



Project SUN

**A study of the illicit cigarette
market in the European Union,
Norway and Switzerland**

2017 Results
Executive Summary

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Important notice

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- Included in the report are a number of insight boxes which are written by RUSI, as well as insights included in the text. The fieldwork and analysis undertaken and views expressed in these boxes are RUSI's views alone and not part of KPMG's analysis. These appear in the Foreword on page 5, the Executive Summary on page 6, on pages 11, 12, 13 and 16.
- Nothing in this Report constitutes legal advice. Information sources, the scope of our work, and scope and source limitations, are set out in the Appendices to this Report. The scope of our review of the contraband and counterfeit segments of the tobacco market within the 28 EU Member States, Switzerland and Norway was fixed by agreement with the Beneficiary and is set out in the Appendices.
- We have satisfied ourselves, so far as possible, that the information presented in this Report is consistent with our information sources but we have not sought to establish the reliability of the information sources by reference to other evidence.
- This Report has not been designed to benefit anyone except the Beneficiary. In preparing this Report we have not taken into account the interests, needs or circumstances of anyone apart from the Beneficiary, even though we have been aware that others might read this Report.
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- In particular, and without limiting the general statement above, since we have prepared this Report for the Beneficiary alone, this Report has not been prepared for the benefit of any manufacturer of tobacco products nor for any other person or organisation 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.

Glossary

Average Daily Consumption	Daily average consumption by the population of the legal smoking age
BAT	British American Tobacco plc
Bn	Billion
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
Cigarillos	A short, narrow cigar, which, like cigarettes, is often machine-made and sold in packs
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 low-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 of BAT, ITL and PMI, all of which participate in the EPS. Additionally, in some markets such as Bulgaria, Luxembourg and Belgium, local manufacturers also participate
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
Domestic Whites	Domestic Whites are packs of domestic market variant, but those that are priced below the minimum tax yield. These products are treated as having not been legally sold in the country in question, and have therefore been reclassified as non-domestic
Duty Free	Cigarettes bought without payment of customs or excise duties. Consumers may buy Duty Free Cigarettes when travelling into or out of the EU (including Switzerland and Norway) by land, air or sea at legal Duty Free shops
EC	European Commission
EEA	European Economic Area
EPS	Empty Pack Survey
EU	European Union
EU Flows Model	The primary methodology for measuring consumption in a market. The model has been developed by KPMG on a bespoke basis for the specific purpose of measuring inflows and outflows of cigarettes in the scope of this project
EUTPD	European Union Tobacco Products Directive
FTZ	Free Trade Zone
Green Leaf	Uncut dried tobacco leaf, which smokers cut themselves
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

Glossary

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)
Inflows/Outflows	Inflows of non-domestic product into a market / outflows of product from a market
ITL	Imperial Tobacco Limited
JTI	JT International SA
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
MPPC	Most Popular Price Category
MYO	Make Your Own tobacco products
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
NMA/TMA	National Manufacturers’ Association /Tobacco Manufacturers’ Association
OCG	Organised crime group
OLAF	Office Européen de Lutte Antifraude also known as the European Anti-Fraud Office
OTP	Other Tobacco Products (RYO/MYO, cigarillos, portions, rolls and cigars; excluding smokeless tobacco and water-pipe tobacco)
PMI	Philip Morris International Management SA
RUSI	Royal United Services Institute for Defence and Security Studies
RYO	Roll Your Own tobacco products
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
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 or other official sources

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Foreword by the Royal United Services Institute

Project SUN is a study that estimates the scale of the illicit cigarette market in the EU, Norway and Switzerland

Illicit trade is a global criminal activity driven by organised crime networks, posing a substantial threat to national security and public safety. Since 2014, the Royal United Services Institute (RUSI) has run a programme of research focused on better understanding this form of illicit activity, with the aim of informing and improving policy responses. As part of this workstream, as in 2016, this year RUSI has commissioned the 2017 iteration of Project SUN, which provides an estimate of the scale of the illicit cigarette market in the EU, Norway and Switzerland. RUSI commissioned this research with funding from BAT and PMI, provided for the Institute's illicit trade research. Alongside Project SUN, RUSI has produced an Occasional Paper to shed light on some of the main organised crime dynamics accompanying the trends revealed by the KPMG data.

This KPMG report presents the results of the range of statistical analyses conducted as part of Project SUN, covering all 28 EU countries, as well as Norway and Switzerland. The report follows an established quantitative methodology, with analyses covering the prevalence of illicit cigarette consumption in each country, the origins of non-domestic inflows, the destinations of outflows, and the brands most extensively consumed. This year, for the first time, the results are presented via hosted online platforms.

The Occasional Paper RUSI has produced this year builds on the quantitative analysis conducted by KPMG with qualitative research into some of the main organised crime dynamics accompanying the trends revealed by the data. This is based on desk-based research as well as in-depth consultations with a range of stakeholders from across the public and private sectors. In particular, RUSI's research has focused on two important factors driving the illicit trade landscape: the use of the internet, and the exploitation of postal and some fast parcel services.

These platforms and services are increasingly exploited by organised crime groups involved in the illicit cigarette trade across Europe. However, there is considerable geographical variation. To explore this, the RUSI paper presents the results of research conducted across three key EU markets over 2018:

the UK, France and Germany. All three are among the top five countries for illicit consumption in 2017, yet each has adopted different policy and practical approaches to the challenges posed by the use of the internet, e-commerce, postal and some fast parcel services to facilitate the illicit cigarette trade and associated organised criminality.

The RUSI paper seeks to shed light on these dynamics, highlighting their relevance to the broader illicit trade picture, and proposing a number of recommendations for more effectively addressing the challenges they pose. A number of the insights presented in the RUSI paper are summarised in this report. The full RUSI publication can be accessed at <https://RUSI.org/illicittrade2018> from October 2018.

The use of online and postal services are not challenges that are set to decline. As for many other forms of organised crime, the expansion in the use of e-commerce, postal and some fast parcel services has created numerous opportunities for those dealing in illicit products. Attention to these dynamics must now form a critical part of overarching efforts to tackle illicit trade in cigarettes and other tobacco products.



Cathy Haenlein

Senior Research Fellow, Serious and Organised Crime
Royal United Services Institute

Executive summary

Key findings

44.7bn

Counterfeit and contraband cigarettes consumed ^(a)



-3.6bn on 2016
-7% on 2016

8.7%

Of total consumption was C&C



-0.4ppt on 2016

€10bn

Tax revenue lost



€-209m on 2016
-2% on 2016

In 2017, the Counterfeit and Contraband (C&C) cigarette consumption in the EU is estimated at 8.7% of total consumption, accounting for 44.7 billion cigarettes

- The volume of C&C continued to decline in 2017; the 7.4% reduction was more pronounced than the legal domestic consumption decline of 2.5%
- The C&C proportion of overall consumption was the lowest since 2008
- Despite the overall C&C decline, counterfeit volumes increased by 8.6% from 2016, a total of 4 billion cigarettes and 9.2% of total C&C
- The volume of C&C resulted in a tax loss of €10 billion, making illicit cigarettes one of the largest sources of overall consumption

