	7.59	7.35	(3%)
Total Non-Domestic	2.77	3.64	4.72	7.59	7.35	(3%)
Total Measured Consumption	**59.00**	**52.67**	**47.53**	**44.21**	**36.92**	**(17%)**

- Since 2018, total measured cigarette consumption has been declining. Following a large increase in Non-Domestic consumption in 2021, Non-Domestic consumption remained relatively stable in 2022. This has resulted in it representing a larger share of total measured consumption in 2022 due to the continuing decline in LDS
- Inflows declined by 0.24bn cigarettes in 2022, driven by a decline in Counterfeit and Contraband flows, partially offset by increasing flows of illegal products misleadingly labelled Duty Free (i.e., products marked “For Duty Free Sale”, but sold illegally through retail channels in Ukraine)
- Outflows continued the long term declining trend seen since 2018, with outflows to Poland and smaller markets grouped together under ‘Other’ declining, partially offset by higher outflows to Estonia

Total inflows by country of origin – 2018-2022[(1)(a)(b)]

Inflows to Ukraine					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Illegal products labelled “For Duty Free Sale”	1.73	1.91	1.39	4.06	4.31
Counterfeit	0.26	0.39	2.24	2.53	2.45
Contraband	0.78	1.33	1.09	0.99	0.59
Total Inflows	**2.77**	**3.64**	**4.72**	**7.59**	**7.35**

Total outflows by destination – 2018-2022[(1)(b)]

Outflows from Ukraine					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Poland	(0.89)	(0.55)	(0.88)	(0.34)	(0.22)
France	(0.21)	(0.19)	(0.05)	(0.17)	(0.18)
Estonia	(0.01)	(0.00)	(0.01)	(0.00)	(0.07)
Germany	(0.22)	(0.16)	(0.12)	(0.09)	(0.07)
Italy	(0.35)	(0.21)	(0.09)	(0.04)	(0.05)
Other	(2.75)	(1.62)	(0.43)	(0.23)	(0.12)
Total Outflows	**(4.43)**	**(2.73)**	**(1.56)**	**(0.87)**	**(0.71)**

Note: (a) Pack swap survey data for Ukraine does not contain information regarding the origin of packs collected. Therefore, inflows to Ukraine have not been broken down by origin and ND(L) inflows cannot be estimated. Refer to the Methodology section for further details; (b) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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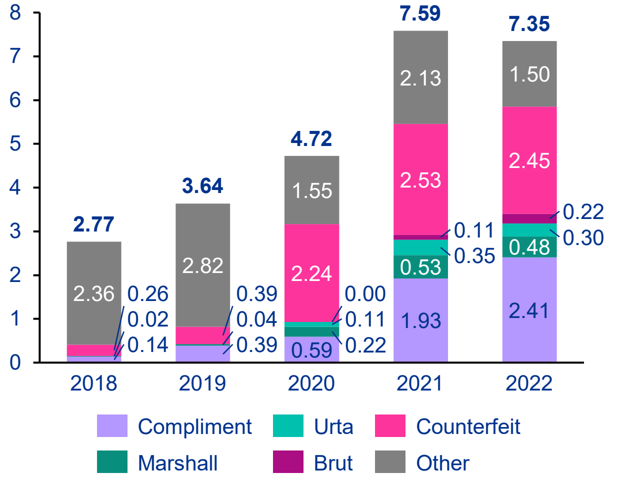
ND(L) and C&C flows

C&C by brand – 2018-2022 (bn cigarettes)[(1)(a)(b)]



- Illicit consumption in Ukraine has been primarily driven by flows of Compliment and the growth in illicit flows of a number smaller brands grouped together under 'Other'
- Please note that information on country of origin is not available in the Ukraine pack swap survey. Therefore, ND(L) and C&C by country of origin cannot be estimated

Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b) Data to break down C&C by brand is only available for 2020-22. Refer to the Methodology section for further information

Source: (1) KPMG EU Flows Calculation, 2018-2022;

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United Kingdom

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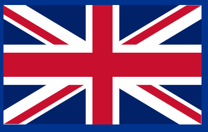
United Kingdom



27.8bn

Cigarettes consumed

-2.3bn on 2021

5.9bn

C&C cigarettes consumed

+0.5bn on 2021

21.2%

Of total consumption was C&C

+3.1ppt on 2021

€3,231m

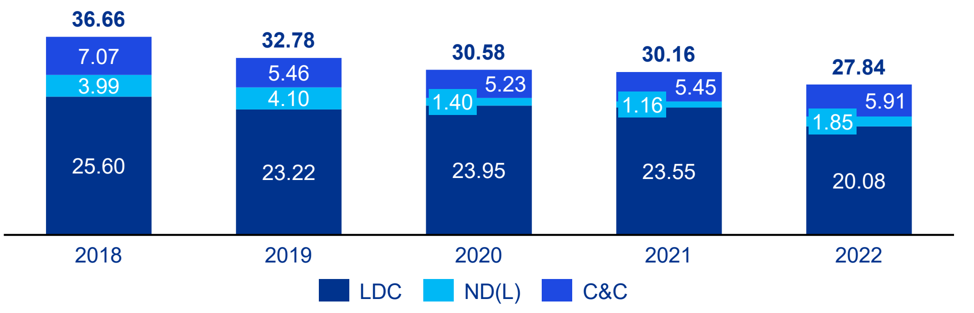
(£2,786m)[3]

Total tax revenue lost from C&C

+€484m on 2021

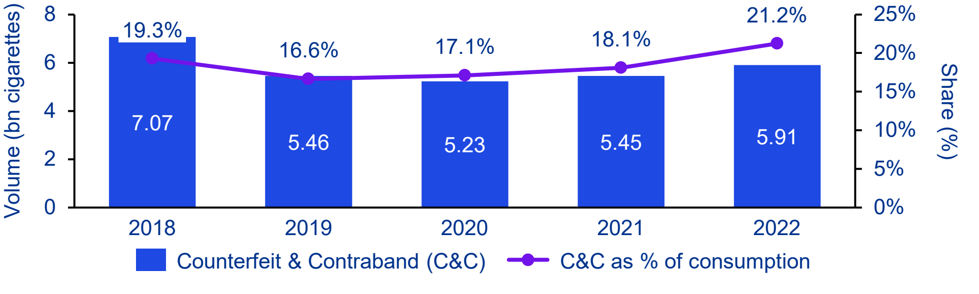
C&C cigarette consumption and total consumption

Total consumption – 2018-2022 (bn cigarettes)[1][2]

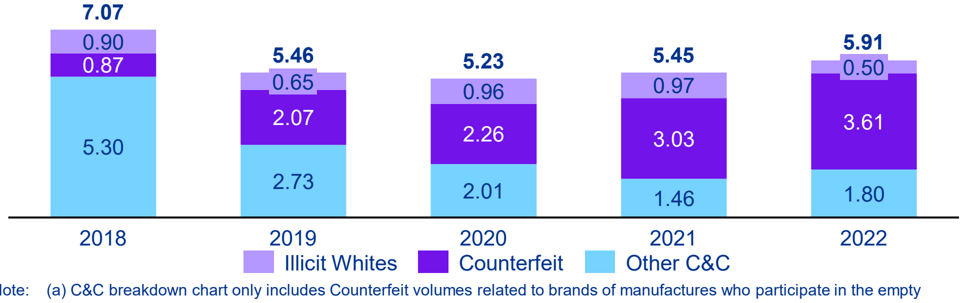


- C&C as a share of total consumption increased by 3.1ppt to 21.2% in 2022, driven by an increase in Counterfeit and Other C&C
- Counterfeit consumption increased to 3.61bn in 2022, the highest volume recorded in the UK since the beginning of this study

Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2018-2022[1][2]



C&C consumption by type – 2018-2022 (bn cigarettes)[1][2][a]



Note: (a) C&C breakdown chart only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys; (b)Total tax revenue lost represents estimated excise and VAT if C&C volumes had been consumed legally in the country of study; (c) Due to rounding, segments highlighted in the charts may not add up to the total and year-on-year changes highlighted in the sidebar may differ from the charts

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data; (3) EUR 1 = GBP 0.862, InforEuro, European Commission, December 2022

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Manufactured cigarette consumption, inflows and outflows

Total manufactured cigarette consumption – 2018-2022[(1)(2)]

Total UK Consumption						
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**	**2021-22 (%)**
Legal Domestic Sales (LDS)	25.99	23.54	24.13	23.68	20.34	(14%)
Outflows	(0.39)	(0.32)	(0.18)	(0.13)	(0.26)	106%
Legal Domestic Consumption (LDC)	25.60	23.22	23.95	23.55	20.08	(15%)
Non-Domestic Legal (ND(L))	3.99	4.10	1.40	1.16	1.85	60%
Counterfeit and Contraband (C&C)	7.07	5.46	5.23	5.45	5.91	8%
Total Non-Domestic	11.06	9.56	6.62	6.61	7.76	17%
Total Consumption	**36.66**	**32.78**	**30.58**	**30.16**	**27.84**	**(8%)**

- Total consumption declined by 8% in 2022, continuing its long-term declining trend. This was driven by a decline in legal domestic consumption, partially offset by an increase in Non-Domestic inflows
- Inflows to the UK increased by 17% in 2022, driven by an increase in inflows of Counterfeit, Duty Free Labelled and Romanian packs
  - Counterfeit has been the largest source of Non-Domestic cigarettes since 2019
- Outflows from the UK increased to levels last seen pre-COVID-19

Total inflows by country of origin – 2018-2022[(1)(a)]

Inflows to UK					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
Counterfeit	0.87	2.07	2.26	3.03	3.61
Duty Free Labelled	1.28	1.37	0.65	0.47	1.17
Poland	1.51	1.14	1.03	0.72	0.60
Romania	1.06	0.44	0.16	0.34	0.58
IWs with no country-specific labelling	0.18	0.33	0.25	0.39	0.22
Other	6.16	4.21	2.27	1.65	1.59
Total Inflows	**11.06**	**9.56**	**6.62**	**6.61**	**7.76**

Total outflows by destination – 2018-2022[(1)(a)]

Outflows from UK					
Billion cigarettes	**2018**	**2019**	**2020**	**2021**	**2022**
France	(0.04)	(0.02)	(0.04)	(0.05)	(0.06)
Netherlands	(0.16)	(0.08)	(0.07)	(0.00)	(0.05)
Ireland	(0.06)	(0.12)	(0.02)	(0.02)	(0.04)
Denmark	(0.01)	(0.02)	(0.00)	(0.00)	(0.03)
Other	(0.12)	(0.08)	(0.05)	(0.05)	(0.08)
Total Outflows	**(0.39)**	**(0.32)**	**(0.18)**	**(0.13)**	**(0.26)**

Note: (a) The inflow and outflow tables only show the top five sources/destinations or countries that make up 80% of total flows

Source: (1) KPMG EU Flows Calculation, 2018-2022; (2) In Market Sales data

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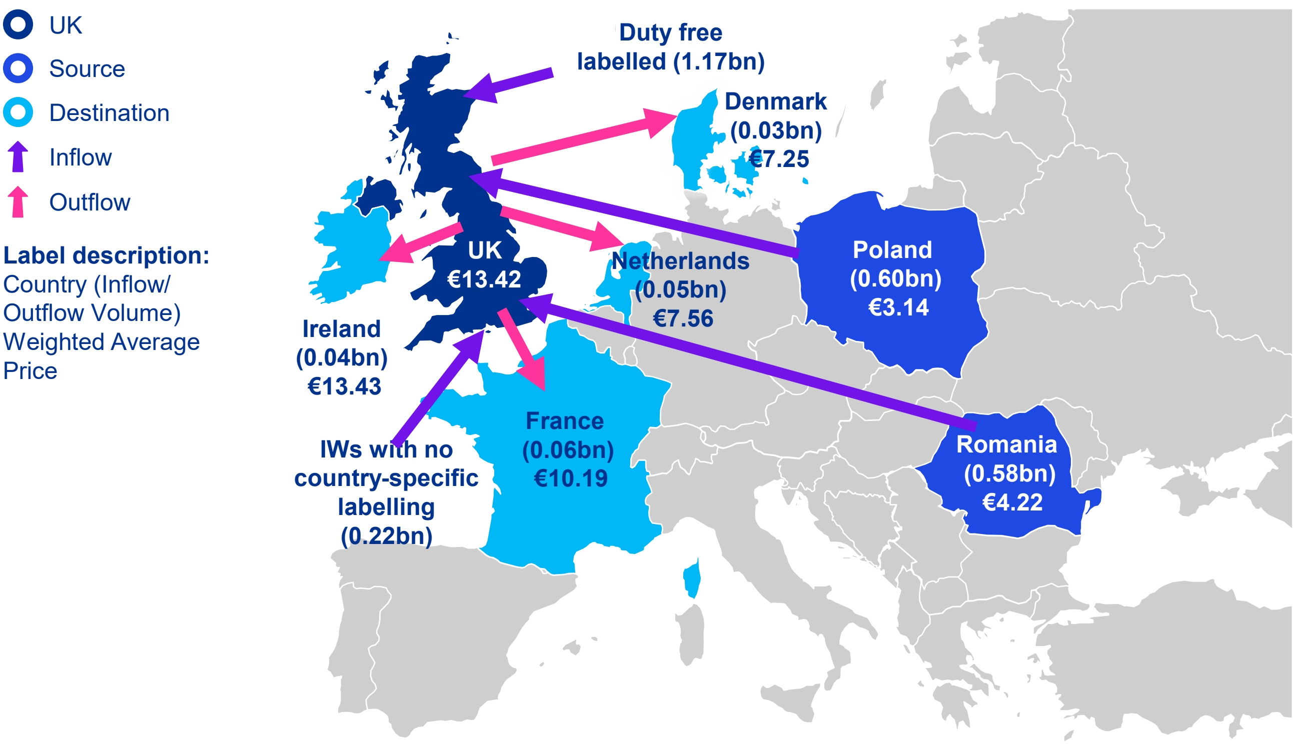
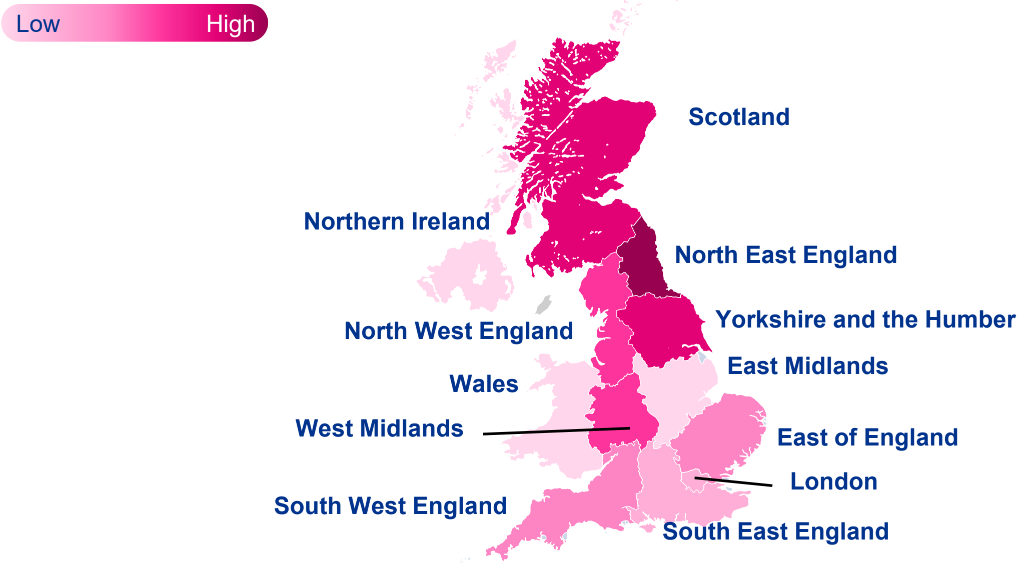
Key flows and C&C consumption patterns

Key inflows and outflows(1)(a)



C&C % by region(1)(b)(c)



Note: (a) For countries with both inflows and outflows, only the larger of the two flows have been shown; (b) C&C% by region shown is the C&C share (including Counterfeit, Illicit Whites and Other C&C) of total cigarette consumption in the region. C&C scale is specific to this market and is not comparable with other markets in the study. Lighter colour scales do not necessarily imply that there is no C&C consumption in the region; (c) Data not available for regions in grey

Source: (1) KPMG EU Flows Calculation 2022; ; (2) Prices and tax rates, EC Excise Duty, 2022; (3) Tax rate and WAP, PMI, October 2022; (4) Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020; (5) Prices, Euromonitor, 2020-2022

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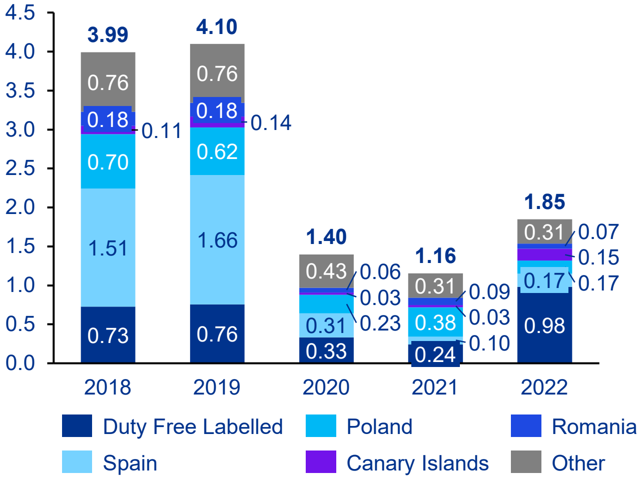
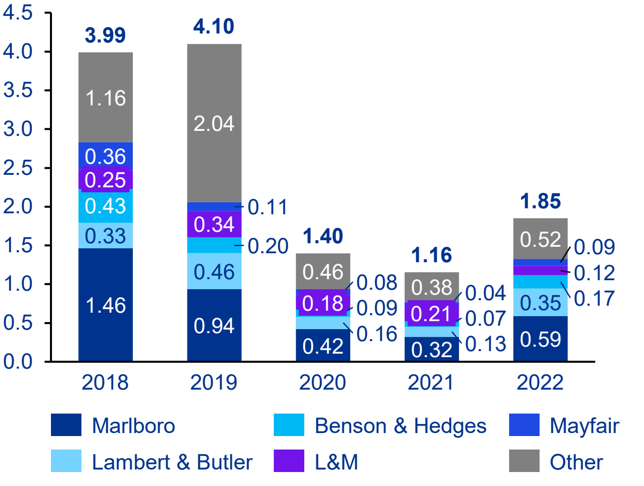
ND(L) and C&C flows

ND(L) by country of origin – 2018-2022 (bn cigarettes)[(1)]

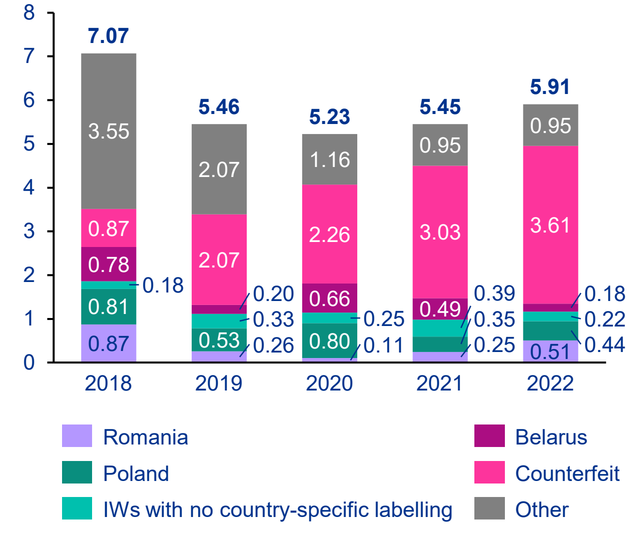


ND(L) by brand – 2018-2022 (bn cigarettes)[(1)]