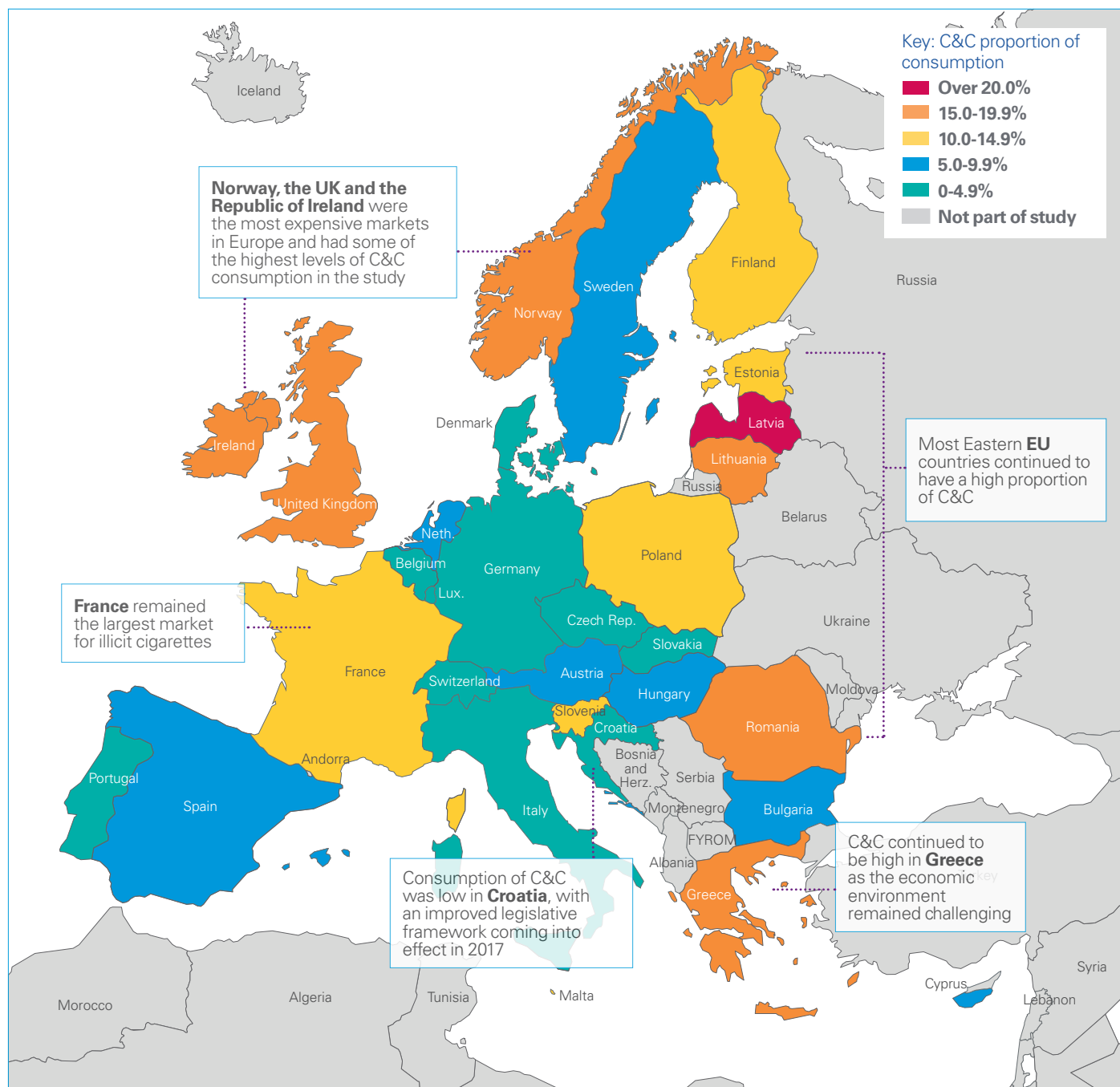
Despite the overall decline, C&C grew in countries with the largest price differences with source countries

- C&C in the UK and Ireland grew to 18% and 20% of consumption respectively; two of the highest rates in the study
- In these countries the price difference with non-EU countries was greater than €8 per pack. This may have led to smugglers diverting products to these higher priced countries
- The illicit cigarette trade remains a low-risk, high-reward activity for organised crime groups operating on a transnational scale. Illicit cigarettes are smuggled into the EU by sophisticated criminal networks, using well-developed international supply chains
- Research suggests the presence of organised criminal networks that regularly smuggle cigarettes into the EU in large quantities. However, within the EU, a sizeable proportion of all cigarette seizures remain small in volume, indicating an ongoing trend towards 'low volume, high frequency smuggling', including via fast parcels and postal services

C&C fell in markets where there was evidence of positive law enforcement activity or a favourable economic climate

- Law enforcement activities, especially the coordinated efforts on the Eastern EU border, appear to have reduced flows from Belarus and Ukraine
- In addition, positive changes in economic factors (such as GDP, unemployment rate, etc.) in many countries may have resulted in consumers switching to the legal market, whilst growing traveller numbers maintained non-domestic legal purchases
- Both Poland and Croatia saw falls in C&C, aligned with increased law enforcement activity and improved legislative frameworks
- C&C fell alongside positive changes in economic factors in Romania and Germany

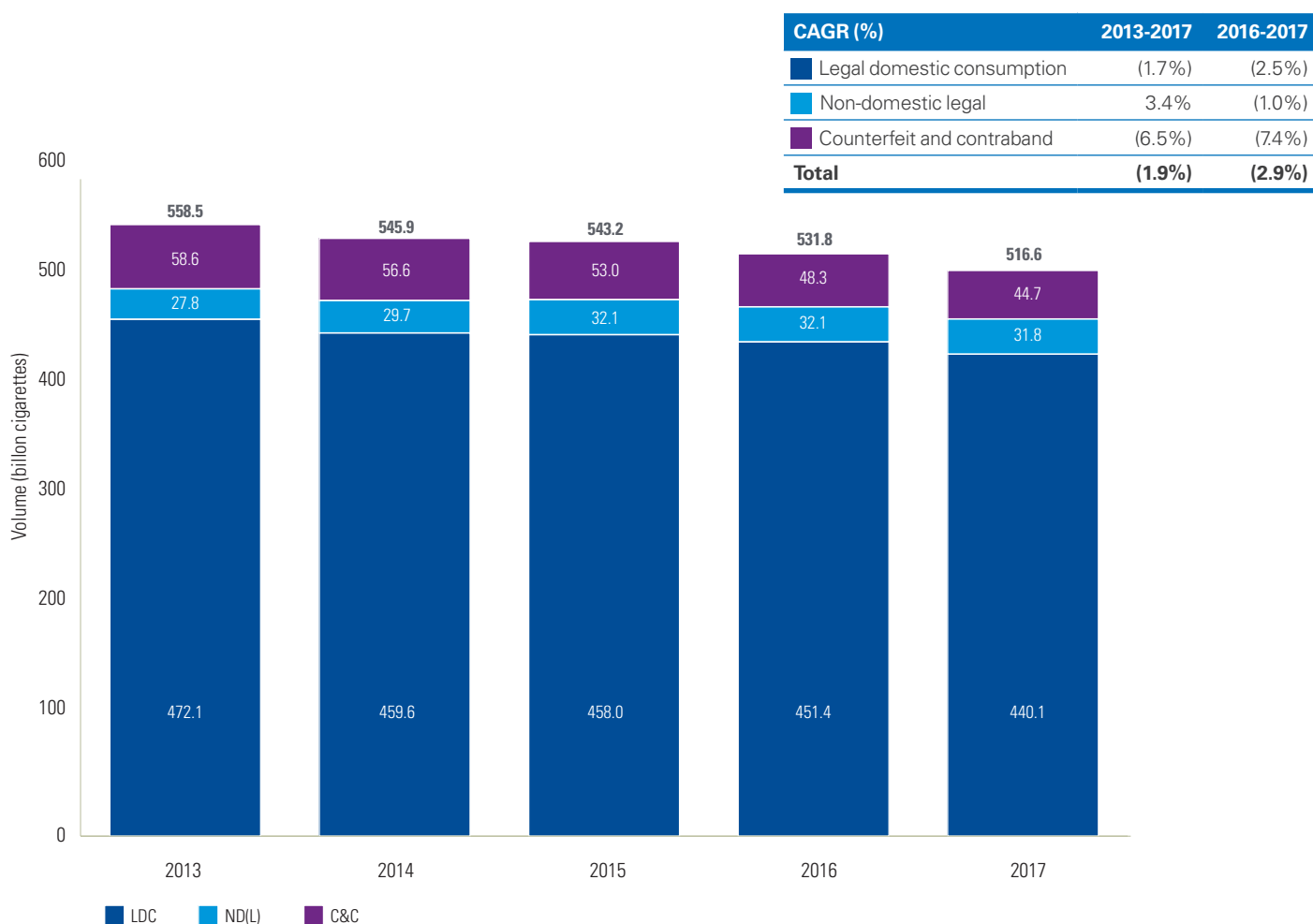
C&C consumption in the EU, Norway and Switzerland as a percentage of total consumption, 2017⁽¹⁾



C&C consumption declined in 16 of the 30 countries in the study

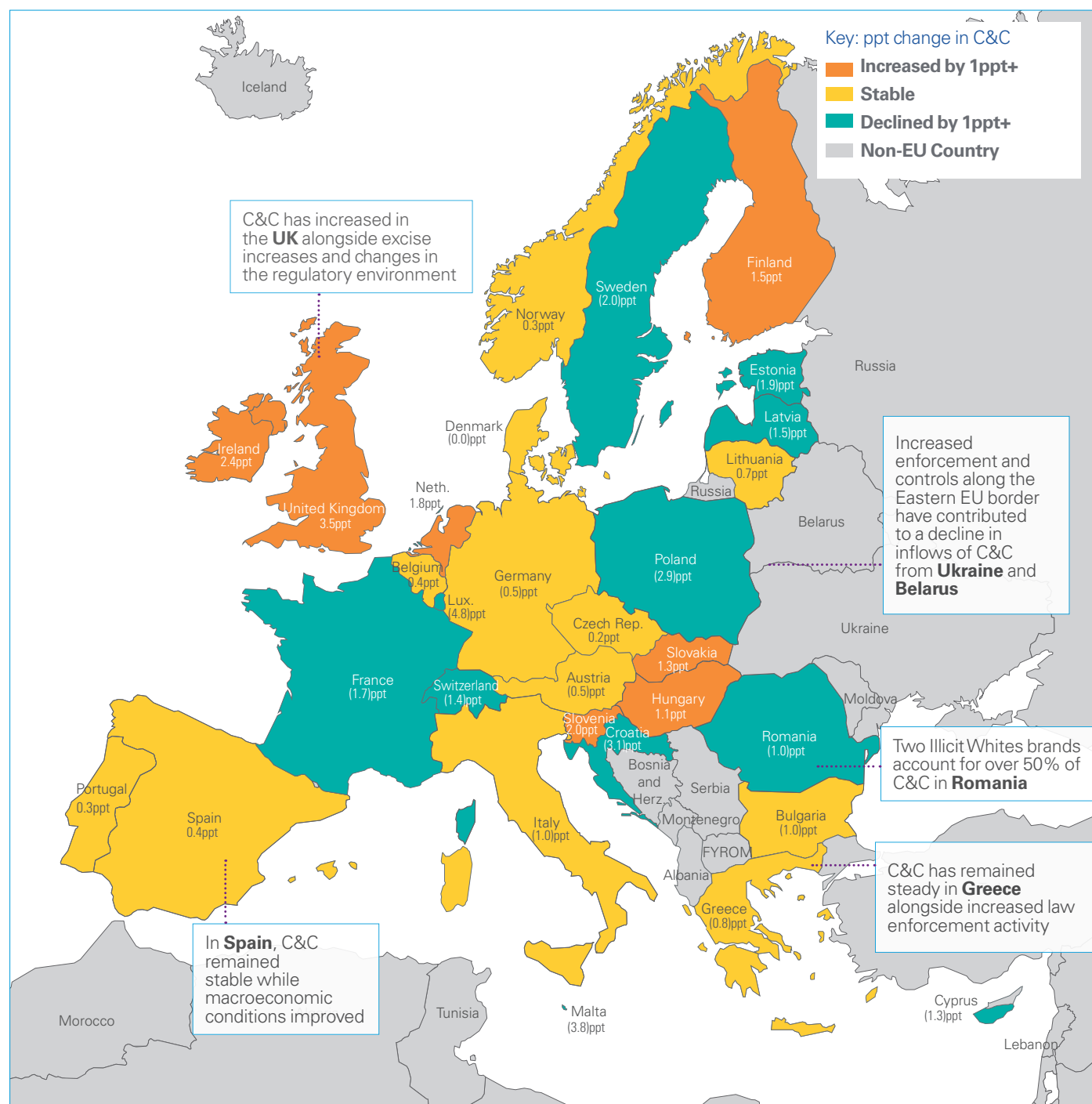
- The C&C consumption decline of 7.4% in the EU from 2016 to 2017 was greater than the legal domestic consumption decline of 2.5%
- Although the volume of C&C declined, the total loss in tax revenue across the EU remained similar to the previous year at €10 billion
- C&C consumption remained high in countries such as the UK and Ireland, where high legal prices created strong consumer demand for C&C products
- Non-Domestic Legal remained stable supported mainly by travel flows between EU countries

Manufactured cigarette total consumption in the EU, 2013-2017⁽¹⁾



Sources: (1) KPMG EU flows model 2013-2017; (2) EC Excise Duty Tables, January 2018 (Part III – Manufactured Tobacco)
(3) KPMG analysis of UNWTO data

Percentage point change in C&C consumption in the EU, Norway and Switzerland as a percentage of total consumption, 2016 vs. 2017^{(1)(a)}



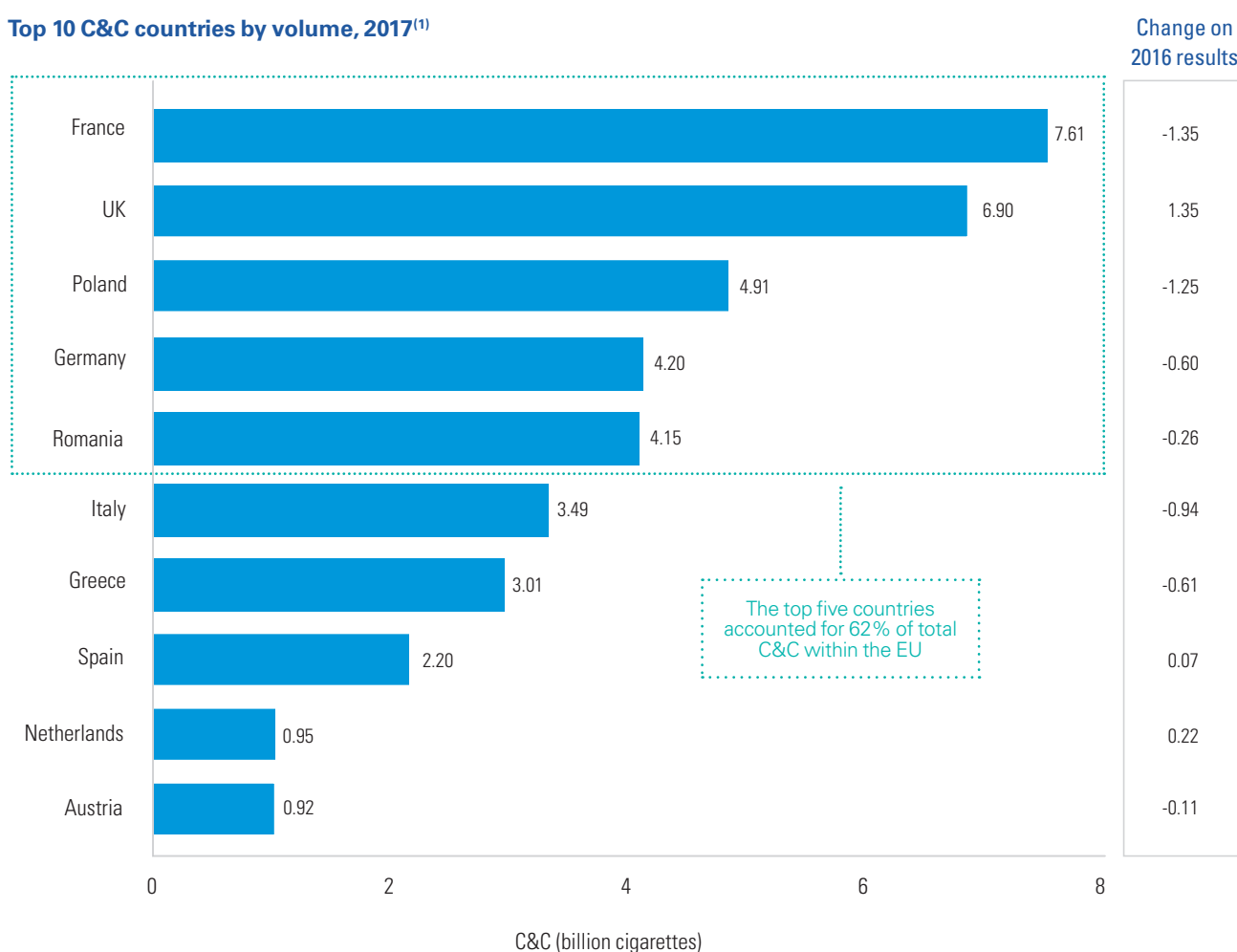
Note: (a) A percentage point, or ppt, is the unit for arithmetic difference between two percentages