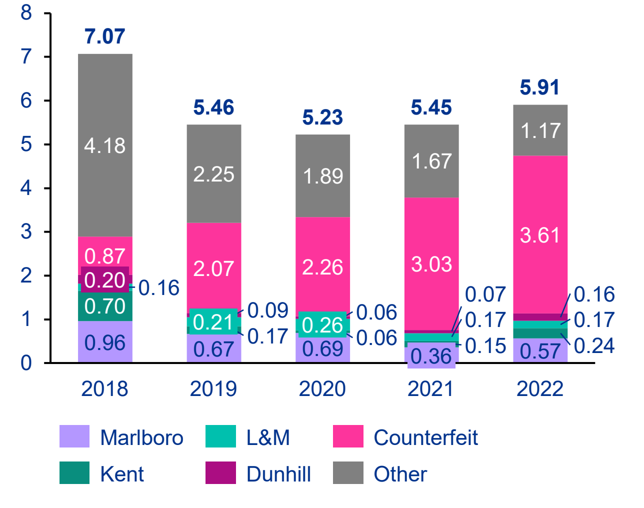


- Legal inflows (ND(L)) increased by 60% (0.69bn sticks), but remained lower than pre-pandemic levels. The increase in 2022 was driven by an increase in flows of Duty Free Labelled products and flows from Spain and Canary Islands, but partially offset by decreased flows from Poland
- C&C consumption increased in 2022, driven by increased inflows of Counterfeit packs and increased illicit flows from Romania and Poland

C&C by country of origin – 2018-2022 (bn cigarettes)[(1)(a)]



C&C by brand – 2018-2022 (bn cigarettes)[(1)(a)]



Note: (a) Only includes Counterfeit volumes related to brands of manufactures who participate in the empty pack/yellow bag/pack swap surveys

Source: (1) KPMG EU Flows Calculation, 2018-2022

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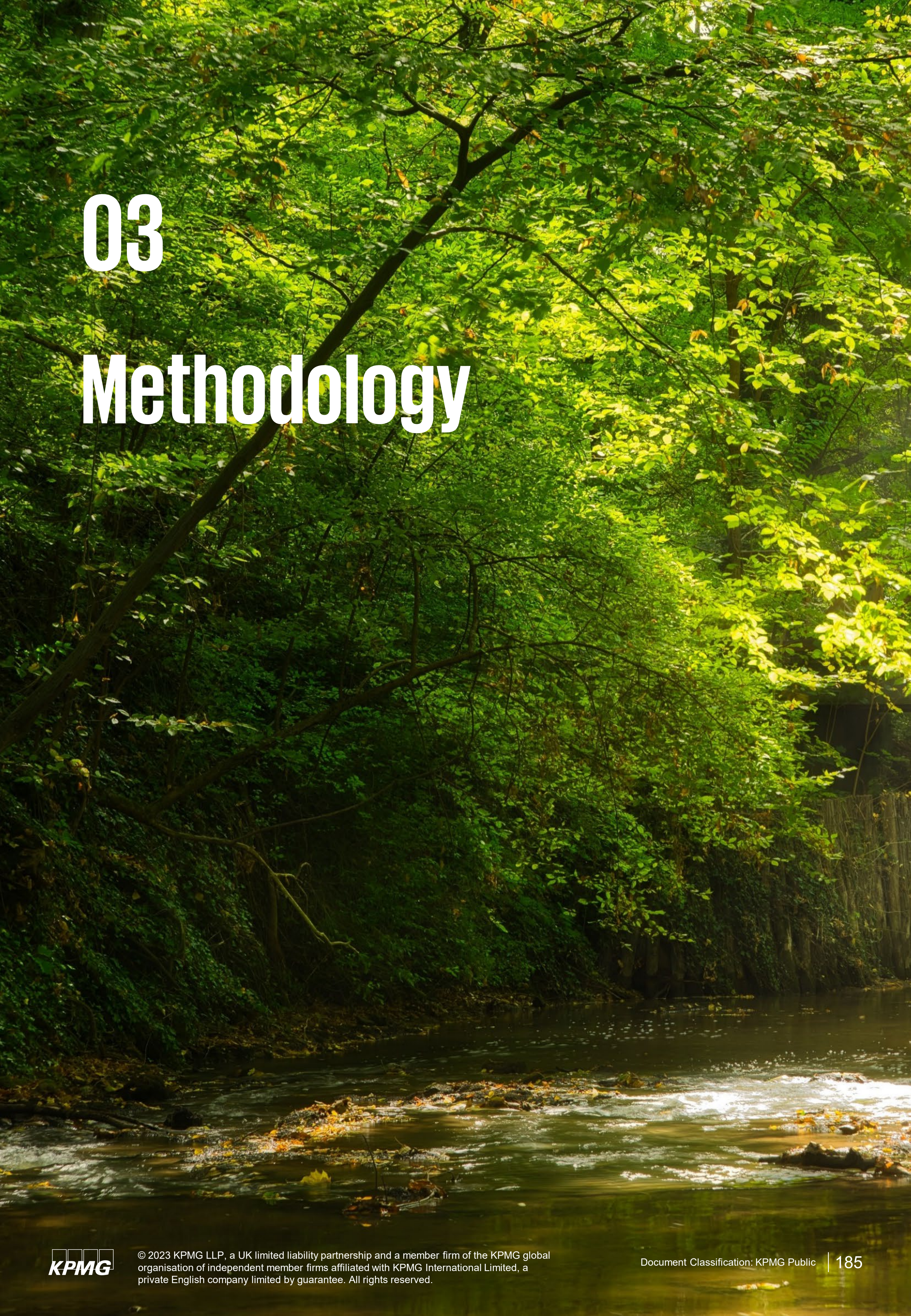

03

Methodology

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Overview

KPMG has developed and refined its methodology for estimating annual Counterfeit and contraband incidence across the 27 EU markets and the UK since 2006, Norway and Switzerland included since 2014, Ukraine and Moldova included in 2022	**The methodology has been tested extensively and refined to seek to ensure that it delivers robust and justifiable results** • Our approach integrates multiple sources and custom-built analytical tools • In 2018, 2019 and 2020, the annual study (previously known as Project SUN or Project Stella) was commissioned by Philip Morris International. In 2017, Project SUN was commissioned by the Royal United Services Institute (RUSI). RUSI contracted the work with funding from British American Tobacco and Philip Morris International to support RUSI's broader illicit trade research. As part of this, RUSI has also produced an Occasional Paper to shed light on some of the main organised crime dynamics accompanying the trends revealed by the KPMG data. In 2016, similarly, RUSI commissioned Project Sun with funding from British American Tobacco, Philip Morris International and Imperial Tobacco Limited. Prior to this, between 2013-2015, Project Sun was commissioned jointly by the four major tobacco manufacturers (British American Tobacco plc, Imperial Tobacco Limited, JT International SA and Philip Morris International Management SA). KPMG LLP were previously commissioned by Philip Morris International Management SA to produce reports covering 2006 to 2012 ('Project STAR') • As a part of the 2018 study, an external panel of experts with a background in law enforcement, brand protection and tobacco control was appointed by KPMG. The panel had a mandate to review the methodology, validate and challenge any assumptions used, and suggest improvements KPMG could make, which were then implemented in the study and the report. For details on the panel of experts, refer to the 2018 Project Stella report
The methodology is based primarily on objective evidence from LDS and empty pack/ pack swap survey results, which are input to the bespoke EU Flows Calculation	**The KPMG EU Flows Calculation is a dynamic, iterative approach that is based on Legal Domestic Sales (LDS) and empty pack/ pack swap survey results and is used to estimate overall manufactured cigarette volumes** • The KPMG EU Flows Calculation has been developed by KPMG to specifically estimate inflows and outflows of cigarettes between EU countries for the purpose of the annual study and report. It is an iterative, data-driven approach that uses LDS and empty pack survey results to estimate the volume of Non-Domestic outflows and inflows to and from the EU Member States, the UK, Norway, Switzerland, Ukraine and Moldova • LDS is the starting point of the methodology, from which outflows of legal sales to other countries are then subtracted to estimate Legal Domestic Consumption (LDC) • Inflows from other countries are then added to estimate the total consumption within a market. Due to limitations in the data available from pack swap surveys, additional assumptions have been made to estimate inflows to Ukraine and Moldova. Refer to the 'Limitations of Results' section of this report for further details • This methodology has been developed by KPMG for the manufactured cigarettes market specifically. For that reason, an assessment of other tobacco products (both legal and illicit) is excluded from the scope of this Report

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Overview (cont.)

Empty pack/ pack swap survey results provide a robust indication of the incidence of Non-Domestic and Counterfeit packs and their country of origin	**An empty pack survey relies purely on physical evidence, avoiding the potential for consumer bias found in interview-based methods** • The empty pack surveys were separately commissioned by the tobacco manufacturers and conducted by independent market research agencies using a consistent methodology across all the EU27 markets, the UK, Norway and Switzerland allowing for direct comparison of data and the identification of inflows and outflows between all of the countries analysed • In Moldova, empty pack surveys were commissioned by PMI between 2018 and 2020. However, in 2021 and 2022, PMI, JTI, IB and BAT commissioned a pack swap survey. All surveys were conducted by independent research agencies • In Ukraine, pack swap surveys were conducted by independent research agencies between 2018 and 2022 commissioned by PMI, JTI, IB and BAT • 524,079 packs were collected in 2022 as part of this research for 32 countries • Further detail regarding the reliability and validity of empty pack survey, the sampling approach and results by country at a regional level are provided later in this Report • The external panel of experts involved in 2018 concluded that “the empty pack survey is the most reliable and objective approach to data collection available”
Tourism and travel trends are used to estimate legal Non-Domestic cigarette purchases	**Tourism and travel data provided by publicly-available 3rd party sources are used to estimate genuine, legal Non-Domestic tobacco purchases (including cross-border shopping) in each market based on inbound visitor inflows** • United Nations World Tourism Organisation (UNWTO) data is the primary source used to identify travel trends, supplemented with Euromonitor and other publicly available data • European Commission releases(b) are the source of the weighted average price (WAP) of a pack of cigarettes in EU27 countries. For non-EU27 countries assessed in the study, WAP and tax rates were provided by PMPSA. Where flows come into a country from a higher priced country they are assumed to be 100% legal, as there is no price incentive for smuggling • Due to limitations in data, Non-Domestic Legal (ND(L)) consumption cannot be estimated for Ukraine. Therefore, Total Measured Consumption (Total consumption excluding ND(L)) has been included in the Ukraine country report. Refer to ‘Limitations of Results’ section in the appendix for further details
There are some specific limitations in the methodology	**Given the complexity of measuring C&C, we recognise there are some limitations within the methodology** There are broadly two types of limitations: scope exclusions and source limitations • Scope exclusions include areas which cannot or have not been accounted for in our scope of work and approach, such as geographic, brand (non-participating manufacturer counterfeit), category exclusions (other tobacco products) and legal domestic product flows out of the EU27 • Source limitations include the availability of information and the potential errors inherent with any data sources such as sampling criteria, coverage issues and seasonality factors
To help improve the accuracy of results, some minor refinements were necessary at a country level	**Comparison of results from alternative sources identified a few markets where country-to-country flows required minor adjustment** • In nearly all instances, overall country results and flows from the KPMG EU Flows Calculation appeared in line with estimates from other third party sources. However, in a limited number of instances, specific adjustments were made to country-to-country flows where additional data provided by third parties or manufacturers allowed for further refinement of the analysis. Refer to page 197 for further details

Notes: (a) UNWTO; (b) EC Excise Duty Tables, 2022. At the time of publication of this report, the latest WAP data available from the European Commission Excise Duty tables were for the year 2021

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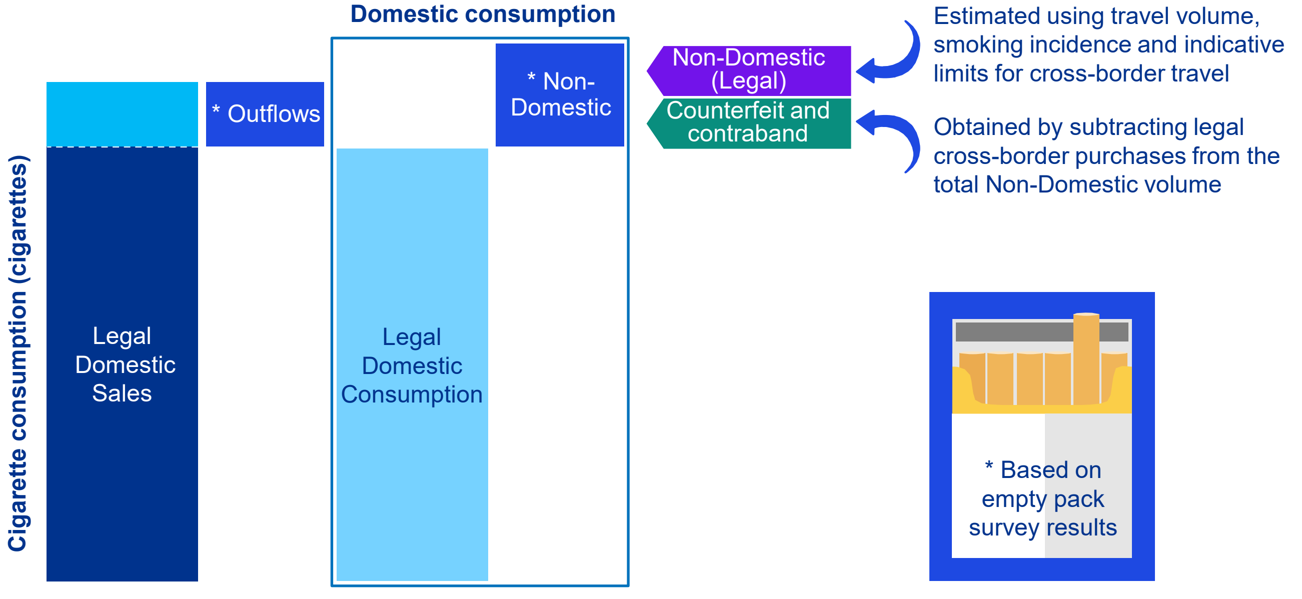
Overview (cont.)

This methodology uses LDS, empty pack survey results and other consumer research to estimate the volume of C&C cigarettes consumed in the EU27



This methodology was developed by KPMG. It has been deployed consistently since 2006, enabling comparisons to be made between Counterfeit and contraband volumes from year to year

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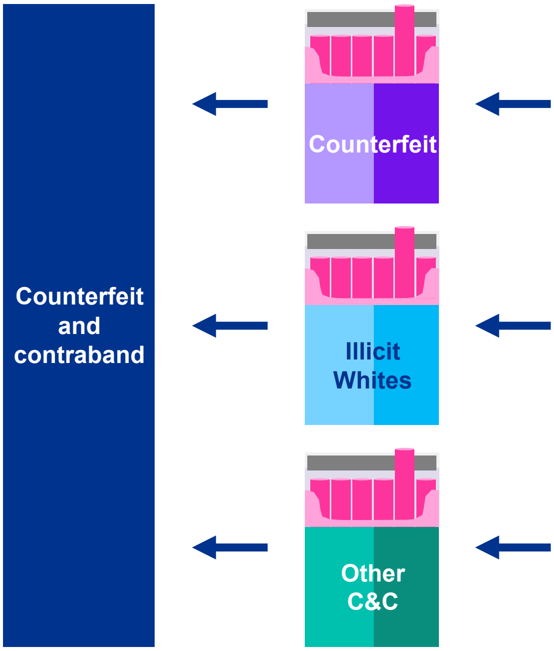
Overview (cont.)

Counterfeit and contraband is allocated into three constituent parts: Counterfeit, Illicit Whites and Other C&C



Counterfeit packets are identified by those manufacturers participating in the given wave of empty pack/ pack swap survey research. Each manufacturer analyses their own packaging from the packs collected and marks whether or not the pack is Counterfeit

Illicit Whites are defined as cigarettes which are usually manufactured legally in one country or market but which the evidence suggests have been smuggled across borders to the destination market where they have limited or no legal distribution and are sold without the payment of tax. KPMG has an approach to estimate Illicit Whites brand flows using specific criteria described on page 219

'Other C&C' comprises contraband which does not fall within the Illicit Whites definition. It is often Duty Paid product from both EU27 and non-EU27 countries. There may also be counterfeit of brands that are not trademark-owned by participant manufacturers[(a)]

Understanding the differences between OLAF seizure data and the results of this study

Around 43% of illicit product identified within this Report is defined as 'Other C&C' in 2022. However, OLAF (and other law enforcement agency) seizures data often notes a different, typically lower, contraband share[(1)]

There are several possible explanations for this difference:

- Seizures are often intelligence led and tend to target specific manufacturing or transport operations. It is difficult to estimate what share of total illicit activity/consumption these seizures represent
- Illicit Whites and Counterfeit cigarettes are typically seized in larger volumes than 'Other C&C', leading to these categories having a greater volume share of seizures
  - Illicit Whites may not be subject to the same high level of supply chain controls as genuine international brands. This means that product can be legally manufactured in bulk in one country, with large volumes imported and distributed illegally within another country, raising the potential for larger volume seizure events, or more seizure events
  - Counterfeit cigarettes are usually seized within transport containers or via raids on the illegal factories, leading to high volume seizure events
- 'Other C&C' is generally only available through legitimate sale locations with the relevant duty paid for the country of purchase. This means it is generally not transported in high volumes, with illicit flows into countries being volumes over and above legal allowances. This high frequency but low volume approach, sometimes referred to as "bootlegging" or "ant smuggling", makes detection more difficult and seizures are smaller
- As the majority of 'Other C&C' seems to be 'bootlegged' or 'ant smuggled', even if the smuggled product is seized by law enforcement agencies, volumes are usually below 50,000 cigarettes and are therefore less likely to be notified to OLAF

Note: (a) Cigarette packs of brands that are not trade mark owned by participant manufacturers are not analysed and are all considered to be genuine
Source: (1) OLAF, Illicit tobacco trade: over half billion cigarettes seized in 2022, 04 April 2023

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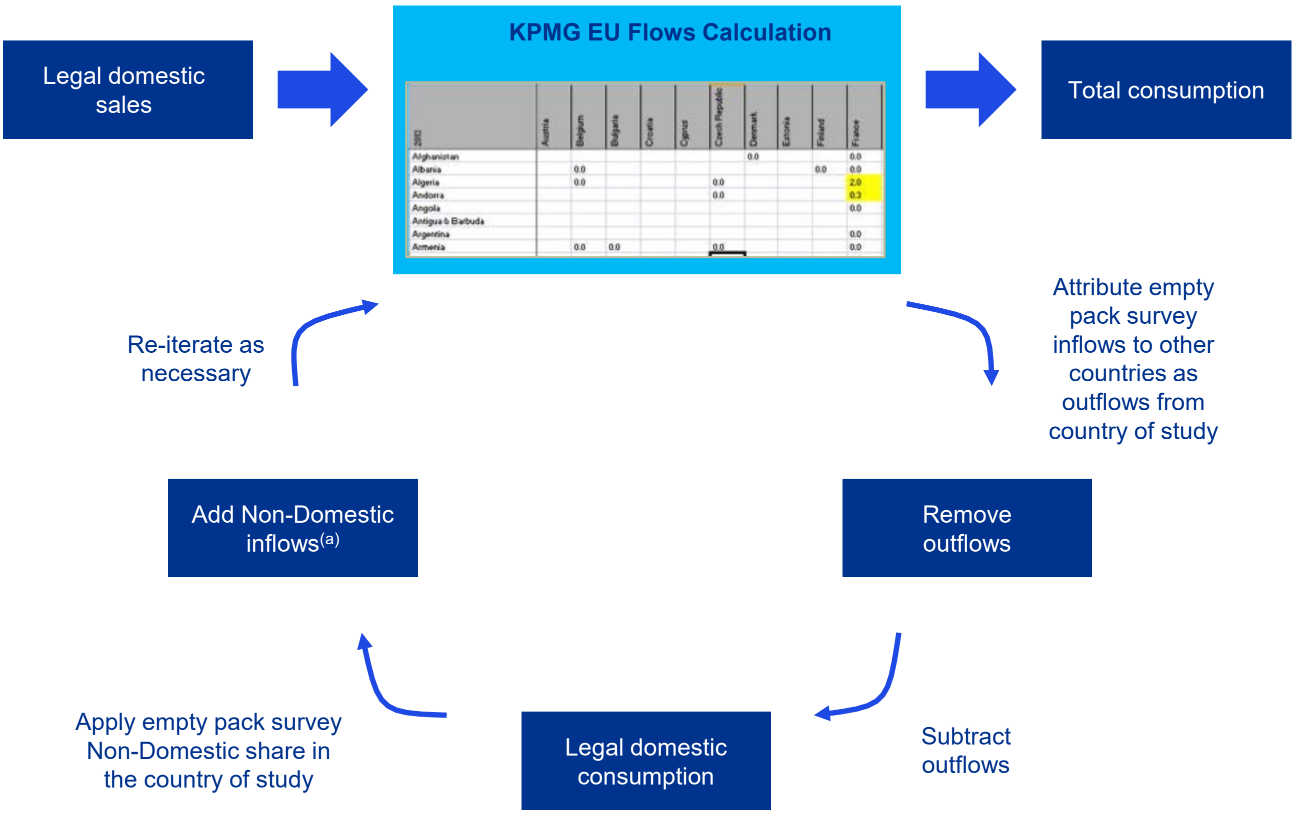
KPMG EU Flows Calculation