Source: (1) KPMG EU flows model 2016-2017

C&C volumes declined in 7 of the top 10 countries in this study

- Despite declining, France had the highest volume of C&C identified in the study
- C&C consumption also fell in Poland, Germany, Romania, Italy, Greece and Austria
- The UK experienced the highest increase in C&C consumption in volume terms
 - C&C in the UK was identified from Poland, Romania and countries that bordered the Eastern EU such as Belarus and Ukraine. Unlike in the rest of the EU, flows from these countries increased, demonstrating an incentive to smuggle cigarettes into the UK where the opportunity to profit from greater price differences was higher

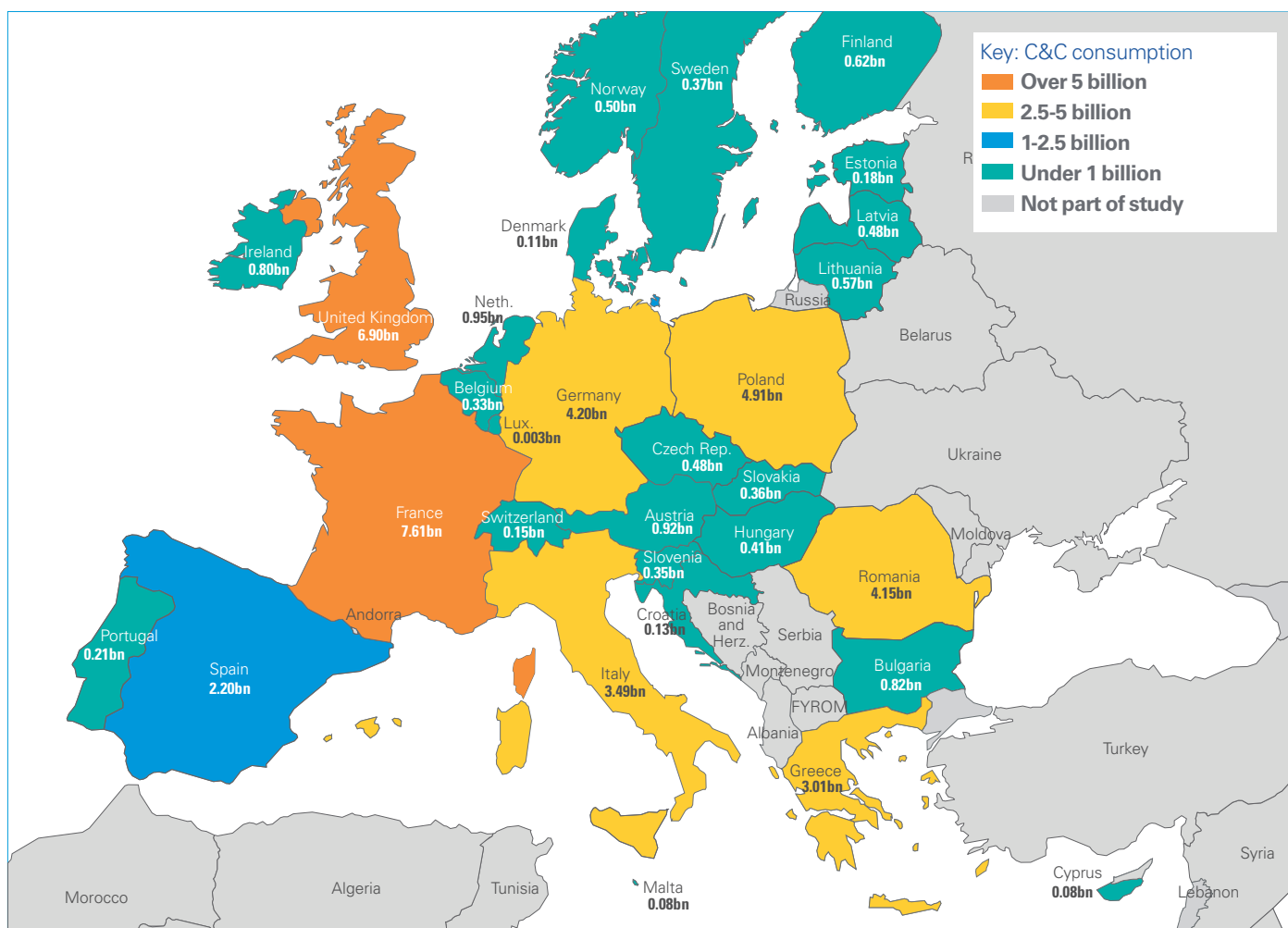
Top 10 C&C countries by volume, 2017⁽¹⁾



RUSI Analysis: The Internet and Social Media⁽²⁾

As for many other forms of organised crime, the growth of the internet and online marketplaces has created new opportunities for sellers of illicit cigarettes. Purpose-built websites are used to market products directly to consumers, who make purchases using debit or credit cards, with goods subsequently delivered using postal or courier services. However, over the past few years, social media platforms have overtaken these sites to become the primary medium through which illicit cigarettes are sold online. At the less organised end of the spectrum, individual opportunists who travel abroad and bring back more than the legal allowance use their profile pages to advertise surplus product to their friends. However, analysis also reveals the existence of sophisticated and organised criminal networks, members of which establish many different profiles and post in numerous private groups in order to reach a large consumer base. It is particularly difficult for law enforcement agencies to effectively respond to this threat, as much of this online activity takes place in a closed environment, including via private messaging services or invitation-only groups.

C&C consumption in the EU, Norway and Switzerland (billion cigarettes), 2017⁽¹⁾



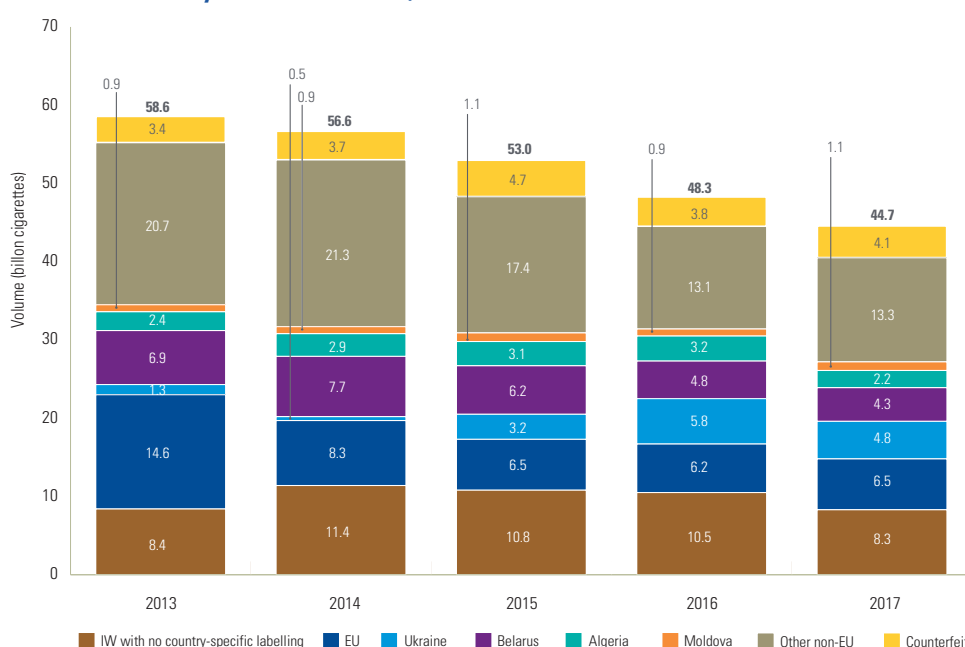
Source: (1) KPMG EU flows model 2017

(2) The RUSI Analysis boxes included in this executive summary draw on a range of sources, as outlined in the Methodology and Frequently Asked Questions sections of Project SUN

Cigarettes from non-EU countries accounted for the majority of C&C consumption in the EU

- Illicit Whites with no country specific labelling remained the largest source of C&C, despite a decline in volume. 59% of this flow displayed 'Duty Free' labelling ^(a)
- The share and volume of counterfeit grew, which continued to demonstrate the flexibility of illicit trade
- C&C from the largest source countries of Ukraine and Belarus declined by 17% and 10% respectively
 - Despite the decline, the introduction of visa-free travel from Ukraine may have facilitated low-volume high-frequency transfer of cigarettes across the border to higher-priced markets
- C&C flows from countries within the EU increased in volume by 5%. C&C from non EU sources formed 58% of C&C volume and declined by 7%

Sources of C&C by volume in the EU, 2017⁽¹⁾



RUSI Analysis: Securing the Legal Supply Chain⁽³⁾

To stem flows of illicit tobacco products in the EU, the European Commission has pursued a range of policy approaches in recent years, including the introduction of new legislation. In this respect, the revision of the Tobacco Products Directive in 2014 and the EU's ratification of the World Health Organization Framework Convention on Tobacco Control (FCTC) protocol to eliminate illicit trade in tobacco products will alter the regulatory landscape in Europe. In June 2018, the protocol reached the forty signatures required for it to enter into force, which it is set to do on 25 September 2018.

Implementing acts issued by the European Commission require traceability and security features on tobacco products. These obligations will enter into force on 20 May 2019 for cigarettes and hand-rolling tobacco, and on 20 May 2024 for other tobacco products.⁽²⁾ Unit packets of tobacco products produced or sold in the EU will be marked with unique identifiers (codes) provided to manufacturers by an independent third-party ('ID issuer'). Once marked with unique identifiers, products will be tracked throughout the legal supply chain until the last economic operator before the first retail outlet, enabling authorities to verify their movement.

Such track and trace and authentication capabilities are set to offer another useful tool in combatting flows of illicit tobacco products. However, while the legislation will provide more insight into and control over flows of tobacco products in the legal supply chain, the onus will continue to be on frequent, robust and coordinated law-enforcement action, as well as enhanced efforts to reduce consumer demand for illicit products.

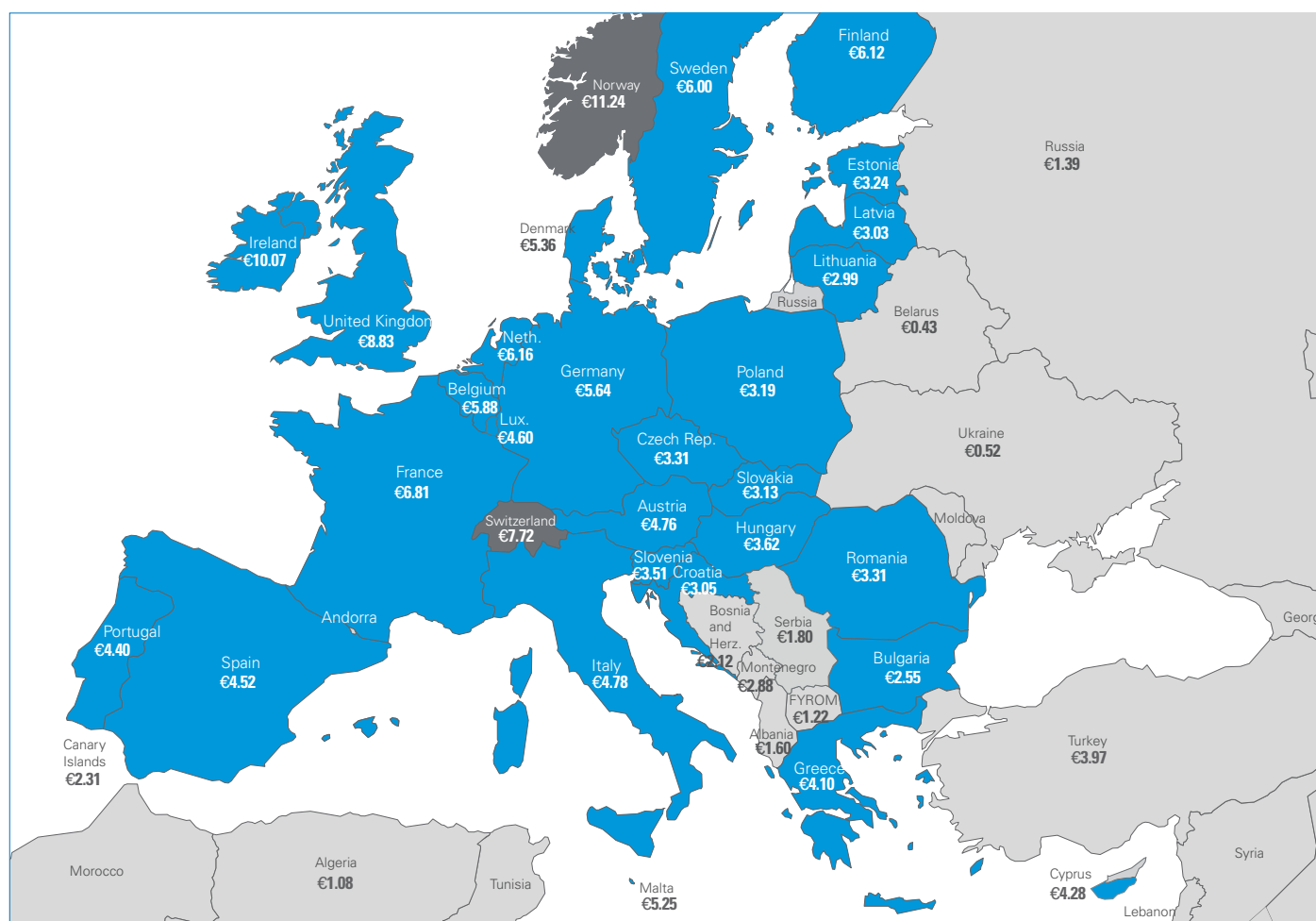
Note: (a) See the glossary section at the front of this report for the definition of Illicit Whites

Sources: (1) KPMG EU flows model 2013-2017 (2) European Union, 'Directive 2014/40/EU of the European Parliament and of the Council of 3 April 2014 on the Approximation of the Laws, Regulations and Administrative Provisions of the Member States concerning the Manufacture, Presentation and Sale of Tobacco and Related Products and Repealing Directive 2001/37/EC', Official Journal of the European Union (L127/1, April 2014). (3) The RUSI Analysis boxes included in this executive summary draw on a range of sources, as outlined in the Methodology and Frequently Asked Questions sections of Project SUN

RUSI Analysis: Fast Parcels and Postal Services⁽⁴⁾

In recent years, seizure data from across the EU has shown that organised crime groups are using fast parcels and postal services to send smaller volumes of illicit goods with higher frequency. There is no internationally accepted definition of fast parcel services, with this term used to describe many different business models. While the major global express delivery carriers with end-to-end supply chain integration are less vulnerable to the illicit cigarette trade, smaller, less integrated services are commonly exploited. The postal system and these smaller fast parcel services represent a low-cost, low-risk means of transportation for illicit cigarettes. This form of trafficking is particularly difficult to enforce against given the sheer volume of parcels now being sent on a daily basis. Lack of data and intelligence to effectively target suspicious parcels further compounds these difficulties. Within the European Economic Area (EEA), there is no legal requirement to declare the contents, weight and value of consignments⁽³⁾. Capitalising on this vulnerability, a common modus operandi is for traffickers to mis-declare large consignments in order to import them into the EEA, before fragmenting these into smaller parcels for further distribution across Europe, minimising financial loss in the event of a seizure.