Primary information sources and tools – EU Flows Calculation



The KPMG EU Flows Calculation is a dynamic, iterative approach that is principally based on LDS and empty pack/ pack swap survey results

- LDS volumes are the starting point of the calculation from which outflows of legal sales to other countries are then subtracted to estimate legal domestic consumption in a market
- Non-Domestic inflows from other countries are then added back in to give an estimate for the total consumption within a market
- The calculation is then re-iterated as necessary reflecting the relationship of inflows and outflows between all 27 EU countries, the UK, Norway and Switzerland
- Empty pack survey results provide a measurement of the share of Non-Domestic packs by country of origin in all markets
  - In the 27 EU markets, the UK, Norway and Switzerland, empty pack survey results provide a consistent source of Non-Domestic packs by country of origin from which we can estimate total product outflow from each market to the other 29 markets
- Pack swap surveys in Moldova provide a measurement of legal and illicit inflows into the country at a summary level. Breakdown of these figures by country of origin is not available
- Pack swap surveys in Ukraine provide a measurement of illicit consumption in the country. Information on the origins of packs collected is not available and, therefore, ND(L) inflows cannot be estimated

Note: (a) The methodology to identify the ND(L) and C&C components of Non-Domestic flows is explained in the ND(L) methodology section

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Legal domestic sales

LDS data is sourced from Nielsen and other independent agencies

- Since the beginning of this annual study in 2006, LDS estimates for all brands have been sourced from In Market Sales (IMS) data compiled by Nielsen, and other independent sources

Where appropriate, external estimates of LDS have been used instead of the above approach

- In certain markets, publicly available estimates of legal manufactured cigarette sales are widely used by manufacturers, industry participants, government bodies and non-governmental organisations.
- In these instances, we have deemed it more appropriate to incorporate these recognised estimates of LDS in the KPMG EU Flows Calculation. For 2022, this is the case with:
  - Latvia: LDS figure reported by the State Revenue Service
  - Bulgaria: LDS figure reported by the Bulgarian Customs Authority
  - Denmark: Due to channel loading in Q4 2021, the IMS data for Q1 2022 shows what appears to be an artificially low rate of sales. However, Nielsen sales data indicated that Q1 accounted for 24% of the annual sales in 2022. Therefore, Q1 IMS LDS for 2022 was adjusted to account for 24% of total annual sales to provide a more accurate "in year" view of LDS
  - Moldova: LDS data for the Transnistria region was not available, so this area has been excluded from the analysis in this report

Source: (1) LDS data provided by Nielsen and other independent agencies. Refer to appendix section for a list of sources

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Empty pack survey methodology

Overview	**An empty pack survey is a research system of collecting discarded empty cigarette packs, the results of which are used to estimate the share of domestic (duty paid), Non-Domestic and Counterfeit packs in each of the markets** • Empty pack surveys are conducted by independent market research agencies (e.g. Nielsen or Ipsos) in each of the countries sampled. The surveys are commissioned by the participating manufacturers and the sampling plan is designed by the agencies in conjunction with the manufacturers to help make the sampling plan statistically representative of consumption in the country for the whole year studied. • Results are based on a large sample of packs collected in various population centres throughout the countries, although the exact collection plan differs by country. Accuracy and credibility of results is driven by sound design of the sampling plan • Results are not subject to respondent behaviour and are therefore less prone to sampling errors than many other alternative methodologies • Results reflect actual overall Non-Domestic share and provide a good snapshot of brands consumed
Process	**Empty pack surveys rely purely on physical evidence, avoiding the potential for consumer bias in interview-based methods** • The independent market research agencies randomly collect empty packs of any brand and market variant from streets and easy access bins • Homes and workplaces are not visited and the collection route specifically excludes sports stadia, shopping malls and stations, or any other locations where Non-Domestic incidence is likely to be higher as a result of a skewed population or demographic visiting these areas • Once packs are collected, they are sorted by manufacturer and brand and the number of packs with domestic versus Non-Domestic tax stamps counted to estimate the proportion of packs that did not originate from that jurisdiction (including Duty Free variants) - In cases where tax stamps are not shown on a packet, health warning and packaging characteristics are used to determine the source market and where no markings are found they are recorded as unspecified • For brands belonging to the major manufacturers, packs are sent to the manufacturers for analysis to determine which are genuine and which are Counterfeit. Only the manufacturers can determine this, based on ink, paper and other characteristics of the packaging • KPMG used the results of the empty pack surveys to extrapolate overall consumption in the market using LDS and the percentage of Non-Domestic cigarettes in the market as found through empty pack surveys • The process is repeated across all countries of study using an approach which iterates the level of Non-Domestic cigarettes until all inflows and outflows are equal
Coverage	**The total number of packs collected in each market is not solely based on population, but is determined by a number of factors such as the size of the market, the likelihood of high Non-Domestic incidence and the manufacturers' share of the legal market. However, the locations where packs are collected 'in market' are based on city and regional populations to seek to ensure the sample is nationally representative** • Small surveys (300-4,999 packs): Croatia, Cyprus, Luxembourg, Malta, Portugal, Slovenia, Moldova (2018-20) • Medium surveys (5,000-9,999 packs): Austria, Belgium, Estonia, Finland, Ireland, Latvia, Lithuania, Norway, Slovakia, Switzerland • Large surveys (10,000 packs or more collected): Bulgaria, Czech Republic, Denmark, France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Romania, Spain, Sweden, the UK

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Empty pack survey methodology (cont.)

Estimate of Non-Domestic incidence on a stick basis since 2012

Overview	**Prior to 2012, the KPMG EU Flows Calculation assumed that all packs collected were the same size (20 cigarettes). In 2012 the approach was updated to take into account different pack sizes, and this approach has been continued since then** • This update to the approach was made to help give a more accurate result for the volume flows between EU countries, as pack sizes vary on a country by country basis
Process	**Empty pack survey results provide the number of cigarettes in each packet** • It is therefore possible to calculate the total number of sticks accounted for by the pack collection despite the different size packs, hence improving the overall accuracy of volume estimations
Impact	**The effect of this change on Non-Domestic incidence is dependent upon whether the typical domestic pack size was greater or less than the average pack size of 20 on a country by country basis** • In countries where the average domestic pack size was less than 20 cigarettes (for example, historically most LDS in the UK and Italy were of 10 or 20 cigarette packs, giving an average domestic pack size of less than 20 cigarettes, and in Denmark domestic cigarettes were sold in packs of 19), then the conversion to a sticks basis is likely to decrease the proportion of domestic cigarettes in the empty pack survey sample, giving a higher Non-Domestic incidence than estimating on a pack basis • In countries where the average domestic pack size was greater than 20 cigarettes (for example in Luxembourg domestic packs typically contain 20, 25 or 30 cigarettes), then the conversion to a sticks basis was likely to increase the proportion of domestic cigarettes in the empty pack survey sample, giving a lower Non-Domestic incidence than estimating on a pack basis

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Empty pack survey methodology

Empty pack survey methodology[1]

1. Population centre selection → 2. Pack collection → 3. Pack processing → 4. Pack analysis

The empty pack survey is conducted in a consistent way for each country. It follows a four step process:

1. Population centre selection

- The population centres chosen are representative of the country of study. Each population centre is divided into five sectors (north, south, east, west and centre). Each sector is subdivided into neighbourhoods of the same size (250 meter radius)

2. Pack collection

- Each neighbourhood is assigned a number of discarded packs for collection based on the size of the overall population centre in comparison with the national population. For example, in France 126 cities are sampled in each wave of 11,500 packs. Of all packs collected, 5,040 are collected in Paris, which represents over 10% of the packs collected. The neighbourhoods sampled include residential, commercial and industrial areas
- A minimum number of packs are collected from each neighbourhood. Each neighbourhood has a specific starting point and a fixed route. The collectors accumulate as many empty packs as possible within each neighbourhood regardless of the quota requested in the sampling plan. Packs are collected from any manufacturer regardless of whether they participate in the survey. Collectors revisit the neighbourhood as many times as necessary in order to achieve the required quotas
- The training of collectors includes an explanation of the methodology and running of pilots prior to the collection. Each team of collectors is supervised by a team leader
- An additional 5% extra packs are collected in case there are issues with the existing sample

3. Pack processing

- The empty packs are placed into bags and stored at a safe collection point. Packs are discarded if they do not meet the survey quality requirements (e.g. torn, unreadable, rotten). Each survey qualified pack is cleaned and placed in a transparent nylon bag with a zipper that carries a unique barcode label indicating the serial number attributed to the pack (corresponding to the data sheet).The details are then entered into the survey “Data Sheet”. The packs are delivered to the participating manufacturers in the given wave of empty pack survey in a way that enables easy processing and identification

4. Pack analysis

- The participating manufacturers check the packets belonging to their brands to identify Counterfeit and inform the agency that collates and updates the data sheets
- These data sheets are finally provided to KPMG by the manufacturers and analysed to estimate the Non-Domestic incidence and contraband and Counterfeit volumes

Source: (1) Third party market research agencies

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Pack swap methodology

Overview	**A pack swap is a research methodology based on collecting cigarette packs from respondents door to door. These packs are then assessed to estimate the share of domestic (duty paid), Non-Domestic and Counterfeit packs** • Pack swaps are conducted by independent market research agencies in Moldova (Nielsen & Ipsos) and Ukraine (Kantar). The surveys are commissioned by the participating manufacturers (PMI, JTI, IB and BAT) and the survey plan is designed by the agencies in conjunction with the manufacturers to help make the sampling plan nationally representative of consumption in the country for the whole year studied • The outputs are based on the analysis of packs collected in various population centres throughout the countries • Results summarise the share of non-duty paid cigarettes consumed in the markets - In Moldova, the packs are assessed by the research agency and classified into Duty-Free, Illicit Whites, Non-Domestic Duty Paid (NDDP) and Others - In Ukraine, the packs are assessed by the research agency and classified into Contraband, Illegal products labelled “For Duty Free Sale" and Counterfeit
Process	• Pack swap surveys are conducted across both rural and urban regions. Urban regions are subdivided into smaller sub-regions based on sub-regional population with a predetermined target for the number of packs to be collected in each region and sub-region to give a nationally representative picture of consumption in the country • For Ukraine in 2022, research did not include the following areas impacted by the ongoing war: Luhansk, Donetsk, Kherson, Mykolaiv, 70% of Kharkiv, Zaporizhzhia (except for the city of Zaporizhzhia) • A random route ‘door to door’ approach is used to identify respondents in each region • The independent market research agencies conduct short face to face interviews where respondents are offered to swap their current cigarette pack in exchange for an incentive, typically a voucher. If respondents decline the interview or to swap their pack, the interview is terminated • An interviewer records the details of the swapped pack after interview completion • Once the swapped packs are collected, the research agency sorts them by manufacturer and brand, and the number of packs with domestic versus Non-Domestic tax stamps is counted to determine the proportion of packs that did not originate from that jurisdiction (including Duty Free variants) • The health warning labelling, excise stamp details and pack descriptors are then evaluated by the research agency to determine the source market • For brands belonging to the participating manufacturers (BAT, IB, JTI, PMI), packs are sent to the manufacturers for analysis to determine which are genuine and which are Counterfeit • KPMG used the results of the pack swaps to extrapolate overall consumption in the market using LDS and the percentage of Non-Domestic cigarettes in the market as found through the pack swaps • The forensic analysis in Ukraine is conducted in a similar manner as the empty pack surveys wherein the participating companies analyse collected samples of their brands while packs of non-participating companies are sent to the Institute of Forensic Expertise – a government agency - The primary focus during the analysis is to establish the authenticity of fiscal stamps - Based on this analysis, Kantar also reports packs that have labelling not compliant with local legislation including no graphical health warning, text not in the local language, no fiscal stamps

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Pack swap methodology

Process	- Additionally, during the pack swap study, respondents are asked questions related to the point of purchase to check if they have been purchased from a legitimate Duty Free channel or from street vendors, open markets, shops or kiosks
Coverage	**The total number of packs collected in each market is not solely based on the population, but is determined by a number of factors such as the size of the market, the likelihood of high Non-Domestic incidence and the manufacturers' share of the legal market. However, the locations where packs are collected 'in market' are based on regional, city and city sub-region populations to seek to ensure the sample is nationally representative**

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Empty pack survey adjustment overview

Empty pack survey adjustments

Where necessary, we make adjustments to the empty pack survey results in our analysis in the form of reweighting different packs or quarterly surveys, based on additional evidence available. Adjustments are made to correct for issues identified in the empty pack survey. The main issues identified this year are covered below:

Empty pack survey	Explanation	Method	Countries where adjustment made
1. Brand oversampling	Domestic packs collected by brand in the empty pack survey deviate significantly from the domestic brand shares	• Some brands may be oversampled which we can check through a comparison with the LDS • KPMG assumes that an oversampling of brands domestically will result in an oversampling of brands Non-Domestically. As a result, the weights of Non-Domestic packs are adjusted using the assumption that Non-Domestic packs are oversampled to the same extent as domestic packs	France (Marlboro), Belgium (Marlboro)
2. Adjustments to specific country flows	The flows from some countries appear to have been over or under-sampled based on the timing of the survey, areas sampled, or sales from other countries	• Adjustments were made when the empty pack surveys over or under sampled some flows as highlighted by other sources of data • Some examples include: - Border sales data from Spain, Belgium and Luxembourg indicated that inflows from these countries were being under sampled in the French empty pack survey. Hence, the inflows from these countries were adjusted • A detailed list of empty pack survey adjustments and their impact can be found in the following pages	Belgium, France, Netherlands

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Empty pack survey adjustments

Empty pack survey – adjustments made in KPMG analysis

Country	Sample dates	Packs collected	Number of cities	Adjustment	Impact
Austria	Q4: Nov	6,500	24	None	n/a
Belgium	Q2: Apr-May Q4: Oct-Nov	5,600	18	**Country flows adjustments:** • Inflows of some Bulgarian brands were in excess of sales of those brands in Bulgaria (after accounting for Bulgarian domestic consumption), indicating these brands were over sampled in the Belgium EPS. Therefore, we reduced inflows of these brands to equal the sales of these brands in Bulgaria less the Bulgarian domestic consumption of these brands (per LDS and the Bulgarian empty pack surveys). • Analysis of Belgium / Luxembourg border sales data provided by PMI indicated that Luxembourg packs were being under sampled. Therefore, inflows from Luxembourg were adjusted be in line with 2021 **Brand adjustment:** • A comparison of Marlboro LDS with domestic packs collected in the empty pack survey indicated that the brand was oversampled in the empty pack survey. Therefore, the volume of Non-Domestic packs was reduced, using the assumption that Non-Domestic packs were oversampled to the same extent as domestic packs	• Inflows to Belgium decreased from 2.10bn to 1.63bn
Bulgaria	Q1: Feb-Mar Q2: May Q3: Sep Q4: Nov	23,200	20	None	n/a
Croatia	Q4: Oct	3,000	8	None	n/a
Cyprus	Q4: Oct	1,000	4	None	n/a
Czech Republic	Q2: Apr-May Q4: Sep-Oct	21,004	30	None	n/a
Denmark	Q2: Apr Q4: Oct	10,000	6	None	n/a
Estonia	Q2: May Q3: Sep	6,600	14	None	n/a

Source: (1) UNWTO (2) Overview: From the lockdown on March 18 to the most recent corona measures: this is the route that Belgium has gone through so far, HLN, 11 May 2021

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Empty pack survey adjustments (cont.)

Empty pack survey – adjustments made in KPMG analysis

Country	Sample dates	Packs collected	Number of cities	Adjustment	Impact
Finland	Q2: Apr	5,000	10	None	n/a
France	Q1: Feb-Mar Q2: May-Jun Q3: Sep Q4: Nov-Dec	46,000	126	**Country flows adjustments:** Inflows from Spain and Belgium were adjusted using publicly available data sources for local border populations, car ownership, average daily consumption, smoking incidence, adult population, etc. (from sources such as Eurobarometer, WHO, European Environment Agency, France National Institute of Statistics and Economic Studies, etc.), and were corroborated with manufacturer border sales data (market estimates using sales data) • Inflows were adjusted to reflect tourism trends and border sales, which indicate higher flows into France **Brand adjustment:** • A comparison of Marlboro LDS with domestic packs collected in the empty pack survey indicated that the brand was oversampled in the empty pack survey. Therefore, the volume of Non-Domestic packs was reduced, using the assumption that Non-Domestic packs were oversampled to the same extent as domestic packs • Inflows of some brands were in excess of sales of those brands in their origin markets (after accounting for domestic consumption in the origin markets), indicating these brands were potentially over-sampled in the France EPS. Therefore, we reduced inflows of these brands to equal the sales of these brands in their origin market less domestic consumption of these brands in their origin market (per LDS and empty pack surveys). • Key brands impacted include Parliament from Poland, Philip Morris from Spain and Winston from Luxembourg and Poland	• Inflows from Spain increased from 0.74bn to 2.62bn • Inflows from Belgium increased from 0.28bn to 0.60bn • Inflows from Luxembourg increased from 0.41bn to 0.89bn • Inflows from Poland reduced from 2.49bn to 1.17bn

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Empty pack survey adjustments (cont.)

Empty pack survey – adjustments made in KPMG analysis

Country	Sample dates	Packs collected	Number of cities	Adjustment	Impact
Germany	Every month	120,000	43	Due to data limitations, Counterfeit data provided before 2020 was not regionally weighted. The provision of regionally-weighted Counterfeit data from 2020 allows a more precise Counterfeit estimate by more accurately reflecting regional, and therefore total, Counterfeit consumption	n/a
Greece	Q2: Apr-May Q3: Sep Q4: Nov	18,000	20	None	n/a
Hungary	Q3: Aug-Sep	17,240	40	None	n/a
Ireland	Q2: Apr-May	5,000	22	None	n/a
Italy	Q1: Mar-Apr Q2: May Q3: Jul-Aug Q4: Oct	40,000	85	None	n/a
Latvia	Q2: May Q3: Sep	9,800	25	None	n/a
Lithuania	Q2: May Q3: Sep	11,600	20	None	n/a
Luxembourg	Q2: Apr Q4: Oct-Nov	400	2	None	n/a
Malta	Q4: Oct-Nov	1,000	8	None	n/a
Moldova	n/a	1,532	n/a	• 2021 and 2022 pack swap surveys exclude the Transnistria region. To ensure consistency across all years, pack swap survey results from the Transnistria region in 2018-2020 have been excluded from our analysis • A pack swap survey was not undertaken in Moldova in 2019. 2019 Non-Domestic share (ND%) has been estimated by applying the annual growth rate implied between 2018 and 2020 to the 2018 pack swap results	n/a

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Empty pack survey adjustments (cont.)