Weighted average prices for a pack of 20 cigarettes January, 2018^{(1)(2)(a)}



Key:

- EU countries
- Non-EU countries
- Non-EU country of study

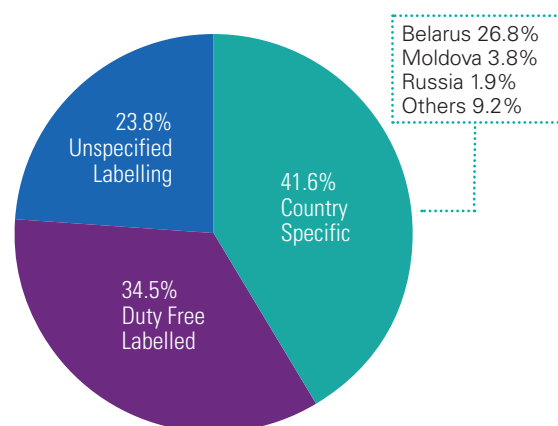
Note: (a) Norway, Switzerland and all non EU countries use WHO 'Price of most sold brand of cigarettes'

Sources: (1) KPMG EU flows model 2017 (2) EU Excise Duty Tables, January 2018 (Part III – Manufactured Tobacco) (3) European Union, 'Consolidated Version of the Treaty on the Functioning of the European Union', Official Journal of the European Union (C 326, 26 October 2012), Article 28. (4) The RUSI Analysis boxes included in this executive summary draw on a range of sources, as outlined in the Methodology and Frequently Asked Questions sections of Project SUN

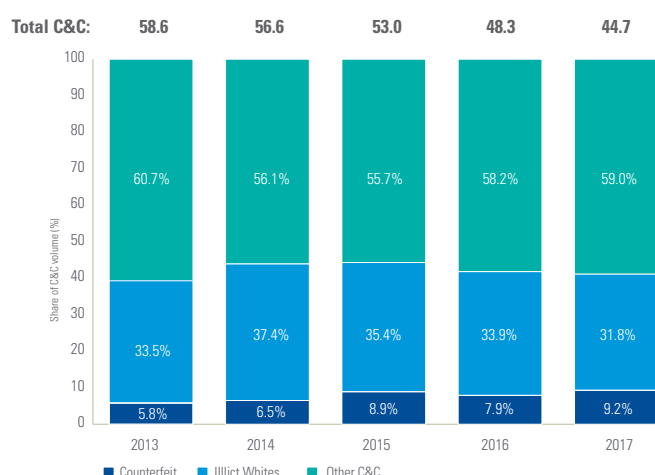
Illicit White brands continued to account for approximately one third of C&C, while counterfeit volumes increased by 9%

- 34.5% of Illicit White brand flows identified were labelled “Duty Free”; however, they were not sold legally through travel retail channels
- 27% of Illicit Whites brand flows had Belarusian labelling. However, 58% of Illicit Whites brand flows had no identifiable source country labelling
- The 10 largest reported seizures (with available brand information) were identified as Illicit Whites, indicating the continued attempts of smugglers to transport these products into the EU
- Counterfeit also increased, the majority of which had Duty Free labelling in order to evade detection

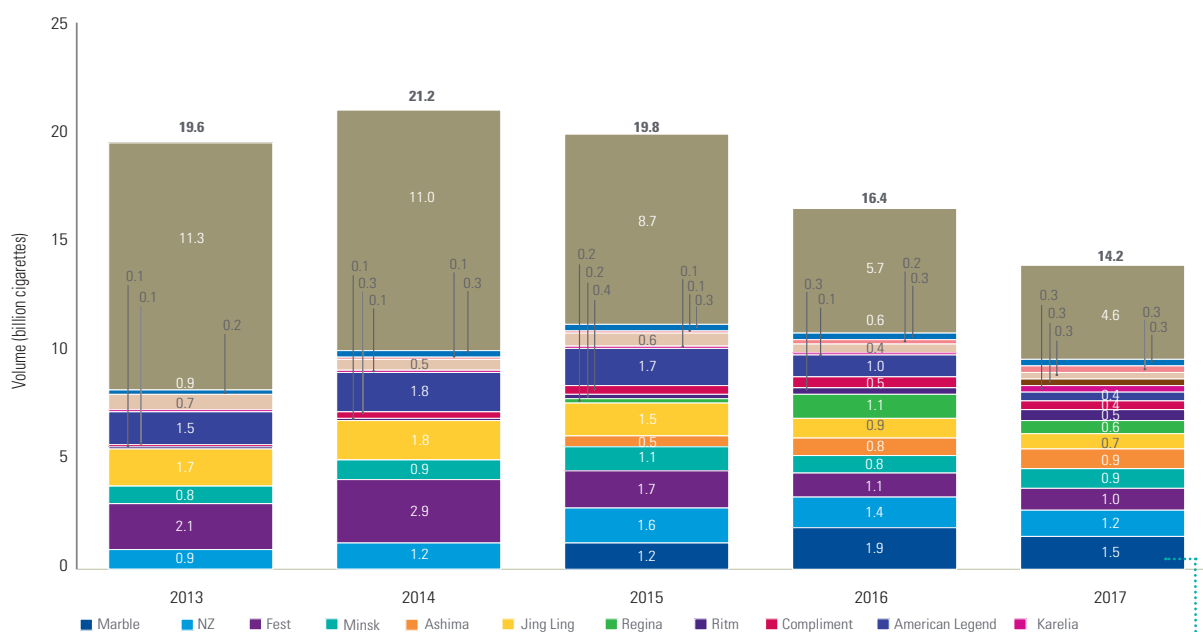
Illicit Whites labelling, 2017^(b)



Illicit Whites as a percentage of total C&C in the EU, 2013-2017^{(1)(a)(c)}



Illicit Whites by brand in the EU, 2013-2017^(b)