Empty pack survey – adjustments made in KPMG analysis

Country	Sample dates	Packs collected	Number of cities	Adjustment	Impact
Netherlands	Q2: Apr-May Q4: Nov	14,000	50	**Country flows adjustments:** • Empty pack survey results indicated a large decline in flows from Belgium, which was not reflective of the trends in border sales data in 2021-22. Therefore, inflows from Belgium were increased to bring the percentage change of inflows from Belgium in line with that implied by border sales data	• Inflows to Netherlands increased from 1.56bn to 2.17bn
Norway	Q2: May-Jun	5,000	8	None	n/a
Poland	Q1: Feb-Mar Q2: May Q3: Aug Q4: Oct-Nov	50,000	40	None	n/a
Portugal	Q2: Apr-May	3,000	10	None	n/a
Romania	Q1: Jan Q2: May-Jun Q3:Jun-Jul,Sep Q4: Oct-Dec	15,076	41	None	n/a
Slovakia	Q2: Jun	5,000	25	None	n/a
Slovenia	Q4: Oct	3,000	8	None	n/a
Spain	Q2: Apr-May Q4: Oct	30,000	58	None	n/a
Sweden	Q2: Jun	10,000	29	None	n/a
Switzerland	Q3: Sep	5,600	20	None	n/a
UK	Q2: Apr-May Q3: Aug	25,400	105	None	n/a

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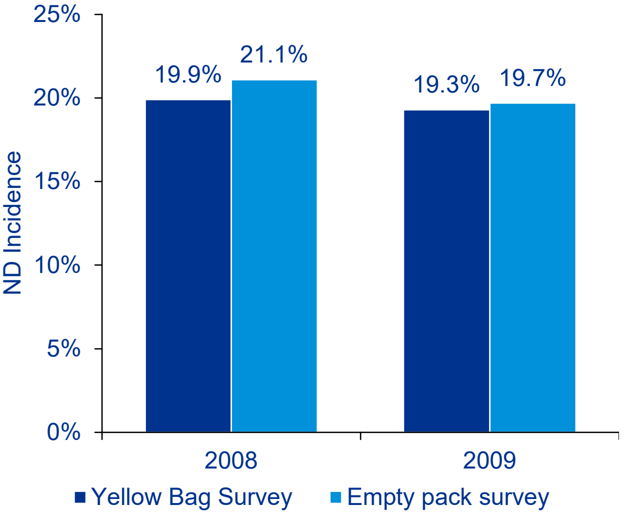
Empty pack survey analysis

Empty pack survey comparison

Comparison of empty pack survey analysis

- A potential limitation of the empty pack survey is that it samples discarded cigarette packs rather than household waste and therefore does not accurately reflect household consumption. Sampling for household waste is impractical in most countries, however it is available in Germany. With the household waste survey, known as a Yellow Bag Survey (YBS), it is possible in Germany because household waste is sorted, mainly for the purposes of recycling. This makes it possible to separate cigarette packs from other waste
- The Yellow Bag Survey, carried out by Ipsos, collected 500 packs a month per centre from 24 waste disposal centres throughout Germany. This resulted in over 120,000 weighted packs collected throughout the year, typically a larger sample than an empty pack survey. A comparison was undertaken by KPMG between the empty pack survey and Yellow Bag survey in 2008 and 2009, the only years where both surveys were run simultaneously
- In addition to the benefits of the higher sample size, collections from waste disposal centres resulted in packs coming from both household waste and public bins, demonstrating that consumption of illicit tobacco in the home is unlikely to be significantly different to consumption in public places

Comparison of empty pack survey and Yellow Bag Survey, Germany – 2008-2009[(1)(2)(3)(a)(b)]



Notes: (a) The comparison between methodologies is made on a “sticks basis” in 2008 and 2009 rather than a packs basis. These were the only years for which both yellow bag survey and empty pack survey were available

Sources: (1) MS Intelligence Research, Germany empty pack survey report, Q2 2009 (2) Ipsos empty pack surveys, 2008-2009 (3) Ipsos Yellow Bag Surveys

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Non-Domestic Legal analysis

Primary information sources and tools – Non-Domestic Legal analysis and assumptions

Volume estimated by travel flows, border crossings, smoking incidence and additional analysis as discussed below

ND – ND(L) = C&C[a]

ND(L) was estimated by analysis of travel trends, border crossings and cigarette pricing data. C&C volumes formed the remaining Non-Domestic balance after subtracting ND(L) from total Non-Domestic

ND(L) was estimated using two methods:

1. **Countries where ND(L) is 100% of total ND**
   - Non-Domestic cigarettes in the empty pack surveys from higher priced inbound tourist/visitor countries were categorised as legal, as long as these flows were not identified as Counterfeit or Illicit Whites brands, as there is no price incentive to smuggle
2. **Travel flows analysis**
   - Business and tourism travel data from the World Tourism Organization (UNWTO), Euromonitor, national statistics offices and other publicly available sources were used to estimate the number of trips made by travellers over the age of 18
   - This total number of trips was then multiplied by the average cigarette smoking prevalence of the country of origin to estimate the total number of trips by cigarette smokers. Smoking prevalence data for 2022 was provided by WHO and Euromonitor
   - We assumed that the number of packs purchased per trip is equal to the Duty Free allowance, or the indicative legal limit for cross-border travel
   - The empty pack survey and EU Flows Calculation form the basis of all Non-Domestic analysis. As a result, where the ND(L) calculation was greater than 100% of the flow calculated by the EU Flows Calculation, it is capped at the volume generated by the EU Flows Calculation
   - In certain cases travel data may not capture the extent of cross-border travel where such travel does not entail an overnight stay. Where this is a material source of cross-border flows, it is estimated based on regional border populations, retail sales data and other publicly available data

1 **Countries where ND(L) is 100% of total**: ND(L) is 100% of total Non-Domestic ▶ ND from EU Flows Calculation = **Total ND(L) (sticks)**

2 **Travel flows analysis**: Total trips where cigarettes purchased x Cigarettes per trip = **Total ND(L) (sticks)**

Example using illustrative data[c]

1 Countries where ND(L) is 100% of total

Country of Origin	ND (bn sticks)[1]	ND(L) (bn sticks)	% of ND
Belgium	0.78	0.78	100%

2 Travel flows analysis

Country of origin	ND (bn sticks)[1]	Number of journeys (m)[2][3]	% of Population 18+[3][4]	Smoking Prevalence[3][5]	Trips where cigarettes purchased (m)	Cigarettes per trip[b]	ND(L) (bn sticks)	% of ND
UK	0.62	8.63	78.6%	19.7%	1.34	200	0.27	43%

Notes (a) KPMG estimates the split between C&C and ND(L) by calculating the ND(L) volume and subtracting from the total inflows
(b) Unless stated otherwise it is assumed that returning travellers purchase the indicative maximum allowed
(c) Data shown is illustrative only. Refer to pages 209-218 for details of the actual ND(L) calculations for the markets in this study (excluding Ukraine and Moldova)

Sources: (1) KPMG EU Flows Calculation (2) UN WTO Tourism Factbook (3) Euromonitor (4) UNICEF (5) WHO

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Non-Domestic Legal analysis (cont.)

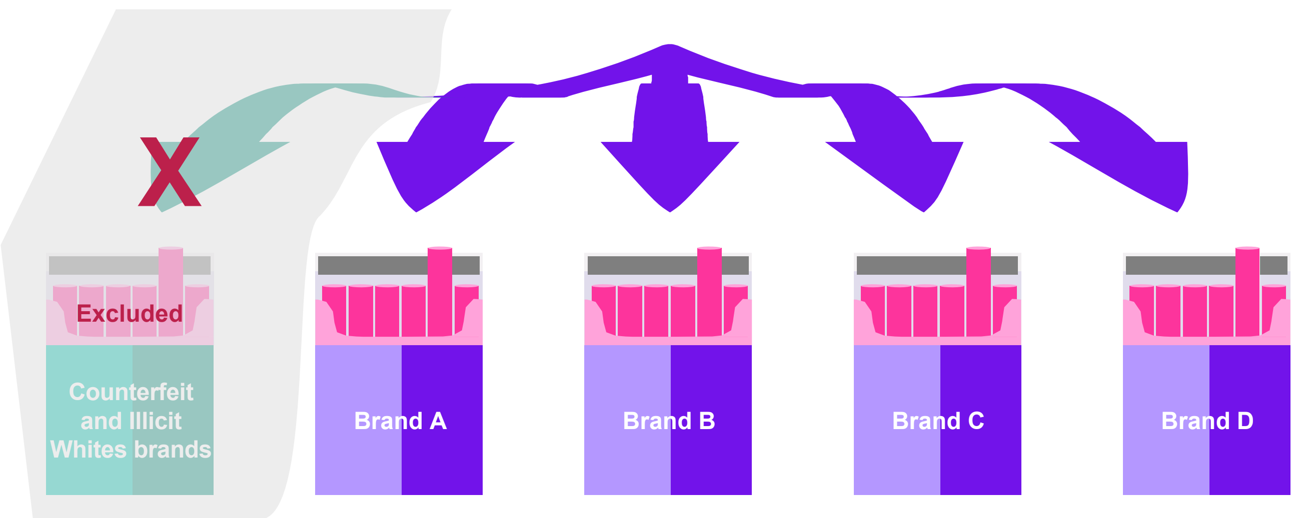
Non-Domestic Legal brand split analysis and assumptions

Illustrative example of ND(L) by brand approach

ND(L) by brand from Country A = **Empty pack survey legitimate brand share from Country A (%)** X **ND(L) from Country A**

Illustrative example of Brand Share calculation

Non-Domestic Brands from Country A
(as per empty pack survey)



Empty pack survey legitimate brand share from Country A (%)

Having estimated the volume of ND(L) inflows on a country basis as detailed on the previous page, the brand share was estimated by analysis of the brands that were found in the empty pack survey from that country

The ND(L) inflow from each source country was split into brands by using the following approach

- Illicit Whites brands and Counterfeit packs were excluded from being potentially classified as ND(L) as these brands are always C&C, leaving only brands that could have potentially legal inflow volumes
- For the remaining potentially legal brands, the ND(L) percentage share was estimated to be the same as the Non-Domestic share of these brands
- ND(L) volume by brand was estimated as the product of the total ND(L) inflow and the brand percentage share

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Non-Domestic Legal adjustments

Non-Domestic Legal adjustments

Country	Adjustment
Austria	**ND(L) from Czech Republic** Assumed to be predominately legal due to the countries' proximity and high non-tourism travel volumes **ND(L) from Slovenia** Assumed to be predominately legal due to high non-tourism travel volumes **ND(L) from Slovakia** ND(L) in Eastern Border areas from Slovakia assumed to be predominately legal given large price differentials and opportunities for Austrians to cross-border shop
Belgium	**ND(L) from Luxembourg** Assumed to be predominately legal due to high non-tourism travel volumes
Bulgaria	None
Croatia	None
Cyprus	None
Czech Republic	None
Denmark	None
Estonia	None
Finland	None
France	**Change in intra-EU27 cigarette cross-border legal limit** French authorities changed the legally allowed pack limit from 40 packs to 10 packs for all EU countries with effect from 1st August 2020 **ND(L) from Spain, Belgium and Luxembourg** In addition to tourist ND(L), ND(L) flows into France were increased to account for legal flows from border shoppers (using data points on local border populations, car ownership, average daily consumption, smoking incidence, adult population, etc to estimate the volume of cigarettes that could be bought legally by French smokers near the border). Border shopping is common in these bordering and cheaper markets, and border shopper crossings are not captured in tourist data **ND(L) from Algeria** ND(L) in France from Algeria was estimated using traveller volumes from the WTO and Bulletin Statistics, and traveller research carried out at airports in Algeria by Kantar TNS ('Tobacco brought back from Algeria to France by travellers of direct flights', May 2018) that indicated that 33% of travellers carry tobacco products from Algeria to France. The indicative legal limit remains 200 cigarettes

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Non-Domestic Legal adjustments (cont.)

Non-Domestic Legal adjustments

Country	Adjustment
Germany	**ND(L) from Czech Republic** Czech Republic ND(L) was estimated to be 2.02bn in this Report, by supplementing the WTO traveller numbers with yearly change in travel volume of border crossing data from the Czech Statistics Office. This is because WTO traveller data does not account for the high number of non-tourism related border crossings between Germany and Czech Republic related to workers and shoppers. The updated number of travellers was multiplied by the adult population %, smoking prevalence % and an assumed allowance of 420 cigarettes per person (cigarette number based on previous consumer research provided by PMI pre 2016) **ND(L) from Luxembourg** Assumed to be predominately legal due to the high number of border crossings
Greece	None
Hungary	None
Ireland	None
Italy	None
Latvia	None
Lithuania	None
Luxembourg	None
Malta	None
Moldova	**ND(L) from World Wide Duty Free** As Moldova is a non-EU27 market, Moldovans can purchase Duty Free when travelling to the EU27 and abroad. Given the quantum of Duty Free identified in Moldova, travel statistics to and from Moldova are sufficient to assume that Duty Free volumes identified are predominately legal. **ND(L) from Non-Domestic Duty-Paid** Assumed to be predominately legal because duties were paid in the origin market and there is limited incentive for travellers to carry more than the legal allowance to Moldova, which has some of the lowest cigarette prices in the region
Netherlands	None
Norway	**ND(L) from Sweden** Assumed to be predominately legal due to the high number of border crossings for shopping. Cigarettes are a popular border shopping purchase as prices in Sweden are almost half that in Norway **ND(L) from World Wide Duty Free** Assumed to be predominately legal. As Norway is a non-EU27 market, Norwegians can purchase Duty Free when travelling to the EU27 and abroad

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Non-Domestic Legal adjustments (cont.)

Non-Domestic Legal adjustments

Country	Adjustment
Poland	None
Portugal	None
Romania	None
Slovakia	None
Slovenia	None
Spain	**ND(L) from Andorra** ND(L) was increased to 0.19bn (from an original 0.11bn). This is to reflect additional border crossings (sourced from 2021 Nielsen study 'Volume assessment among travellers in Andorra 2021') and extrapolated for 2022, using 2021-22 CAGR of inbound arrivals from Andorra to Spain sourced from Euromonitor. The Andorra flow is considered predominately legal given the large number of tourist and cross border workers and shoppers **ND(L) from Canary Islands** ND(L) has been estimated at 0.18bn using total tourist border crossings sourced from government data as tourist data between Spain and the Canary Islands is not recorded in the WTO travel database. This flow is considered predominately legal given high tourism volumes **ND(L) from Gibraltar** ND(L) has been adjusted to 0.30bn (from an original 0.00bn). This is to reflect government data on total border crossings in 2022 of 9.5m which does not get captured in WTO travel data. This is then split between tourists and workers (sourced from HM Government of Gibraltar: Frontier workers by nationality, 2022 (Employment department) and Land frontier visitor arrivals, 2021 (Tourism department)) extrapolated for 2022, using 2021-22 CAGR of Inbound arrivals from Gibraltar to Spain sourced from Euromonitor. The relevant smoking prevalence for workers and tourists, adult population and purchase assumptions are then used to estimate total ND(L)
Sweden	None

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Non-Domestic Legal adjustments (cont.)

Non-Domestic Legal adjustments

Country	Adjustment
Switzerland	**ND(L) from Germany** Assumed to be predominately legal given its proximity and large number of tourists and cross border workers **ND(L) from World Wide Duty Free** Assumed to be predominately legal. As Switzerland is a non-EU27 market, Swiss can purchase Duty Free when travelling to the EU27 and abroad
UK	**ND(L) from Poland** The smoking prevalence of Polish visitors to the UK was increased from 21.5% to 23.1% to correspond to the proportions of male to female visitors (there were more male than female visitors from Poland, with men having a higher smoking prevalence, as sourced from the Office for National Statistics (‘Visits to and spending in UK: by sex, purpose of visit and country of residence 2021’ subsequently extrapolated for 2022 using 2021-22 CAGR of inbound arrivals from Poland to UK sourced from Euromonitor) The smoking prevalence of UK visitors to Poland was also updated to 19.1% (the Polish smoking prevalence) to account for the fact that a large majority of these UK visitors are Polish, as sourced from the Office for National Statistics (Number of visits to specified countries: by main country visited and nationality 2021 and extrapolated for 2022 (using 2021-22 CAGR of outbound departures from UK to Poland sourced from Euromonitor). Packs brought to the UK by Polish visitors was increased from 2 to 37 (based on previous consumer research provided by PMI pre 2016). This increased ND(L) from 0.04bn to 0.17bn **ND(L) from Romania** Packs brought to the UK by Romanian visitors were increased from 2 to 40 (based on previous consumer research provided by PMI pre 2016). Given the large price differentials between the UK and Romania, and the Romanian population in the UK, these travellers may be resident or working in the UK with the price incentive to purchase cigarettes up to the indicative legal limit. This increased ND(L) from 0.01bn to 0.07bn

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Non-Domestic Legal analysis

Primary information sources and tools – 2022 Non-Domestic legal major flow calculations

Austria									
Country		**# of border crossings**	**Population 18+**	**Smoking prevalence**	**Smoker trips**	**Packs per trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Slovenia	Outbound / Inbound	Flows considered predominantly legal							0.18bn
Hungary	Outbound / Inbound	Flows considered predominantly legal							0.10bn
Czech Republic	Outbound / Inbound	Figure based on tourism statistics and border region consumption analysis							0.09bn
Slovakia	Outbound / Inbound	Figure based on tourism statistics and border region consumption analysis							0.07bn
Others									0.35bn
Total									**0.78bn**

Belgium									
Country		**# of border crossings**	**Population 18+**	**Smoking prevalence**	**Smoker trips**	**Packs per trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Luxembourg	Outbound / Inbound	Figure based on tourism statistics and border region consumption analysis							0.43bn
France	Outbound / Inbound	Flows considered predominantly legal							0.07bn
Netherlands	Outbound / Inbound	Flows considered predominantly legal							0.05bn
Germany	Outbound / Inbound	Flows considered predominantly legal							0.03bn
Others									0.19bn
Total									**0.77bn**

Bulgaria									
Country		**# of border crossings**	**Population 18+**	**Smoking prevalence**	**Smoker trips**	**Packs per trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Turkey	Outbound / Inbound	Flows considered predominantly legal							0.02bn
Germany	Outbound / Inbound	Flows considered predominantly legal							0.01bn
The Republic of North Macedonia	Outbound / Inbound	Figure based on tourism statistics and border region consumption analysis							0.00bn
Serbia	Outbound / Inbound	Figure based on tourism statistics and border region consumption analysis							0.00bn
Others									0.06bn
Total									**0.10bn**

Note: Predominantly legal indicates that for the purposes of this Report cross-border travel volumes are sufficiently large that we have classified the flows as 100% ND(L), but recognise in reality that an element of the flow could be illicit as smuggling or imports over the allowed limits may occur 4

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Non-Domestic Legal analysis

Primary information sources and tools – 2022 Non-Domestic legal major flow calculations

Croatia									
Country		**# of border crossings**	**Population 18+**	**Smoking prevalence**	**Smoker trips**	**Packs per trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Singapore	Outbound	Flows considered predominantly legal							0.01bn
	Inbound								
Slovenia	Outbound	Flows considered predominantly legal							0.01bn
	Inbound								
Italy	Outbound	Flows considered predominantly legal							0.01bn
	Inbound								
Austria	Outbound	Flows considered predominantly legal							0.01bn
	Inbound								
Others									0.04bn
Total									**0.09bn**

Cyprus									
Country		**# of border crossings**	**Population 18+**	**Smoking Prevalence**	**Smoker trips**	**Packs per Trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Bulgaria	Outbound	0.02m	81%	29%	0.00m	40	800	0.00bn	0.00bn
	Inbound	0.02m	83%	35%	0.01m	2	40	0.00bn	
Saudi Arabia	Outbound	0.00m	81%	29%	0.00m	10	200	0.00bn	0.00bn
	Inbound	0.01m	70%	11%	0.00m	2	40	0.00bn	
Georgia	Outbound	0.00m	81%	29%	0.00m	10	200	0.00bn	0.00bn
	Inbound	0.00m	74%	27%	0.00m	2	40	0.00bn	
Afghanistan	Outbound	0.00m	81%	29%	0.00m	10	200	0.00bn	0.00bn
	Inbound	0.00m	50%	8%	0.00m	2	40	0.00bn	
Others									0.02bn
Total									**0.02bn**

Czech Republic									
Country		**# of border crossings**	**Population 18+**	**Smoking prevalence**	**Smoker trips**	**Packs per trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Poland	Outbound	Flows considered predominantly legal							0.47bn
	Inbound								
Slovakia	Outbound	Flows considered predominantly legal							0.06bn
	Inbound								
Germany	Outbound	Flows considered predominantly legal							0.04bn
	Inbound								
Bulgaria	Outbound	Figure based on tourism statistics and border region consumption analysis							0.01bn
	Inbound								
Others									0.13bn
Total									**0.71bn**

Note: Predominantly legal indicates that for the purposes of this Report cross-border travel volumes are sufficiently large that we have classified the flows as 100% ND(L), but recognise in reality that an element of the flow could be illicit as smuggling or imports over the allowed limits may occur

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Non-Domestic Legal analysis

Primary information sources and tools – 2022 Non-Domestic legal major flow calculations

Denmark									
Country		**# of border crossings**	**Population 18+**	**Smoking prevalence**	**Smoker trips**	**Packs per trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Sweden	Outbound	Figure based on tourism statistics and border region consumption analysis							0.05bn
	Inbound								
UK	Outbound	Flows considered predominantly legal							0.03bn
	Inbound								
Poland	Outbound	0.18m	80%	15%	0.02m	40	800	0.02bn	0.02bn
	Inbound	0.18m	82%	21%	0.03m	2	40	0.00bn	
Germany	Outbound	Flows considered predominantly legal							0.02bn
	Inbound								
Others									0.10bn
Total									**0.22bn**

Estonia									
Country		**# of border crossings**	**Population 18+**	**Smoking Prevalence**	**Smoker trips**	**Packs per Trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Latvia	Outbound	Flows considered predominantly legal							0.01bn
	Inbound								
Poland	Outbound	Flows considered predominantly legal							0.00bn
	Inbound								
Bulgaria	Outbound	0.02m	81%	23%	0.00m	40	800	0.00bn	0.00bn
	Inbound	0.00m	83%	35%	0.00m	2	40	0.00bn	
Turkey	Outbound	0.11m	81%	23%	0.02m	10	200	0.00bn	0.00bn
	Inbound	0.00m	73%	29%	0.00m	2	40	0.00bn	
Others									0.02bn
Total									**0.03bn**

Finland									
Country		**# of border crossings**	**Population 18+**	**Smoking prevalence**	**Smoker trips**	**Packs per trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Estonia	Outbound	0.35m	81%	15%	0.04m	40	800	0.04bn	0.04bn
	Inbound	0.06m	81%	23%	0.00m	2	40	0.00bn	
Latvia	Outbound	0.14m	81%	15%	0.02m	40	800	0.01bn	0.01bn
	Inbound	0.02m	81%	31%	0.00m	2	40	0.00bn	
Canary Islands	Outbound	Flows considered predominantly legal							0.01bn
	Inbound								
Poland	Outbound	0.10m	81%	15%	0.01m	40	800	0.01bn	0.01bn
	Inbound	0.03m	82%	21%	0.01m	2	40	0.00bn	
Others									0.09bn
Total									**0.16bn**

Note: Predominantly legal indicates that for the purposes of this Report cross-border travel volumes are sufficiently large that we have classified the flows as 100% ND(L), but recognise in reality that an element of the flow could be illicit as smuggling or imports over the allowed limits may occur

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Non-Domestic Legal analysis

Primary information sources and tools – 2022 Non-Domestic legal major flow calculations

France

Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Spain	Outbound	Figure based on tourism statistics and border region consumption analysis							1.54bn
	Inbound								
Belgium	Outbound	Figure based on tourism statistics and border region consumption analysis							0.43bn
	Inbound								
Algeria	Outbound	Figure based on tourism statistics and border region consumption analysis							0.21bn
	Inbound								
Andorra	Outbound	2.82m	79%	30%	0.66m	15	300	0.20bn	0.20bn
	Inbound	0.00m	84%	26%	0.00m	2	40	0.00bn	
Others									1.43bn
Total									**3.82bn**

Germany

Country		# of border crossings	Population 18+	Smoking Prevalence	Smoker trips	Packs per Trip	# of cigarettes	ND(L) volume	Total ND(L)
Poland	Outbound	Flows considered predominantly legal							4.63bn
	Inbound								
Czech Republic	Outbound	Figure based on tourism statistics and border region consumption analysis							2.02bn
	Inbound								
Luxembourg	Outbound	Flows considered predominantly legal							0.54bn
	Inbound								
Austria	Outbound	Figure based on tourism statistics and border region consumption analysis							0.23bn
	Inbound								
Others									1.95bn
Total									**9.36bn**

Greece

Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Bulgaria	Outbound	Figure based on tourism statistics and border region consumption analysis							0.02bn
	Inbound								
Turkey	Outbound	Flows considered predominantly legal							0.01bn
	Inbound								
Italy	Outbound	Flows considered predominantly legal							0.00bn
	Inbound								
Cyprus	Outbound	Figure based on tourism statistics and border region consumption analysis							0.00bn
	Inbound								
Others									0.19bn
Total									**0.22bn**

Note: Predominantly legal indicates that for the purposes of this Report cross-border travel volumes are sufficiently large that we have classified the flows as 100% ND(L), but recognise in reality that an element of the flow could be illicit as smuggling or imports over the allowed limits may occur

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Non-Domestic Legal analysis

Primary information sources and tools – 2022 Non-Domestic legal major flow calculations

Hungary									
Country		**# of border crossings**	**Population 18+**	**Smoking prevalence**	**Smoker trips**	**Packs per trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Slovakia	Outbound	Flows considered predominantly legal							0.03bn
	Inbound								
Austria	Outbound	Flows considered predominantly legal							0.03bn
	Inbound								
Romania	Outbound	Flows considered predominantly legal							0.02bn
	Inbound								
Poland	Outbound	Flows considered predominantly legal							0.02bn
	Inbound								
Others									0.15bn
Total									**0.25bn**

Ireland									
Country		**# of border crossings**	**Population 18+**	**Smoking Prevalence**	**Smoker trips**	**Packs per Trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Spain	Outbound	Flows considered predominantly legal							0.07bn
	Inbound								
Canary Islands	Outbound	Flows considered predominantly legal							0.05bn
	Inbound								
UK	Outbound	Flows considered predominantly legal							0.04bn
	Inbound								
Poland	Outbound	0.19m	76%	18%	0.03m	40	800	0.02bn	0.02bn
	Inbound	0.17m	82%	21%	0.03m	2	40	0.00bn	
Others									0.21bn
Total									**0.40bn**

Italy									
Country		**# of border crossings**	**Population 18+**	**Smoking prevalence**	**Smoker trips**	**Packs per trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Slovenia	Outbound	0.25m	84%	22%	0.05m	40	800	0.04bn	0.05bn
	Inbound	2.62m	82%	20%	0.43m	2	40	0.02bn	
Romania	Outbound	Figure based on tourism statistics and border region consumption analysis							0.05bn
	Inbound								
Switzerland	Outbound	Flows considered predominantly legal							0.03bn
	Inbound								
Spain	Outbound	Flows considered predominantly legal							0.02bn
	Inbound								
Others									0.57bn
Total									**0.73bn**

Note: Predominantly legal indicates that for the purposes of this Report cross-border travel volumes are sufficiently large that we have classified the flows as 100% ND(L), but recognise in reality that an element of the flow could be illicit as smuggling or imports over the allowed limits may occur

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Non-Domestic Legal analysis

Primary information sources and tools – 2022 Non-Domestic legal major flow calculations

Latvia

Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Lithuania	Outbound	Flows considered predominantly legal							0.00bn
	Inbound								
Poland	Outbound	Flows considered predominantly legal							0.00bn
	Inbound								
Belarus	Outbound	0.10m	81%	31%	0.03m	2	40	0.00bn	0.00bn
	Inbound	0.09m	80%	24%	0.02m	2	40	0.00bn	
Estonia	Outbound	Flows considered predominantly legal							0.00bn
	Inbound								
Other									0.02bn
Total									**0.03bn**

Lithuania

Country		# of border crossings	Population 18+	Smoking Prevalence	Smoker trips	Packs per Trip	# of cigarettes	ND(L) volume	Total ND(L)
Poland	Outbound	Flows considered predominantly legal							0.03bn
	Inbound								
Latvia	Outbound	Flows considered predominantly legal							0.01bn
	Inbound								
Belarus	Outbound	0.54m	82%	25%	0.11m	2	40	0.00bn	0.01bn
	Inbound	0.08m	80%	24%	0.02m	2	40	0.00bn	
Germany	Outbound	Flows considered predominantly legal							0.00bn
	Inbound								
Other									0.04bn
Total									**0.09bn**

Luxembourg

Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Germany	Outbound	Flows considered predominantly legal							0.00bn
	Inbound								
Spain	Outbound	Flows considered predominantly legal							0.00bn
	Inbound								
Netherlands	Outbound	Flows considered predominantly legal							0.00bn
	Inbound								
France	Outbound	Flows considered predominantly legal							0.00bn
	Inbound								
Others									0.00bn
Total									**0.01bn**

Note: Predominantly legal indicates that for the purposes of this Report cross-border travel volumes are sufficiently large that we have classified the flows as 100% ND(L), but recognise in reality that an element of the flow could be illicit as smuggling or imports over the allowed limits may occur

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Non-Domestic Legal analysis

Primary information sources and tools – 2022 Non-Domestic legal major flow calculations

Malta

Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Italy	Outbound	Flows considered predominantly legal							0.01bn
	Inbound								
France	Outbound	0.01m	84%	21%	0.00m	40	800	0.00bn	0.00bn
	Inbound	0.13m	79%	30%	0.03m	2	40	0.00bn	
UK	Outbound	0.07m	84%	21%	0.01m	10	200	0.00bn	0.00bn
	Inbound	0.30m	79%	13%	0.03m	2	40	0.00bn	
Saudi Arabia	Outbound	0.00m	84%	21%	0.00m	10	200	0.00bn	0.00bn
	Inbound	0.00m	70%	11%	0.01m	2	40	0.00bn	
Other									0.01bn
Total									**0.03bn**

Netherlands

Country		# of border crossings	Population 18+	Smoking Prevalence	Smoker trips	Packs per Trip	# of cigarettes	ND(L) volume	Total ND(L)
Germany	Outbound	Flows considered predominantly legal							0.18bn
	Inbound								
Belgium	Outbound	1.50m	81%	17%	0.21m	40	800	0.17bn	0.18bn
	Inbound	1.78m	80%	20%	0.28m	2	4	0.01bn	
Italy	Outbound	Flows considered predominantly legal							0.07bn
	Inbound								
Spain	Outbound	Flows considered predominantly legal							0.06bn
	Inbound								
Other									0.44bn
Total									**0.94bn**

Poland

Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Germany	Outbound	Flows considered predominantly legal							0.07bn
	Inbound								
Italy	Outbound	Flows considered predominantly legal							0.06bn
	Inbound								
Czech Republic	Outbound	Flows considered predominantly legal							0.02bn
	Inbound								
UK	Outbound	Flows considered predominantly legal							0.02bn
	Inbound								
Other									0.29bn
Total									**0.47bn**

Note: Predominantly legal indicates that for the purposes of this Report cross-border travel volumes are sufficiently large that we have classified the flows as 100% ND(L), but recognise in reality that an element of the flow could be illicit as smuggling or imports over the allowed limits may occur

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Non-Domestic Legal analysis

Primary information sources and tools – 2022 Non-Domestic legal major flow calculations

Portugal									
Country		**# of border crossings**	**Population 18+**	**Smoking prevalence**	**Smoker trips**	**Packs per trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Spain	Outbound			Flows considered predominantly legal					0.02bn
	Inbound								
Poland	Outbound			Flows considered predominantly legal					0.00bn
	Inbound								
Belgium	Outbound			Flows considered predominantly legal					0.00bn
	Inbound								
Switzerland	Outbound			Flows considered predominantly legal					0.00bn
	Inbound								
Others									0.03bn
Total									**0.06bn**

Romania									
Country		**# of border crossings**	**Population 18+**	**Smoking Prevalence**	**Smoker trips**	**Packs per Trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Bulgaria	Outbound			Flows considered predominantly legal					0.05bn
	Inbound								
Turkey	Outbound			Flows considered predominantly legal					0.02bn
	Inbound								
Moldova	Outbound	0.03m	81%	26%	0.01m	10	200	0.00bn	0.01bn
	Inbound	1.50m	77%	25%	0.29m	2	40	0.01bn	
UK	Outbound			Flows considered predominantly legal					0.01bn
	Inbound								
Others									0.08bn
Total									**0.18bn**

Slovakia									
Country		**# of border crossings**	**Population 18+**	**Smoking prevalence**	**Smoker trips**	**Packs per trip**	**# of cigarettes**	**ND(L) volume**	**Total ND(L)**
Poland	Outbound			Flows considered predominantly legal					0.02bn
	Inbound								
Czech Republic	Outbound			Flows considered predominantly legal					0.02bn
	Inbound								
Austria	Outbound			Flows considered predominantly legal					0.01bn
	Inbound								
Italy	Outbound			Flows considered predominantly legal					0.00bn
	Inbound								
Others									0.02bn
Total									**0.07bn**

Note: Predominantly legal indicates that for the purposes of this Report cross-border travel volumes are sufficiently large that we have classified the flows as 100% ND(L), but recognise in reality that an element of the flow could be illicit as smuggling or imports over the allowed limits may occur

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Non-Domestic Legal analysis

Primary information sources and tools – 2022 Non-Domestic legal major flow calculations

Slovenia

Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Hungary	Outbound	Flows considered predominately legal							0.02bn
	Inbound								
Romania	Outbound	Flows considered predominately legal							0.02bn
	Inbound								
Croatia	Outbound	Flows considered predominately legal							0.02bn
	Inbound								
Austria	Outbound	Flows considered predominately legal							0.01bn
	Inbound								
Others									0.03bn
Total									**0.10bn**

Spain

Country		# of border crossings	Population 18+	Smoking Prevalence	Smoker trips	Packs per Trip	# of cigarettes	ND(L) volume	Total ND(L)
Gibraltar	Outbound	Figure based on tourism statistics and border region consumption analysis							0.30bn
	Inbound								
Andorra	Outbound	Figure based on tourism statistics and border region consumption analysis							0.19bn
	Andorra								
Canary Islands	Outbound	Flows considered predominately legal							0.18bn
	Inbound								
Portugal	Outbound	Flows considered predominately legal							0.03bn
	Inbound								
Others									0.31bn
Total									**1.02bn**

Sweden

Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Poland	Outbound	0.28m	79%	11%	0.02m	40	800	0.02bn	0.02bn
	Inbound	0.19m	82%	21%	0.03m	2	40	0.00bn	
Denmark	Outbound	Flows considered predominantly legal							0.02bn
	Inbound								
Spain	Outbound	Flows considered predominantly legal							0.01bn
	Inbound								
Germany	Outbound	Flows considered predominantly legal							0.01bn
	Inbound								
Others									0.13bn
Total									**0.19bn**

Note: Predominantly legal indicates that for the purposes of this Report cross-border travel volumes are sufficiently large that we have classified the flows as 100% ND(L), but recognise in reality that an element of the flow could be illicit as smuggling or imports over the allowed limits may occur

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Non-Domestic Legal analysis

Primary information sources and tools – 2022 Non-Domestic legal major flow calculations

UK[a]

Country		# of border crossings	Population 18+	Smoking Prevalence	Smoker trips	Packs per Trip	# of cigarettes	ND(L) volume	Total ND(L)
Spain	Flows considered predominately legal								0.17bn
Poland	Outbound	1.55m	79%	19%	0.23m	10	200	0.05bn	0.17bn
	Inbound	0.86m	82%	23%	0.16m	37	740	0.12bn	
Canary Islands	Figure based on tourism statistics and border region consumption analysis								0.15bn
Romania	Outbound	0.16m	79%	13%	0.02m	10	200	0.00bn	0.07bn
	Inbound	0.38m	81%	26%	0.08m	40	800	0.06bn	
Others									1.30bn
Total									**1.85bn**

Norway

Country		# of border crossings	Population 18+	Smoking Prevalence	Smoker trips	Packs per Trip	# of cigarettes	ND(L) volume	Total ND(L)
Sweden	Outbound	Flows considered predominately legal							0.16bn
	Inbound								
Germany	Outbound	0.40m	80%	25%	0.03m	10	200	0.01bn	0.01bn
	Inbound	0.82m	83%	26%	0.14m	2	40	0.01bn	
Poland	Outbound	0.56m	80%	10%	0.05m	10	200	0.01bn	0.01bn
	Inbound	0.17m	82%	21%	0.03m	2	40	0.00bn	
Spain	Outbound	Flows considered predominately legal							0.01bn
	Inbound								
Others									0.26bn
Total									**0.45bn**

Switzerland

Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Germany	Outbound	Flows considered predominantly legal							0.09bn
	Inbound								
Italy	Outbound	Flows considered predominantly legal							0.07bn
	Inbound								
France	Outbound	Flows considered predominantly legal							0.05bn
	Inbound								
Austria	Outbound	Figure based on tourism statistics and border region consumption analysis							0.02bn
	Inbound								
Others									0.37bn
Total									**0.60bn**

Notes: (a) Smoking prevalence has been weighted to take account of the nationality and gender of the travellers between Poland and the UK; (b) Predominantly legal indicates that for the purposes of this Report cross-border travel volumes are sufficiently large that we have classified the flows as 100% ND(L), but recognise in reality that an element of the flow could be illicit as smuggling or imports over the allowed limits may occur

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Illicit Whites analysis

Illicit Whites brand flows accounted for almost a quarter of total C&C volumes in the EU27

Illicit Whites are defined as

- Cigarettes which are usually manufactured legally in one country or market but which the evidence suggests have been smuggled across borders to the destination market where they have limited or no legal distribution and are sold without the payment of tax

KPMG undertook the following analysis to estimate which brands made up Illicit Whites brand flows:

- Non-Domestic volumes were compared to LDS on a country by country basis to estimate the Non-Domestic share of total consumption
- KPMG conservatively assumed that where Non-Domestic volumes of a brand represented over 99% of total consumption, it is classified as an Illicit Whites brand

Where Illicit Whites packs do not have any country-specific tax stamps, they are categorised as 'Illicit Whites with no country-specific labelling' in the Report. This includes Duty Free labelled packs

An Illicit Whites brand's overall volume is the total of only those countries where the brand flow meets the 99% criteria

Many of the Illicit Whites flows are identified in high volumes in the empty pack survey. However, given our identification of Counterfeit product is limited to the empty pack survey participants, we cannot assess whether these flows are genuine or counterfeit

Illustrative example

Non-Domestic volumes by brand and destination country

Brand	Country 1	Country 2	Country 3	Country 4
Brand A	0.01	0.24	0.01	0.01

LDS by brand and by country

Brand	Country 1	Country 2	Country 3	Country 4
Brand A	-	0.00	-	0.01

Non-Domestic volumes as share of total consumption

Brand	Country 1	Country 2	Country 3	Country 4
Brand A	100%	100%	100%	38%

Illicit White volumes by brand and by destination country

Brand	Country 1	Country 2	Country 3	Country 4
Brand A	0.01	0.24	0.01	-

Classified as an Illicit White in country 1, 2 and 3 where there is limited or no evidence of legal distribution

Not classified as an Illicit White in country 4 where Non-Domestic volumes are 38% of consumption