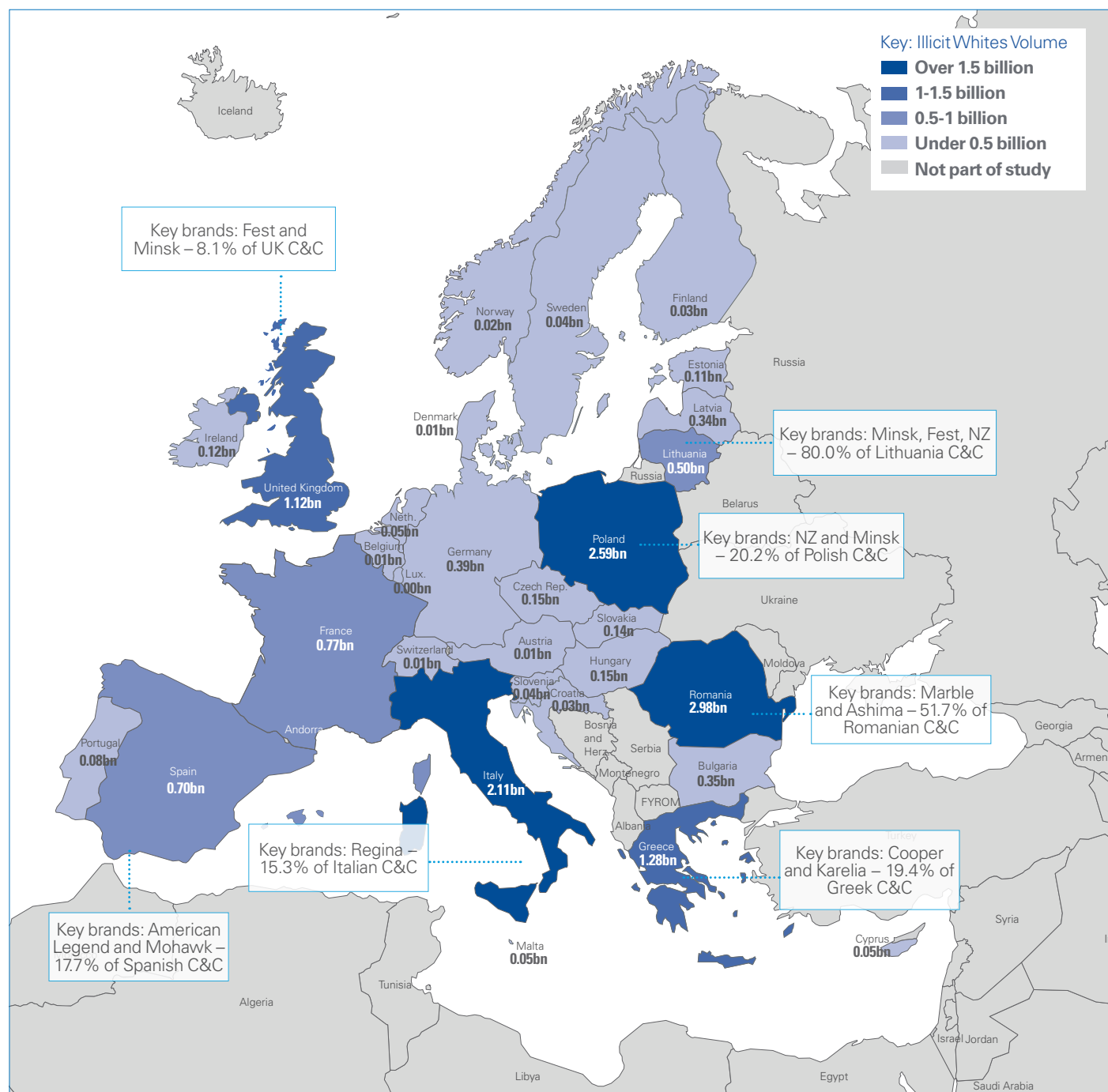


Romanian Marble was included in the Illicit White definition in 2017 as the majority of inflows of this brand displayed Duty Free Labelling

Notes: (a) Duty Free labelled brands may be classified as Illicit Whites as they are unavailable in Duty Free outlets (b) KPMG cannot determine if Illicit Whites are counterfeit. Counterfeit flows highlighted in this report are restricted to the analysis of packs conducted by the Empty Pack Survey participants PMI, BAT, JTI and ITL (c) Other C&C consists of EU labelled and non-EU labelled C&C

Sources: (1) KPMG EU flows model 2013-2017

Illicit Whites Volume in the EU, Norway and Switzerland, 2017⁽¹⁾



RUSI Analysis: Free Trade Zones⁽⁵⁾

Free trade zones (FTZs) are a perfect habitat for smugglers and counterfeiters. Owing to their limited oversight and advanced infrastructure, many of these special economic areas are used to ship, sell, store and produce counterfeit or contraband goods, including cigarettes and other tobacco products⁽¹⁾. As the World Health Organization Framework Convention on Tobacco Control (FCTC) protocol to eliminate illicit trade in tobacco products recognises, the production and smuggling of illicit tobacco products via FTZs poses a global threat to the legal supply chain⁽²⁾.

Individuals, companies and criminal organisations employ a range of methods to capitalise on these environments, in light of the lax oversight to which they are subject. In particular, Illicit Whites are known to be smuggled in large volumes from or via FTZs into the European market. Illicit Whites are often declared correctly for export from an FTZ but are then rerouted using forged documentation for import into their intended market destination. Smugglers also take advantage of simplified customs procedures to mis-declare goods in transit, transferring them instead to local warehouses before smuggling them on to higher-priced marketplaces, evading excise duties in the process. Evidence also suggests that the manufacturing process itself can be conducted in FTZs.

Tobacco smuggling, however, is part of a much larger illicit trade picture surrounding FTZs. A 2018 study by the Organisation for Economic Cooperation and Development and the EU Intellectual Property Office points to a positive correlation between the level of exports of counterfeit and pirated goods from a country, on the one hand, and the number and size of the FTZs that it hosts on the other. Indeed, according to the study, establishing an additional FTZ within an economy was associated with an average 5.9% increase in the value of counterfeit exports from that economy in the time period 2011–13⁽³⁾.

Whilst it has proven difficult to persuade governments to strengthen FTZ oversight, the FCTC protocol is notable for the stricter enforcement it implies in relation to tobacco control. Article 12 of the protocol demands not only that all parties ban the intermingling of tobacco with non-tobacco products

at the time of export, but also that they adopt control and verification measures on the manufacture of tobacco products in FTZs.

The protocol will enter into force in September 2018, giving FTZ operators in parties to the protocol three years to implement the required changes. With countries including Brazil, India, Turkey, Panama and Qatar having ratified the Protocol, this has the potential to bring about positive outcomes in addressing illicit trade activity. However, some of the most important players, such as the UAE, Malaysia, Belize and Singapore, remain missing from the list of parties to the protocol⁽⁴⁾.

FTZs are undoubtedly a boost to many economies around the world; however, a more effective balance must be found between facilitating legal trade and ensuring security. The ITTP is a positive step, but not all countries will choose to opt in. As such, a broader set of global actions are required to stem the flow of illicit tobacco – among other illicit products – from FTZs.