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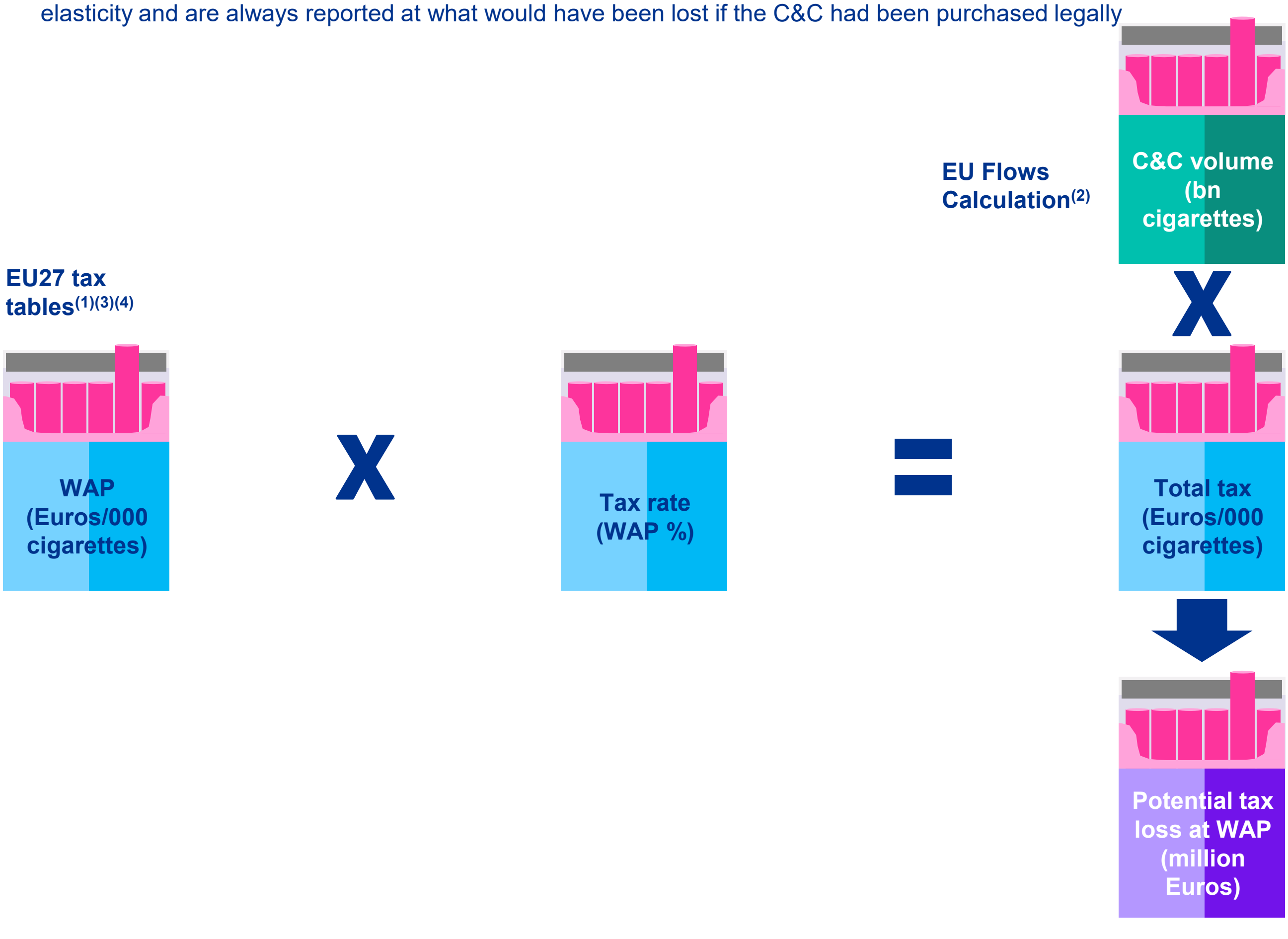
Tax Revenue Loss

The Report estimates the excise and VAT revenue that would have been gained had the volume of C&C cigarettes consumed in a country been legally purchased in that country

- The calculation shown below was performed for each country:
  - European Commission Excise Duty Tables tax tables 2022 were used to estimate the Weighted Average Price[a] for cigarettes within the EU27
  - This is then multiplied by the tax rate (as a % of Weighted Average Price (WAP))
  - The resultant tax take (per cigarette) is multiplied by the C&C consumption volumes for that country per the EU Flows Calculation to give the total potential tax loss based on WAP
  - Total tax losses for the 27 EU countries based on WAP were estimated to be €11.3bn in 2022. This was an increase versus prior year (2021: €10.4bn)[1][2]
- KPMG also estimated tax losses for Norway, Switzerland, UK, Ukraine and Moldova using the tax rates in these countries and WAP available through other sources[1][3][4]
- Tax losses are estimated based on sales volumes and are not reflective of any other factors, like affordability or price elasticity and are always reported at what would have been lost if the C&C had been purchased legally



Note: (a) WAP denotes Weighted Average Price per pack of 20 cigarettes

Sources: (1) For EU countries, tax rate and WAP from EC Excise Duty tables; (2) KPMG EU Flows Calculation and analysis of data sources provided by manufacturers; (3) For UK, Norway, Switzerland, Ukraine and Moldova, tax rate and WAP from PMI as on October 2022; (4) For other countries, WHO 2020 most sold brand prices extrapolated for 2022 using 2020-22 CAGR from Euromonitor

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04

Appendices

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Limitations of Results

The below noted limitations of results apply across 2018 to 2022

Limitation	Detail	Impact	Adjustment
Geographic coverage	• We have limited our geographic coverage in some markets where the inclusion of additional territories would impact confidence levels in the ND(L) research • In some instances (e.g. Greek islands), LDS data is also insufficient for the purposes of this study • Regions impacted by the ongoing war in Ukraine have been excluded from pack swap surveys in 2022	• Spanish results only cover mainland Spain and do not include the Canary Islands, Balearic Islands or Ceuta & Melilla • French results cover only mainland France and do not include Corsica. As a result, LDS from Corsica is not included in France consumption figures • Portuguese results only cover mainland Portugal and do not include Madeira or the Azores • Greek results only cover mainland Greece and do not include the Greek islands • UK results only cover Great Britain and Northern Ireland and do not include the Channel Islands or Isle of Man • The following regions were excluded from the pack swap survey in Ukraine: Luhansk, Donetsk, Kherson, Zaporizhia (except for the city of Zaporizhzhia), Crimea, Mykolaiv and 70% of Kharkiv	Not adjusted for
Non-major manufacturer Counterfeit	• Empty pack survey results do not identify Counterfeit packs that have been made by manufacturers other than British American Tobacco, Imperial Tobacco, Japan Tobacco International, and Philip Morris International as only the manufacturer/trademark owner can confirm whether their brand pack is genuine[(a)]	• In some instances, the volume of legal domestic consumption may be overstated where domestic Counterfeit variants exist, leading to corresponding understatements of C&C volumes for some brands (although the impact is likely to be minimal) • We cannot distinguish non-major manufacturer brand Counterfeit (Non-Domestic variants) and Contraband product, although this will not impact the overall volume of C&C • Illicit Whites volumes may include Counterfeit • For Moldova, Counterfeit analysis is not available • For Ukraine, a detailed breakdown of C&C by brand is only available for 2020-22. For 2018-19, brand level breakdowns are only available for the top five contraband brands during the year of survey, meaning volumes for some of the top C&C brands identified in 2022 are not available in 2018-19 and and may be included within the 'Other' category	Not adjusted for
Non-EU27 outflows	• In order to estimate consumption, we have assumed no outflows of LDS outside the 30 countries of study	• Non-EU27 LDS outflows are not considered to be material for all countries of study except Luxembourg. This is because of the high prices relative to other parts of the world and Duty Free import restrictions. This is supported by market discussions and non-EU27 empty pack surveys • For Luxembourg, additional research by industry participants indicates that there is a significant outflow of cigarettes to non-EU27 markets and has been adjusted for	Not adjusted for except Luxembourg

Note: (a) Phillip Morris International Counterfeit data only is included for Germany in 2018-2021

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Limitations of Results (cont.)

Source	Limitation
Empty pack survey	Whilst the empty pack survey for every country is designed by the third party market research agencies to be representative of the overall population, in some countries, owing to the geographical circumstances or demographics it may not be possible to ensure that the sample is fully representative. This may be because: • The sample is more heavily weighted towards populous, urban areas and therefore may not be fully representative of consumption habits in rural regions • Homes and workplaces or public spaces are not covered Results from Germany are based on a monthly analysis of approximately 10,000 packs collected at recycling centres as well as via empty pack surveys. Therefore, they are not directly comparable with the empty pack survey results from other countries due to the difference in the methodology adopted by Ipsos. However, both methods produce similar results (see page 202 for details)[a] In 2021, Moldova switched from a PMI-commissioned empty pack survey to pack swap surveys commissioned by Big-4 industry participants. Therefore, given the change in methodology, trends may not be directly comparable between 2018-20 and 2021-22 Although empty pack survey dates are selected by the third party market research agencies to seek to minimise seasonal factors, there may be specific events that impact the results such as significant price changes between countries and major national events which result in large numbers visiting the country, such as the Olympics or World Cup • In some instances the timing of empty pack surveys has changed between years. To seek to ensure comparability of results, we analyse monthly LDS figures, consumption trends and visitor data and make adjustments where appropriate • Where there are specific outflows related to tourism limited to the summer months, the reported numbers may underrepresent the full picture as the empty pack survey will only capture one point in time • COVID-19 related lockdowns and trave restrictions have impacted the timings of empty pack surveys in some markets in the 2020 and 2021 results. To seek to ensure comparability of results, we have analysed monthly LDS figures, consumption trends, visitor data and other data sources to make adjustments where appropriate. Refer to the 2020 results version of this Report for further details on the estimated impact of COVID-19 on the results and our methodology, and the empty pack survey adjustments pages in the methodology section of this Report (pages 197-201) Brand and market variant share can only be extrapolated with a degree of statistical accuracy for brands where a sufficiently large number of packs have been collected We analyse empty pack survey results to identify any outliers that may impact results, such as geographic concentrations of a specific brand or market variant. We also compare brand specific data to known sales in the source market to identify whether results are credible • Where data suggests a sampling or data capture error may have occurred at a specific location, we adjust the results in our analysis accordingly In some specific instances it is not possible to differentiate between Duty Free and Duty Paid variants from the empty packs collected • In some countries it is possible to purchase duty free labelled product but, when travelling within the EU27, duty is in fact paid on the product. It is not possible for the third party market research agencies, participating manufacturers or us to determine this distinction • The study also does not take account of various duty free loopholes that exist for some travel within the EU27

Note: (a) 120,000 weighted packs were collected as part of the YBS in Germany. Only a summarised version of the file with 33,226 data lines was provided to KPMG

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Limitations of Results (cont.)

Source	Limitation
LDS	• In some cases tax stamp data on packs released for sale may not correspond to the calendar year and may also be distorted by inventory holdings in advance of increases in taxation. In these instances we have used the LDS source considered by local country PMI management to be representative of smoker consumption during the calendar year, or official government data sources • Slight timing variances may arise between the date the product was shipped and actual consumption but, following discussions with local PMI management, this is not considered significant and the full year LDS information we have is considered to be a fair and accurate representation in each market
ND(L)	• From 2014, we have used business and tourism travel data from sources such as the UN World Tourism Organization (UNWTO) and national statistics offices to estimate the number of trips made • We have estimated the volume of cigarettes purchased by travellers by assuming that smokers purchase the Duty Free limit, or the indicative legal limit for intra-EU27 travel • This may over-weight ND(L) volume as a proportion of the total Non-Domestic flow • In some markets consumer research help us to overcome some of these limitations, such as the number of packs purchased per trip • We assume that traveller demographics are the same as the domestic population. It is likely that travellers will be older on average, with fewer under 18s. This may under-estimate ND(L) • In order to estimate the ND(L) brand split, we used brand shares from the empty pack surveys. Refer to page 204 for details • Pack swap survey data for Ukraine does not contain information regarding the origin of packs collected. Therefore, inflows to Ukraine cannot be broken down by origin and ND(L) inflows cannot be estimated • Pack swap survey results for Moldova have been summarised by the market research agency into four categories – Duty Free, Non-Domestic Duty Paid (NDDP), Illicit Whites and Others. For the purposes of this report, the first two categories have been considered to be legal inflows into Moldova and the last two have been considered C&C. Furthermore, data on origins of these packs is not available and, therefore, breakdown of ND(L) and C&C by country of origin cannot be estimated
Weighted Average Price (WAP)	• At the time of publication of this report, the latest WAP data available from the European Commission Excise Duty tables were for the year 2021

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Empty pack survey results by country

Empty pack survey results for EU27 countries, UK, Norway, Switzerland, Ukraine and Moldova 2019-22[(a)]

	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Austria	13,000	6,500	6,500	6,500	16%	11%	10%	11%
Belgium	5,600	2,800	5,600	5,600	17%	12%	10%	21%
Bulgaria	23,200	23,200	23,200	23,200	3%	2%	2%	2%
Croatia	3,000	3,000	3,000	3,000	8%	7%	7%	6%
Cyprus	1,000	1,000	1,000	1,000	16%	9%	16%	15%
Czech Republic	21,004	21,004	20,423	21,004	9%	3%	8%	9%
Denmark	5,000	5,000	10,000	10,000	10%	5%	10%	9%
Estonia	6,600	3,300	6,600	6,600	11%	9%	12%	16%
Finland	5,000	5,000	5,000	5,000	16%	12%	16%	19%
France	46,000	46,000	46,000	46,000	28%	29%	34%	39%
Germany	119,999	120,000	120,000	120,000	19%	17%	14%	15%
Greece	12,000	18,000	18,000	18,000	24%	25%	25%	22%
Hungary	17,240	17,240	17,241	17,240	10%	5%	6%	11%
Ireland	5,000	5,000	5,000	5,000	34%	22%	20%	36%
Italy	40,000	30,000	40,000	40,000	5%	4%	3%	3%
Latvia	9,800	4,900	9,800	9,800	17%	20%	17%	17%
Lithuania	11,600	5,800	11,600	11,600	20%	22%	21%	22%
Luxembourg	400	200	400	400	11%	12%	6%	17%
Malta	1,000	1,000	1,000	1,000	10%	8%	12%	11%
Netherlands	14,000	7,000	14,000	14,000	19%	16%	27%	15%
Poland	37,500	25,000	50,000	50,000	10%	9%	6%	5%
Portugal	3,000	3,000	3,000	3,000	8%	5%	7%	3%
Romania	15,125	12,646	10,049	15,076	13%	8%	8%	7%
Slovakia	5,000	5,000	5,000	5,000	6%	4%	4%	4%
Slovenia	3,000	3,000	3,000	3,000	15%	8%	14%	7%
Spain	30,000	15,000	30,000	30,000	8%	9%	8%	6%
Sweden	10,000	10,000	10,000	10,000	16%	10%	9%	11%
UK	12,700	12,700	25,400	25,400	27%	24%	22%	28%
Norway	5,000	5,000	5,000	5,000	38%	23%	22%	35%
Switzerland	5,600	5,600	5,600	5,600	14%	9%	9%	8%
Ukraine[(c)]	18,000	12,000	13,200	5,527	6%	6%	16%	19%
Moldova[(d)(e)]	-	-	1200	1532	-	-	1200	7%
Total	**505,368**	**434,890**	**526,147**	**524,079**	**15%**	**14%**	**14%**	**15%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in this table, i.e. 'focus' samples designed to investigate particular regional phenomena are excluded as they do not form part of the statistically representative national sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report; (c) Pack swap survey (d) Empty pack survey not undertaken in 2019 (e) Pack swap survey in 2021 and 2022

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Empty pack survey results by country (cont.)

Austria and Belgium results by region, 2019-22(1)(2)(3)(a)

Austria	Number of packs collected				ND incidence in empty pack survey(b)			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Burgenland	440	220	220	220	14%	11%	7%	15%
Kärnten	850	425	425	425	23%	14%	11%	15%
Niederösterreich	2,484	1,242	1,242	1,242	14%	13%	11%	9%
Oberösterreich	2,178	1,089	1,089	1,089	15%	10%	7%	9%
Salzburg	816	408	408	408	16%	9%	12%	10%
Steiermark	1,854	927	927	927	15%	11%	13%	12%
Tirol	1,104	552	552	552	12%	5%	6%	8%
Vorarlberg	574	287	287	287	16%	4%	6%	3%
Wien	2,700	1,350	1,350	1,350	20%	11%	11%	15%
Total	**13,000**	**6,500**	**6,500**	**6,500**	**16%**	**11%**	**10%**	**11%**

Belgium	Number of packs collected				ND incidence in empty pack survey(b)			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Aalst	200	100	200	200	11%	9%	4%	20%
Anderlecht	240	120	240	240	15%	17%	15%	24%
Antwerp	1,100	550	1,100	1,100	15%	12%	9%	21%
Arlon	160	80	160	160	47%	74%	45%	19%
Brugge	240	120	240	240	20%	12%	9%	24%
Brussels	380	190	380	380	25%	8%	8%	20%
Charleroi	460	230	460	460	16%	17%	16%	14%
Genk	200	100	200	200	13%	9%	22%	12%
Ghent	500	250	500	500	18%	12%	7%	25%
Hasselt	200	100	200	200	18%	11%	13%	22%
Kortrijk	200	100	200	200	14%	15%	5%	22%
Leuven	200	100	200	200	15%	5%	5%	19%
Liege	440	220	440	440	17%	7%	6%	18%
Mechelen	200	100	200	200	16%	7%	7%	24%
Mons	200	100	200	200	12%	11%	5%	18%
Namur	240	120	240	240	14%	16%	15%	19%
Sambreville	160	80	160	160	15%	2%	17%	26%
Schaerbeek	280	140	280	280	14%	8%	8%	23%
Total	**5,600**	**2,800**	**5,600**	**5,600**	**17%**	**12%**	**10%**	**21%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) Ipsos marketing empty pack surveys, 2019-2021; (2) MS Intelligence empty pack surveys, 2019; (3) WSPM empty pack surveys, 2020-22

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Empty pack survey results by country (cont.)

Bulgaria results by region, 2019-22[1](a)

Bulgaria	Number of packs collected				ND incidence in empty pack survey[b]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Blagoevgrad	600	600	600	600	5%	2%	3%	2%
Burgas	1,332	1,332	1,332	1,332	3%	2%	2%	2%
Dobric	600	600	600	600	3%	5%	2%	2%
Gabrovo	600	600	600	600	1%	2%	1%	3%
Grad Sofia	7,056	7,056	7,056	7,056	3%	2%	2%	2%
Haskovo	1,524	1,524	1,524	1,524	5%	2%	1%	3%
Jambol	600	600	600	600	2%	3%	1%	3%
Kjustendil	-	-	-	-	-	-	-	-
Lovec	672	672	672	672	5%	4%	1%	3%
Montana	-	-	-	-	-	-	-	-
Pazardzik	600	600	600	600	4%	3%	4%	1%
Pernik	600	600	600	600	6%	2%	4%	1%
Plovdiv	2,828	2,828	2,828	2,828	5%	2%	3%	3%
Ruse	984	984	984	984	3%	3%	1%	3%
Sliven	600	600	600	600	3%	3%	2%	4%
Sumen	600	600	600	600	2%	2%	2%	2%
Varna	2,204	2,204	2,204	2,204	3%	3%	2%	4%
VelikoTarnovo	600	600	600	600	6%	0%	1%	3%
Vidin	600	600	600	600	3%	3%	2%	5%
Vratsa	600	600	600	600	4%	3%	3%	3%
Total	**23,200**	**23,200**	**23,200**	**23,200**	**3%**	**2%**	**2%**	**2%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Source: (1) Nielsen empty pack surveys, 2019-2022

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Empty pack survey results by country (cont.)

Croatia, Cyprus and Czech Republic results by region, 2019-22[(1)(2)(a)]

Croatia	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Osijek	193	193	193	187	18%	8%	3%	4%
Pula	132	132	132	129	6%	1%	8%	5%
Rijeka	295	295	295	267	2%	4%	5%	5%
Sesvete	124	124	124	136	10%	9%	2%	4%
Slavonski Brod	123	123	123	111	46%	19%	19%	19%
Split	384	384	384	370	5%	3%	3%	12%
Zadar	164	164	164	165	8%	2%	2%	1%
Zagreb	1,585	1,585	1,585	1,635	7%	9%	9%	4%
Total	**3,000**	**3,000**	**3,000**	**3,000**	**8%**	**7%**	**7%**	**6%**

Cyprus	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Larnaca	150	150	150	150	16%	17%	17%	15%
Limassol	300	300	300	300	10%	4%	9%	18%
Nicosia	400	400	400	400	21%	11%	22%	13%
Paphos	150	150	150	150	19%	8%	8%	18%
Total	**1,000**	**1,000**	**1,000**	**1,000**	**16%**	**9%**	**16%**	**15%**

Czech Republic	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Jihocesky Kraj	724	724	702	724	5%	2%	5%	3%
Jihomoravsky Kraj	2,148	2,148	2,099	2,148	10%	3%	7%	7%
Karlovarsky Kraj	300	300	275	300	9%	5%	13%	12%
Kralovehradecky Kraj	526	526	509	526	3%	3%	6%	11%
Liberecky Kraj	1,034	1,034	966	1,034	8%	4%	12%	12%
Moravsoslezsky Kraj	3,332	3,332	3,234	3,332	14%	3%	14%	22%
Olomoucky Kraj	1,062	1,062	1,035	1,062	7%	3%	8%	6%
Pardubicky Kraj	510	510	505	510	3%	3%	5%	7%
Plzensky Kraj	948	948	909	948	8%	2%	8%	4%
Praha	7,114	7,114	7,000	7,114	8%	3%	5%	6%
Stredocesky Kraj	636	636	618	636	5%	1%	4%	4%
Ustecky Kraj	1,750	1,750	1,673	1,750	6%	4%	12%	10%
Vysocina	496	496	483	496	8%	1%	7%	4%
Zlinsky Kraj	424	424	415	424	5%	3%	6%	6%
Total	**21,004**	**21,004**	**20,423**	**21,004**	**9%**	**3%**	**8%**	**9%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) Nielsen empty pack surveys, 2019-2022; (2) Ultex empty pack surveys, 2019-2022

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Empty pack survey results by country (cont.)

Denmark and Estonia results by region, 2019-22[(1)(2)(3)(a)]

Denmark	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Capital Region	2,612	2,612	5,224	5,224	12%	4%	10%	9%
Mid Jutland	1,011	1,011	2,022	2,022	10%	6%	8%	7%
North Jutland	422	422	844	844	5%	4%	13%	11%
South Denmark	955	955	1,910	1,910	8%	8%	10%	9%
Zealand	-	-	-	-	-	-	-	-
Total	**5,000**	**5,000**	**10,000**	**10,000**	**10%**	**5%**	**10%**	**9%**

Estonia	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Har	3,200	1,600	3,200	3,200	10%	10%	10%	17%
Ida	1,100	550	1,100	1,100	14%	9%	20%	15%
Lääne	200	100	200	200	12%	1%	6%	18%
Lvi	200	100	200	200	9%	4%	15%	21%
Pär	300	150	300	300	11%	7%	11%	17%
Saa	200	100	200	200	2%	4%	5%	13%
Tar	800	400	800	800	12%	11%	13%	16%
Val	200	100	200	200	30%	14%	13%	13%
Vil	200	100	200	200	6%	3%	8%	13%
Võr	200	100	200	200	12%	6%	5%	15%
Total	**6,600**	**3,300**	**6,600**	**6,000**	**11%**	**9%**	**12%**	**16%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) MS Intelligence Empty pack surveys, 2019; (2) Nielsen empty pack surveys, 2019-2022; (3) WSPM empty pack survey, 2020-22

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Empty pack survey results by country (cont.)

Finland and France results by region, 2019-22[1][2][a]

Finland	Number of packs collected				ND incidence in empty pack survey[b]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Etela-Karjala	-	-	-	-	-	-	-	-
Keski-Suomi	315	315	315	315	7%	4%	20%	10%
Kymenlaakso	193	193	193	193	16%	5%	11%	23%
Lappi	-	-	-	-	-	-	-	-
Paijat-Hame	271	271	271	271	11%	20%	14%	12%
Pirkanmaa	517	517	517	517	16%	7%	14%	7%
Pohjois-Karjala	-	-	-	-	-	-	-	-
Pohjois-Savo	267	267	267	267	6%	11%	14%	9%
Prohiois-Pohianmaa	454	454	454	454	7%	4%	15%	10%
Uusimaa	2,558	2,558	2,558	2,558	20%	16%	17%	25%
Varsinais-Suomi	425	425	425	425	19%	12%	21%	22%
Total	**5,000**	**5,000**	**5,000**	**5,000**	**16%**	**12%**	**16%**	**19%**

France	Number of packs collected				ND incidence in empty pack survey[b]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Alsace Lorraine Champagne Ardennes	4,000	4,000	4,000	-	36%	29%	33%	-
Aquitaine	2,456	2,456	2,456	4,000	26%	29%	34%	39%
Auvergne Limousin	1,500	1,500	1,500	4,396	16%	23%	33%	38%
Auvergne-Rhône-Alpes	4,760	4,760	4,760	5,760	25%	26%	33%	38%
Basse Haute Normandie	2,804	2,804	2,804	2,804	19%	27%	33%	37%
Bourgogne-Franche-Comté	3,200	3,200	3,200	3,040	22%	28%	33%	36%
Bretagne	3,600	3,600	3,600	3,600	15%	25%	29%	39%
Centre - Val de Loire	2,000	2,000	2,000	2,000	18%	25%	39%	38%
Île-de-France	7,200	7,200	7,200	7,200	33%	29%	33%	39%
Occitanie	3,200	3,200	3,200	3,200	37%	37%	33%	38%
Nord Picardie	4,396	4,396	4,396	4,000	34%	31%	35%	39%
Pays de la Loire	3,284	3,284	3,284	2,400	17%	21%	34%	38%
Provence-Alpes-Côte d'Azur	3,600	3,600	3,600	3,600	30%	33%	38%	43%
Total	**46,000**	**46,000**	**46,000**	**46,000**	**28%**	**29%**	**34%**	**39%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) MS Intelligence empty pack surveys, 2019; (2) WSPM empty pack surveys, 2019-2022

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Empty pack survey results by country (cont.)

Germany and Greece results by region, 2019-22[(1)(2)(a)]

Germany	Number of packs collected[(c)]				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Lower Saxony	20,182	20,411	20,527	19,852	11%	9%	7%	10%
North Rhine-Westphalia	25,737	24,222	26,070	26,338	11%	10%	8%	10%
Rhineland-Palatinate	15,206	16,599	15,051	16,551	12%	10%	10%	13%
Baden-Württemberg	14,508	15,248	14,651	14,729	12%	10%	9%	11%
Bavaria	19,077	19,372	18,656	18,389	24%	22%	16%	19%
Berlin	5,779	-	-	6,875	45%	-	-	42%
Brandenburg	10,918	15,121	16,072	8,914	33%	39%	30%	35%
Saxony	8,592	9,026	8,972	8,302	40%	33%	28%	34%
Total	**119,999**	**120,000**	**120,000**	**120,000**	**19%**	**17%**	**14%**	**15%**

Greece	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Attica	4,600	6,900	6,900	6,900	27%	27%	28%	23%
Central Greece	400	600	600	600	18%	19%	20%	22%
Central Macedonia	2,400	3,600	3,600	3,600	23%	25%	25%	23%
Crete	1,000	1,500	1,500	1,500	20%	23%	25%	23%
East Macedonia/Thrace	-	-	-	-	-	-	-	-
Epirus	400	600	600	600	17%	22%	20%	25%
Ionian Islands	400	600	600	600	27%	27%	17%	18%
South Aegean	400	600	600	600	14%	21%	20%	21%
Thessaly	1,200	1,800	1,800	1,800	24%	28%	27%	20%
West Greece	1,200	1,800	1,800	1,800	23%	24%	19%	23%
West Macedonia	-	-	-	-	-	-	-	-
Total	**12,000**	**18,000**	**18,000**	**18,000**	**24%**	**25%**	**25%**	**22%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report; (c) This table lists the weighted pack count from yellow bag surveys for 2017-2020. This is different from the unweighted pack count listed in last year's report

Sources: (1) Ipsos Yellow Bag Surveys, 2019-2021; (2) Nielsen empty pack surveys, 2019-2022

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Empty pack survey results by country (cont.)

Italy and Latvia results by region, 2019-22[(1)(2)(a)]

Hungary	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Bács-Kiskun	775	775	775	775	9%	6%	6%	8%
Baranya	645	645	645	605	9%	3%	5%	9%
Békés	555	555	555	555	8%	5%	5%	11%
Borsod-Abaúj-Zemplén	850	850	850	790	16%	11%	12%	12%
Budapest	6,250	6,250	6,250	6,250	9%	5%	5%	12%
Csongrád	900	900	900	900	10%	6%	6%	10%
Fejér	640	640	640	640	9%	5%	4%	10%
Gyor-Moson-Sopron	934	934	934	975	9%	5%	5%	8%
Hajdú-Bihar	990	990	990	990	12%	8%	8%	13%
Heves	390	390	390	390	10%	5%	10%	15%
Jász-Nagykun-Szolnok	315	315	315	315	10%	6%	6%	12%
Komárom-Esztergom	440	440	440	440	10%	5%	7%	8%
Nógrád	165	165	165	165	12%	5%	10%	12%
Pest	1,235	1,235	1,235	1,295	7%	6%	5%	10%
Somogy	285	285	285	285	6%	2%	5%	11%
Szabolcs-Szatmár-Bereg	485	485	485	485	16%	10%	9%	13%
Tolna	145	145	145	145	9%	3%	5%	7%
Vas	335	335	335	335	7%	2%	4%	7%
Veszprém	417	417	417	415	6%	3%	5%	6%
Zala	489	489	490	490	8%	1%	6%	7%
Total	**17,240**	**17,240**	**17,241**	**17,240**	**10%**	**5%**	**6%**	**11%**

Ireland	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Connacht	400	400	400	400	36%	21%	25%	34%
Leinster	3,225	3,225	3,225	3,225	34%	22%	20%	38%
Munster	1,275	1,275	1,275	1,275	32%	19%	19%	34%
Ulster	100	100	100	100	26%	19%	21%	22%
Total	**5,000**	**5,000**	**5,000**	**5,000**	**34%**	**22%**	**20%**	**36%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) Ipsos empty pack surveys, 2019-2021; (2) Nielsen empty pack surveys, 2019-2021; (3) WSPM empty pack surveys, 2022

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Empty pack survey results by country (cont.)

Italy and Latvia results by region, 2019-22[1][2][a]

Italy	Number of packs collected				ND incidence in empty pack survey[b]			
Region	2019	2020	2021	2022	2019	2020	2021	2022
Abruzzo	720	540	720	720	3%	1%	1%	1%
Calabria	880	660	880	880	2%	1%	1%	1%
Campania	3,720	2,790	3,720	3,720	16%	12%	11%	8%
Emilia Romagna	3,880	2,910	3,880	3,880	3%	4%	2%	3%
Friuli Venezia Giulia	640	480	640	640	27%	24%	26%	35%
Lazio	7,320	5,490	7,320	7,320	5%	4%	1%	1%
Liguria	1,680	1,260	1,680	1,680	2%	1%	1%	2%
Lombardia	4,480	3,360	4,480	4,480	5%	3%	3%	3%
Marche	600	450	600	600	3%	2%	2%	2%
Piemonte	2,920	2,190	2,920	2,920	2%	1%	1%	2%
Puglia	2,960	2,220	2,960	2,960	5%	3%	3%	3%
Sicilia	4,840	3,630	4,840	4,840	4%	2%	1%	2%
Toscana	1,920	1,440	1,920	1,920	3%	1%	1%	1%
Trentino Alto Adige	400	300	400	400	6%	6%	6%	4%
Umbria	720	540	720	720	1%	0%	1%	1%
Veneto	2,320	1,740	2,320	2,320	5%	2%	2%	1%
Total	**40,000**	**30,000**	**40,000**	**40,000**	**5%**	**4%**	**3%**	**3%**

Latvia	Number of packs collected				ND incidence in empty pack survey[b]			
Region	2019	2020	2021	2022	2019	2020	2021	2022
Kurzeme	1,200	600	1,200	1,200	11%	21%	14%	14%
Latgale	1,400	700	1,400	1,400	26%	31%	32%	29%
Pieriga	1,400	700	1,400	1,400	18%	21%	15%	14%
Riga	4,000	2,000	4,000	4,000	16%	19%	15%	16%
Vidzeme	800	400	800	800	7%	12%	21%	15%
Zemgale	1,000	500	1,000	1,000	15%	17%	13%	11%
Total	**9,800**	**4,900**	**9,800**	**9,800**	**17%**	**20%**	**17%**	**17%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) Ipsos empty pack surveys, 2019-2022; (2) Nielsen empty pack surveys, 2019-2022

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Empty pack survey results by country (cont.)

Lithuania, Luxembourg and Malta results by region, 2019-22(1)(2)(3)(a)

Lithuania	Number of packs collected				ND incidence in empty pack survey(b)			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Alytus	600	300	600	600	23%	25%	24%	23%
Kaunas	2,800	1,400	2,800	2,800	23%	26%	21%	27%
Klaipeda	1,600	800	1,600	1,600	17%	18%	20%	18%
Marijampole	400	200	400	400	23%	18%	19%	26%
Panevezys	600	300	600	600	26%	22%	24%	23%
Siauliai	800	400	800	800	21%	29%	19%	18%
Taurage	200	100	200	200	22%	25%	23%	26%
Telsiai	800	400	800	800	11%	16%	19%	19%
Utena	600	300	600	600	24%	12%	14%	18%
Vilnius	3,200	1,600	3,200	3,200	19%	19%	21%	22%
Total	**11,600**	**5,800**	**11,600**	**11,600**	**20%**	**22%**	**21%**	**22%**

Luxembourg	Number of packs collected				ND incidence in empty pack survey(b)			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Esch-Sur-Alzette	160	80	160	320	13%	21%	6%	18%
Luxembourg	240	120	240	480	10%	5%	6%	16%
Total	**400**	**200**	**400**	**800**	**11%**	**12%**	**6%**	**17%**

Malta	Number of packs collected				ND incidence in empty pack survey(b)			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Northern	350	350	350	350	10%	7%	12%	11%
Northern Harbour	550	550	550	550	10%	9%	11%	12%
Southern Harbour	**100**	**100**	**100**	**100**	**10%**	**5%**	**10%**	**11%**
Total	**1,000**	**1,000**	**1,000**	**1,000**	**10%**	**8%**	**12%**	**11%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) Nielsen Empty pack surveys, 2019-2022; (2) MS Intelligence empty pack surveys, 2018-2019; (3) WSPM empty pack surveys, 2020-2022

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Empty pack survey results by country (cont.)

Netherlands, Poland results by region, 2019-22(1)(2)(3)(a)

Netherlands	Number of packs collected				ND incidence in empty pack survey(b)			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Drenthe	202	101	202	202	16%	17%	26%	18%
Flevoland	504	252	504	504	29%	15%	23%	15%
Friesland	332	166	332	332	15%	11%	28%	17%
Gelderland	1,084	542	1,084	1,084	11%	15%	27%	10%
Groningen	364	182	364	364	6%	9%	17%	24%
Limburg	752	376	752	752	15%	12%	45%	15%
North Brabant	1,860	930	1,860	1,860	15%	16%	40%	14%
North Holland	3,090	1,545	3,090	3,090	24%	16%	21%	18%
Overijssel	992	496	992	992	20%	19%	29%	12%
South Holland	3,944	1,972	3,994	3,944	20%	16%	24%	15%
Utrecht	876	438	876	876	22%	20%	25%	11%
Total	**14,000**	**7,000**	**14,000**	**14,000**	**19%**	**16%**	**27%**	**15%**

Poland	Number of packs collected				ND incidence in empty pack survey(b)			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Dolnoslaskie	3,000	2,000	4,000	4,000	8%	9%	4%	5%
Kujawsko-Pomorskie	2,775	1,850	3,700	3,700	9%	8%	4%	4%
Lodzkie	2,475	1,650	3,300	3,300	13%	12%	8%	7%
Lubelskie	1,200	800	1,600	1,600	8%	6%	4%	3%
Lubuskie	900	600	1,200	1,200	6%	5%	3%	2%
Malopolskie	2,925	1,950	3,900	3,900	3%	3%	5%	5%
Mazowieckie	6,750	4,500	9,000	9,000	15%	16%	8%	8%
Opolskie	450	300	600	600	5%	2%	3%	2%
Podkarpackie	600	400	800	800	8%	16%	10%	7%
Podlaskie	975	650	1,300	1,300	27%	18%	16%	15%
Pomorskie	2,325	1,550	3,100	3,100	6%	5%	3%	2%
Slaskie	7,350	4,900	9,800	9,800	8%	8%	5%	5%
Swietokrzyskie	675	450	900	900	4%	2%	2%	3%
Warminsko-Mazurskie	1,050	700	1,400	1,400	23%	13%	7%	5%
Wielkopolskie	2,250	1,500	3,000	3,000	1%	5%	3%	4%
Zachodniopomorskie	1,800	1,200	2,400	2,400	7%	9%	2%	3%
Total	**37,500**	**25,000**	**50,000**	**50,000**	**10%**	**9%**	**6%**	**5%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) MS Intelligence empty pack surveys, 2019-2020; (2) Almares Research empty pack surveys, 2019-2022; (3) WSPM Group empty pack surveys, 2021-2022

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Empty pack survey results by country (cont.)

Portugal, Romania and Slovakia results by region, 2019-22[(1)(2)(3)(a)]

Portugal	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Center	200	200	200	200	2%	0%	0%	0%
Lisboa	1,900	1,900	1,900	1,900	6%	3%	3%	2%
North	900	900	900	900	13%	9%	16%	4%
Total	**3,000**	**3,000**	**3,000**	**3,000**	**8%**	**5%**	**7%**	**3%**

Romania	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Bucharest	1,592	1,398	1,078	1,467	5%	4%	4%	5%
Caras-Severin	-	296	154	258	-	4%	6%	8%
Center	1,427	1,214	1,008	1,504	1%	1%	1%	1%
North-East	2,683	2,349	1,883	2,761	31%	21%	23%	21%
North-West	1,979	1,743	1,430	2,215	12%	11%	12%	7%
Satu Mare	-	35	1,410	-	-	29%	4%	-
South	1,754	1,642	1,410	2,044	4%	4%	7%	4%
South-East	2,267	1,659	1,250	1,991	10%	5%	6%	6%
South-West	1,700	1,357	1,065	1,593	20%	10%	11%	6%
West	1,723	953	771	1,243	19%	9%	4%	6%
Total	**15,125**	**12,646**	**10,049**	**15,076**	**13%**	**8%**	**9%**	**7%**

Slovakia	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Banskobystricky Kraj	450	450	450	450	3%	2%	3%	1%
Bratislavsky Kraj	1,200	1,200	1,200	1,200	3%	1%	2%	2%
Kosicky Kraj	800	800	800	800	11%	5%	5%	7%
Nitriansky Kraj	650	650	650	650	8%	5%	7%	5%
Presovsky Kraj	600	600	600	600	5%	5%	8%	5%
Trenciansky Kraj	400	400	400	400	4%	10%	4%	7%
Trnavsky Kraj	300	300	300	300	8%	9%	3%	5%
Zilinsky Kraj	600	600	600	600	2%	2%	4%	2%
Total	**5,000**	**5,000**	**5,000**	**5,000**	**6%**	**4%**	**4%**	**4%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) Ipsos empty pack surveys, 2019-2022; (2) Novel Study, 2019-2021; (3) Nielsen empty pack surveys, 2019-2022

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Empty pack survey results by country (cont.)

Slovenia and Spain results by region, 2019-22(1)(2)(3)(a)

Slovenia	Number of packs collected				ND incidence in empty pack survey(b)			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Celje	210	210	210	210	14%	9%	9%	6%
Koper	139	139	139	139	15%	5%	22%	22%
Kranj	208	208	208	208	20%	7%	25%	9%
Ljubljana	1,539	1,539	1,539	1,539	15%	8%	9%	5%
Maribor	531	531	531	531	17%	9%	22%	8%
Novo Mesto	130	130	130	130	12%	3%	19%	15%
Ptuj	101	101	101	101	10%	5%	18%	4%
Velenje	142	142	142	142	13%	7%	17%	5%
Total	**3,000**	**3,000**	**3,000**	**3,000**	**15%**	**8%**	**14%**	**7%**

Spain	Number of packs collected				ND incidence in empty pack survey(b)			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Andalucia	5,176	2,588	5,176	5,176	29%	36%	32%	20%
Aragon	1,170	585	1,170	1,170	2%	1%	1%	1%
Asturias	858	429	858	858	2%	0%	1%	3%
Basque Country	1,534	767	1,534	1,534	2%	2%	2%	3%
Cantabria	304	152	304	304	2%	2%	2%	3%
CastillaY Leon	1,320	660	1,320	1,320	2%	0%	6%	2%
Castilla-La Mancha	296	148	296	296	2%	3%	12%	1%
Catalonia	5,394	2,697	5,394	5,394	5%	4%	3%	3%
Comunidad Valenciana	2,842	1,421	2,842	2,842	2%	2%	1%	2%
Extremadura	258	129	258	258	1%	17%	25%	8%
Galicia	1,130	565	1,130	1,130	2%	2%	2%	5%
La Rioja	262	131	262	262	2%	2%	0%	1%
Madrid	7,992	3,996	7,992	7,992	6%	4%	4%	4%
Murcia	1,126	563	1,126	1,126	4%	1%	2%	2%
Navarra	338	169	338	338	1%	1%	2%	0%
Total	**30,000**	**15,000**	**30,000**	**30,000**	**8%**	**9%**	**8%**	**6%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) MS Intelligence Empty pack surveys, 2019; (2) WSPM empty pack surveys, 2019-2022; (3) Ipsos empty pack surveys, 2019-2022

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Empty pack survey results by country (cont.)

Sweden results by region, 2019-22[1][a]

Sweden	Number of packs collected				ND incidence in empty pack survey[b]			
Region	2019	2020	2021	2022	2019	2020	2021	2022
Blekinge	150	150	150	150	11%	10%	9%	18%
Dalarna	150	150	150	150	11%	5%	19%	7%
Gastrikland	190	190	190	190	17%	8%	6%	7%
Halland	304	304	304	304	13%	8%	11%	10%
Jönköping	233	233	233	233	13%	4%	10%	15%
Kronoberg	154	154	154	154	22%	5%	12%	8%
Norrbotten	150	150	150	150	9%	4%	5%	6%
Örebro	272	272	272	272	7%	10%	6%	7%
Östergötland	500	500	500	500	15%	10%	14%	14%
Skåne	1,101	1,101	1,101	1,101	15%	13%	12%	18%
Smaland	150	150	150	150	23%	12%	9%	10%
Södermanland	316	316	316	316	17%	10%	10%	12%
Stockholm	3,284	3,284	3,284	3,284	16%	11%	7%	10%
Uppsala	355	355	355	355	20%	9%	6%	9%
Värmland	162	162	162	162	15%	15%	9%	7%
Västerbotten	359	359	359	359	18%	2%	6%	8%
Västernorrland	150	150	150	150	16%	8%	5%	14%
Västmanland	296	296	296	296	12%	8%	7%	10%
Västra Götaland	1,724	1,724	1,724	1,724	15%	8%	11%	10%
Total	**10,000**	**10,000**	**10,000**	**10,000**	**16%**	**10%**	**9%**	**11%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) Global Vox Populi empty pack surveys, 2019-2022

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Empty pack survey results by country (cont.)

UK and Norway results by region, 2019-22[(1)(2)(3)(a)]

UK	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
East Midlands	1,000	1,000	2,000	2,000	25%	23%	25%	23%
East of England	1,000	1,100	2,200	2,200	30%	34%	23%	28%
London	1,500	1,500	3,000	3,000	26%	20%	17%	26%
North East England	500	500	1,000	1,000	42%	40%	38%	41%
North West England	1,299	1,299	2,598	2,598	24%	24%	22%	30%
Northern Ireland	500	500	1,000	1,000	26%	14%	20%	22%
Scotland	1,099	1,099	2,198	2,198	19%	22%	20%	33%
South East England	2,001	2,001	4,002	4,002	27%	19%	19%	25%
South West England	900	900	1,800	1,800	27%	17%	18%	27%
Wales	700	700	1,400	1,400	27%	13%	12%	23%
West Midlands	1,201	1,201	2,402	2,402	25%	28%	26%	28%
Yorkshire and The Humber	900	900	1,800	1,800	32%	36%	32%	34%
Total	**12,700**	**12,700**	**25,400**	**25,400**	**27%**	**24%**	**22%**	**18%**

Norway	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Akershus	376	376	376	376	33%	20%	20%	34%
Hordaland	866	866	866	866	38%	23%	14%	36%
Oslo	2,012	2,012	2,012	2,012	40%	27%	29%	35%
Ostfold	248	248	248	248	39%	24%	23%	36%
Rogaland	419	419	419	419	32%	17%	19%	36%
Sor-Trondelag	579	579	579	579	42%	21%	20%	36%
Vest-Adger	227	227	273	227	40%	16%	16%	35%
Troms	273	273	227	273	36%	16%	8%	39%
Total	**5,000**	**5,000**	**5,000**	**5,000**	**38%**	**23%**	**22%**	**35%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) MS Intelligence empty pack surveys, 2019-2020; (2) Ipsos empty pack surveys, 2019-2022; (3) WSPM Group empty pack survey, 2021-2022

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Empty pack survey results by country (cont.)

UK and Norway results by region, 2019-22(1)(2)(3)(a)

UK	Number of packs collected				ND incidence in empty pack survey(b)			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
East Midlands	1,000	1,000	2,000	2,000	25%	23%	25%	23%
East of England	1,000	1,100	2,200	2,200	30%	34%	23%	28%
London	1,500	1,500	3,000	3,000	26%	20%	17%	26%
North East England	500	500	1,000	1,000	42%	40%	38%	41%
North West England	1,299	1,299	2,598	2,598	24%	24%	22%	30%
Northern Ireland	500	500	1,000	1,000	26%	14%	20%	22%
Scotland	1,099	1,099	2,198	2,198	19%	22%	20%	33%
South East England	2,001	2,001	4,002	4,002	27%	19%	19%	25%
South West England	900	900	1,800	1,800	27%	17%	18%	27%
Wales	700	700	1,400	1,400	27%	13%	12%	23%
West Midlands	1,201	1,201	2,402	2,402	25%	28%	26%	28%
Yorkshire and The Humber	900	900	1,800	1,800	32%	36%	32%	34%
Total	**12,700**	**12,700**	**25,400**	**25,400**	**27%**	**24%**	**22%**	**18%**

Norway	Number of packs collected				ND incidence in empty pack survey(b)			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Akershus	376	376	376	376	33%	20%	20%	34%
Hordaland	866	866	866	866	38%	23%	14%	36%
Oslo	2,012	2,012	2,012	2,012	40%	27%	29%	35%
Ostfold	248	248	248	248	39%	24%	23%	36%
Rogaland	419	419	419	419	32%	17%	19%	36%
Sor-Trondelag	579	579	579	579	42%	21%	20%	36%
Vest-Adger	227	227	273	227	40%	16%	16%	35%
Troms	273	273	227	273	36%	16%	8%	39%
Total	**5,000**	**5,000**	**5,000**	**5,000**	**38%**	**23%**	**22%**	**35%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) MS Intelligence empty pack surveys, 2019-2020; (2) Ipsos empty pack surveys, 2019-2022; (3) WSPM Group empty pack survey, 2021-2022

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Empty pack survey results by country (cont.)

Switzerland results by region, 2019-22[(1)(a)]

Switzerland	Number of packs collected				ND incidence in empty pack survey[(b)]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Basel	400	400	400	400	12%	9%	11%	5%
Bern	900	900	900	900	11%	7%	6%	5%
Biel	-	-	-	-	-	-	-	-
Chur	-	-	-	-	-	-	-	-
Fribourg	200	200	200	200	8%	5%	11%	6%
Geneva	700	700	700	700	23%	9%	14%	11%
Grisons	200	200	200	200	13%	4%	8%	7%
Jura	-	-	-	-	-	-	-	-
Koniz	-	-	-	-	-	-	-	-
La Chaux De Fonds	-	-	-	-	-	-	-	-
Lausanne	-	-	-	-	-	-	-	-
Lugano	-	-	-	-	-	-	-	-
Luzern	200	200	200	200	13%	10%	7%	6%
Neuchatel	400	400	400	400	12%	4%	11%	9%
Schaffhausen	200	200	200	200	15%	9%	8%	10%
Sion	-		-	-	-	-	-	-
St Gallen	200	200	200	200	6%	13%	9%	7%
Thun	-	-	-	-	-	-	-	-
Thurgau	-	-	-	-	-	-	-	-
Ticino	200	200	200	200	12%	36%	10%	12%
Uster	-	-	-	-	-	-	-	-
Valais	200	200	200	200	10%	13%	7%	9%
Vaud	300	300	300	200	11%	7%	7%	7%
Vernier	-	-	-	-	-	-	-	-
Winterthur	-	-	-	-	-	-	-	-
Zurich	1,500	1,500	1,500	1,500	14%	7%	8%	8%
Total	**5,600**	**5,600**	**5,600**	**5,600**	**14%**	**9%**	**9%**	**8%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report

Sources: (1) WSPM empty pack surveys, 2019-2022

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Pack swap results by country

Moldova results by region, 2021-22[(1)(a)(b)]

Moldova	Number of packs swaps				ND incidence in pack swaps[(b)]			
Region	2019	2020	2021	2022	2019	2020	2021	2022
Anenii Noi	-	-	35	39	-	-	0%	4%
Mun. Bălți	-	-	73	77	-	-	0%	1%
Briceni	-	-	34	33	-	-	13%	14%
Basarabeasca	-	-	14	13	-	-	5%	9%
Mun. Chișinău	-	-	335	336	-	-	2%	4%
Cahul	-	-	54	54	-	-	1%	10%
Călărași	-	-	32	32	-	-	2%	5%
Cimișlia	-	-	25	26	-	-	0%	6%
Criuleni	-	-	31	32	-	-	0%	3%
Căușeni	-	-	40	43	-	-	0%	3%
Cantemir	-	-	22	21	-	-	0%	20%
Dubasari	-	-	10	12	-	-	0%	0%
Dondușeni	-	-	17	16	-	-	0%	24%
Drochia	-	-	36	33	-	-	4%	17%
Edineț	-	-	34	35	-	-	6%	15%
Fălești	-	-	35	33	-	-	0%	15%
Florești	-	-	42	38	-	-	5%	10%
Glodeni	-	-	23	21	-	-	5%	19%
Hâncesti	-	-	48	48	-	-	0%	4%
Ialoveni	-	-	48	44	-	-	0%	3%
Leova	-	-	24	22	-	-	0%	3%
Nisporeni	-	-	28	28	-	-	0%	14%
Ocnița	-	-	24	23	-	-	2%	25%
Orhei	-	-	56	59	-	-	3%	0%
Râșcani	-	-	28	29	-	-	9%	2%
Rezina	-	-	24	30	-	-	0%	1%
Șoldănești	-	-	24	21	-	-	7%	0%
Sângerei	-	-	37	37	-	-	0%	9%
Soroca	-	-	41	40	-	-	0%	14%
Strășeni	-	-	46	46	-	-	1%	6%
Ștefan Vodă	-	-	27	33	-	-	0%	12%
Telenești	-	-	28	22	-	-	4%	0%
Taraclia	-	-	22	21	-	-	8%	13%
Ungheni	-	-	66	66	-	-	6%	5%
UTA Găgăuzia	-	-	71	69	-	-	2%	15%
Total	-	-	**1,534**	**1,532**	-	-	**2%**	**7%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report (b) In 2021, Moldova switched from a PMI-commissioned empty pack survey to pack swap surveys commissioned by Big-4 industry participants. Therefore, given the change in methodology, only pack counts for 2021-22 are shown

Sources: (1) Ipsos Pack Swaps, 2021-2022

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Pack swap results by country (cont.)

Ukraine results by region, 2020-22[1][a][b]

Ukraine	Number of packs swaps				C&C incidence in pack swaps[b]			
Region	**2019**	**2020**	**2021**	**2022**	**2019**	**2020**	**2021**	**2022**
Cherkas`ka	511	334	1,071	224	1%	2%	8%	12%
Chernihivs`ka	386	275	302	98	4%	2%	4%	8%
Chernivets`ka	435	302	298	157	11%	18%	18%	17%
Dnipropetrovs`ka	2,028	1,230	1,256	552	10%	9%	18%	38%
Donets`ka	-	-	695	-	-	-	23%	-
Ivano-Frankivs`ka	528	388	451	258	1%	2%	6%	4%
Kharkivs`ka	1,461	914	1,072	266	13%	14%	24%	26%
Khersons'ka	684	521	392	-	4%	5%	20%	0%
Khmelnyts`ka	545	353	368	213	22%	20%	27%	32%
Kiev	1,541	867	548	608	2%	3%	15%	12%
Kirovohrads`ka	491	308	453	155	0%	5%	4%	30%
Kyivs`ka	838	589	453	290	1%	3%	6%	20%
Luhans`ka	-	-	231	-	-	-	28%	-
Lvivs`ka	980	776	911	513	3%	3%	14%	13%
Mykolayivs`ka	683	522	421	-	6%	5%	13%	-
Odes`ka	1,150	916	1034	408	9%	10%	25%	33%
Poltavs`ka	754	464	365	209	1%	3%	8%	18%
Rivnens`ka	428	280	405	193	9%	8%	15%	25%
Sums`ka	420	219	222	179	7%	2%	25%	12%
Ternopils`ka	508	360	250	147	0%	0%	11%	24%
Vinnyts`ka	967	639	289	299	2%	3%	11%	13%
Volyns`ka	362	237	285	145	2%	-	2%	1%
Zakarpats`ka	661	417	476	245	-	6%	9%	14%
Zaporiz`ska	1,057	624	526	92	14%	10%	24%	17%
Zhytomyrs`ka	599	475	444	267	1%	1%	7%	1%
Total[c]	**18,000**	**12,000**	**13,200**	**5,527**	**6%**	**6%**	**16%**	**19%**

Note: (a) Only base survey data in the empty pack surveys have been summarised in the tables, i.e. 'focus' samples designed to investigate specific issues have been excluded as they do not form part of the national statistically representative sample; (b) ND incidence listed in this table is based on the number of Non-Domestic packs collected in the empty pack survey. It doesn't account for differences due to country and brand adjustments made as a part of this study. Therefore, this incidence may differ from the ND incidence stated elsewhere in this Report (b) Pack swap survey data for Ukraine does not contain information regarding the origin of packs collected. Therefore, inflows to Ukraine have not been broken down by origin and ND(L) inflows cannot be estimated and therefore all ND incidence is C&C incidence (c) Total number of packs at regional level have been calculated using the total number of pack swaps in Ukraine multiplied by regional incidence of DP and DNP packs. Due to rounding off error of regional incidence, sum of all regional packs may differ with total number of pack swaps in Ukraine

Sources: (1) Kantar Pack Swaps, 2019-2022

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Sources

Data sources

The sources listed below are those used only in this year's analysis and reporting. Sources for analysis and findings for previous years can be found in previous year reports.

Sources
Air passenger flow, Eurostat
Alcohol, tobacco, cash and excise duties, European Union, Europe.eu, last updated on Dec 2022
Andorra customs duty free allowance, surfevasiopasdelacasa.com
Arrivals and overnight stays by country of origin in Tourism year 2021, Statistik, Austria, 2022
Arrivals of non-resident tourists by country of residence, World Tourism Organization, Netherlands, 2022
Average daily consumption, GCTSONE tool, 2021
Attitudes of Europeans towards tobacco and electronic cigarettes, European Commission, 2021
Border sales in France near Spanish border, PMI estimates
Commercial air traffic, Ministry of Ecological , France, 2022
Current cigarette smoking rates among people aged 15 years and older, 2018 estimates, WHO global report on trends in prevalence of tobacco use 2000-2025, WHO fourth edition
Empty packs surveys, Independent agencies for 30 markets in study, 2018-2022
Exchange rate (InforEuro), European Commission, 2022
Forensic analysis data, PMI
Frontier workers by nationality, Department of Employment, HM Government of Gibraltar, 2022
Inbound Arrivals and Outbound Departures, Euromonitor, 2017-2022
Inbound Arrivals, National Statistics Bureau Ukraine, Ukraine, 2017
KPMG analysis of UNWTO and other sources for traveller data
KPMG EU Flows Calculation 2022
KPMG EU Flows Calculation 2018-2022 and analysis of data sources provided by manufacturers
KPMG law enforcement interviews
Land frontier visitor arrivals, Borders and Coast Guard Agency, HM Government of Gibraltar, 2021
Legal Domestic Sales, Nielson, Denmark, 2022
Market sizes (volume and value) by tobacco categories, Euromonitor, 2021-2022
Pack Swap Surveys, Independent agencies for 2 markets in study, 2018-2022
Passenger car ownership, Eurostat, 2022
Passing customs in Andorra: taxes and exemption, General Directorate of Customs and Indirect Rights, France, 2021
Population by department, sex and major age group, The National Institute of Statistics and Economic Studies, France, 2022
Population 18+, Euromonitor, 2022

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Sources (cont.)

Data sources

The sources listed below are those used only in this year's analysis and reporting. Sources for analysis and findings for previous years can be found in previous year reports.

Sources
Population 18+, UNICEF, 2022
Prices and tax rates, EC Excise Duty Tables, 2022
Prices, Euromonitor, 2020-2022
Prices, European Commission, Taxes in Europe Database v3
Prices, Pack of 20 cigarettes of the most sold brands, WHO 2020
Retail value RSP, Euromonitor, 2018-2022
Smoking population – number of adult smokers, Euromonitor 2022
Tax rate and WAP, GFIS systems as on October 2022
Tobacco brought back from Algeria to France by travellers of direct flights, Kantar TNS for Philip Morris France, May 2018
Tobacco sales, Customs Authority of Bulgaria, 2022
Tobacco sales, State Revenue Service of Latvia, 2022
Tourism statistics (Inbound and Outbound arrivals), Euromonitor, 2016-2022
Tourism statistics, ISTAC, Canary Islands Government, 2022
Tourism statistics, Portugal, Travel BI, 2021
UNWTO Factbook
Volume assessment (among visitors), Andorra (Prepared for Phillip Morris International), Nielsen, January 2022
Volume- and value-based customs and tax allowances, General Directorate of Customs and Indirect Rights, France, 2021

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Scope of work

Estimating the size, nature and financial impact (i.e., equivalent tax value) of illicit consumption of cigarettes in the EU27, the UK, Norway, Switzerland, Moldova and Ukraine for the calendar year 2022

Methodology and Reporting

1. The purpose of the study is to consider and comment on:
   - a) the estimated size and composition of the total cigarette market (including counterfeit and contraband products), for each of the 27 EU member states, the UK, Norway, Switzerland, Moldova and Ukraine for 2022
2. The Contractor will prepare a Report which will be provided in PDF format which covers the results of the analysis undertaken as set out below:
   - a) The findings from the work on the 32 countries will be used both individually and to produce a summary covering an overall view of the total market for the 27 EU Member States (with the UK, Norway, Switzerland, Moldova and Ukraine to be included in any individual country figures quoted), and an analysis of sources of illicit manufactured cigarettes, including reference to specific source countries and free trade zones where appropriate. The Contractor will also provide a section in the Report on counterfeit and contraband flows for each of the 32 countries.
   - b) Each country section will consist of the equivalent of four pages if printed and will include a table detailing total manufactured cigarette consumption from 2018 to 2022, along with charts showing the Non-Domestic Legal (ND(L)) and Counterfeit & Contraband (C&C) volumes by source country and by brand. The commentary will be brief and factual and will source publicly available data on tobacco prices, traveller data and total tobacco consumption where relevant. The commentary will also source other quantitative and qualitative research and analysis as deemed necessary, for example to in relation to trends in C&C.
   - c) The Contractor's analysis of the cigarette market will be based on a methodology that incorporates primary research, market analysis, existing industry surveys and other sources of data.

- For each of the 32 countries, the Contractor will use in-market cigarette sales data provided by PMPSA to estimate legal domestic sales and estimate Legal Domestic Consumption by subtracting outflows to other countries based on the results of Empty Pack Surveys provided by PMPSA.
- The Contractor will analyse the results of the Empty Pack Surveys to estimate the level of non-domestic cigarette inflows for each country, which will then be added to Legal Domestic Consumption to estimate Total Consumption.
- Using publicly available data, the Contractor will analyse tourism flows, smoking incidence, cigarette purchase limits for travellers and border sales data to estimate the proportion of non-domestic inflows that could be considered to be legal, and as a direct result provide an estimate of the level of counterfeit and contraband for each of the 32 countries.
- The steps above will be undertaken to simultaneously analyse the inflows and outflows between all of the 32 countries using Excel and Alteryx analytical tools, which have been specifically developed for this purpose by the Contractor and are consistent with those used in previous engagements for the Client, using the data sources above.
- Additional data sources may be used to refine the Contractor's analysis.

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Scope of work (cont.)

- The Contractor will request meetings or interviews with Law Enforcement representatives to discuss the Contractor's initial findings and other relevant information regarding illicit cigarette consumption. Where Law Enforcement representatives agree to participate in such meetings or interviews the Contractor will, where appropriate, include in the Report, with their permission, a high-level aggregated summary of trends in illicit consumption that they have highlighted.
- The Contractor will set out the estimation process in detail in a methodology section in the Report.
- The Contractor will also conduct analysis on illicit whites. This will be reported in the consolidated section of the Report.

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