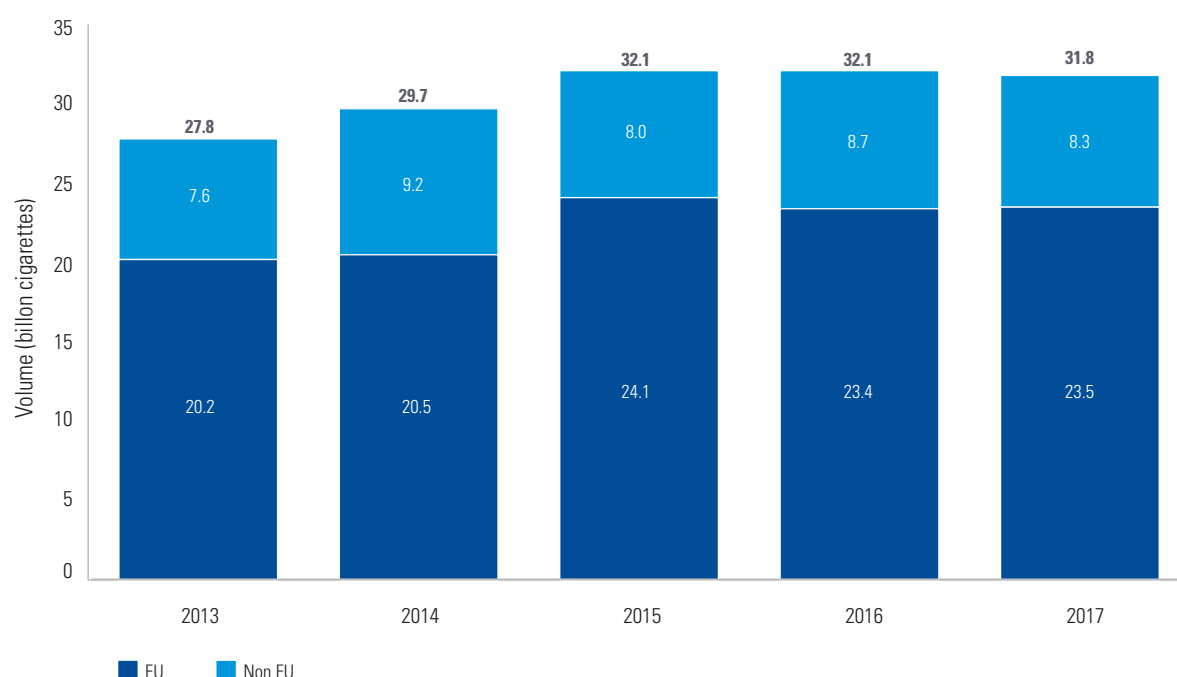


Sources: (1) Clare Ellis, 'On Tap Europe: Organised Crime and Illicit Trade in Tobacco, Alcohol and Pharmaceuticals', Whitehall Reports, 2017. (2) World Health Organization Framework Convention on Tobacco Control, 'Protocol to Eliminate Illicit Trade in Tobacco Products', Article 12 (Geneva: World Health Organization, 2013), <http://www.who.int/fctc/protocol/illicit_trade/protocol-publication/en/>, accessed 10 July 2018. (3) Organisation for Economic Cooperation and Development and EU Intellectual Property Office, 'Trade in Counterfeit Goods and Free Trade Zones: Evidence from Recent Trends', 2018. (4) World Health Organization, 'The Protocol to Eliminate Illicit Trade in Tobacco Products: Questions and Answers', <<http://www.who.int/fctc/protocol/faq/en/index1.html>>, accessed 10 July 2018. (5) The RUSI Analysis boxes included in this executive summary draw on a range of sources, as outlined in the Methodology and Frequently Asked Questions sections of Project SUN

Non-domestic legal (ND(L)) flows remained stable, supported by high travel volumes between countries

- ND(L) represents cigarettes that are purchased and transferred legally from one country to another, mainly as a result of travel flows between countries and price differences
- ND(L) reflects the legal allowance of cigarettes that smokers are able to bring into the country individually multiplied by the number of travellers moving between each country
- The legal allowance between EU countries is generally a guideline amount of 800 cigarettes, whilst for non-EU to EU countries it is restricted to 200 cigarettes, or 40 cigarettes in some circumstances on the Eastern EU border
- Major flows of ND(L) typically come from within the EU where there are large price differences and a lot of travel between countries. These flows include those from the Czech Republic and Poland to Germany and from Spain to France
- ND(L) flows are also high when large numbers of tourists travel from a higher priced country to a lower priced country, such as flows from Spain to the UK

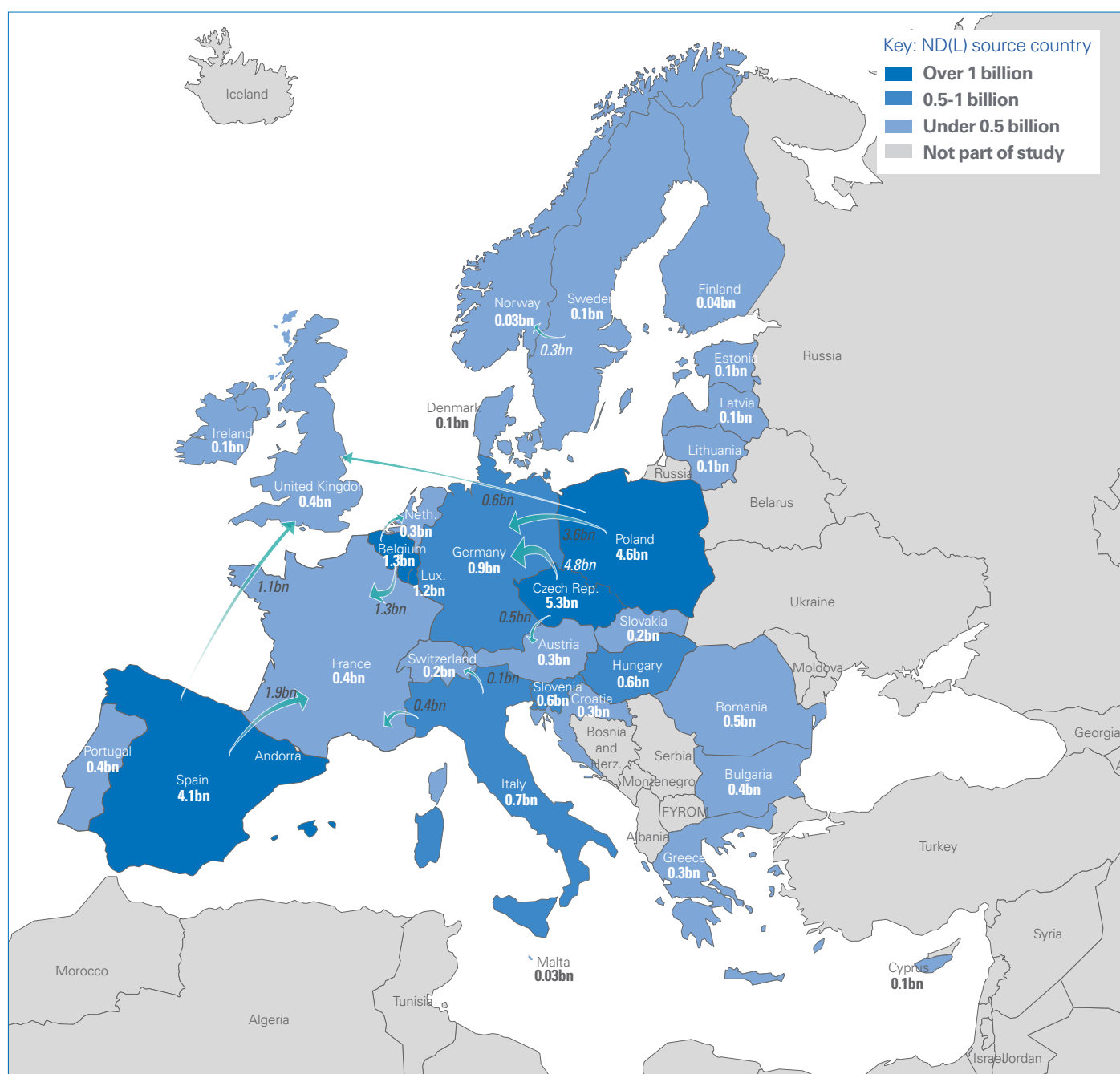
Source of ND(L) in the EU, 2013-2017⁽¹⁾



Note: (a) 800 is the generally indicated limit for cigarettes the EU members have put in place for travel within the EU (b) 200 is the Duty Free allowance for travel into and out of the EU

Source: (1) KPMG EU flows model 2013-2017 and KPMG analysis of UNWTO data

Total volume of ND(L) by source country, 2017⁽¹⁾



If you would like further information, please talk to your usual KPMG contact or contact:

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Countries included in this study



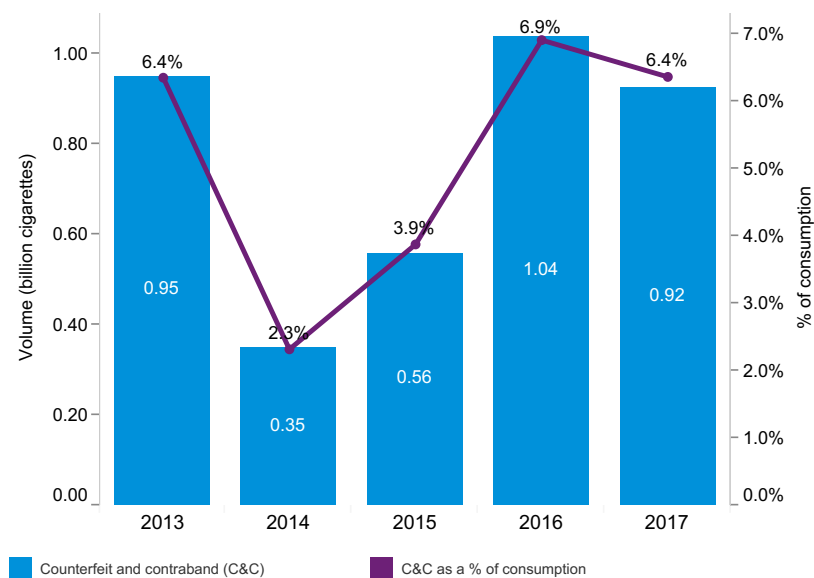
Austria



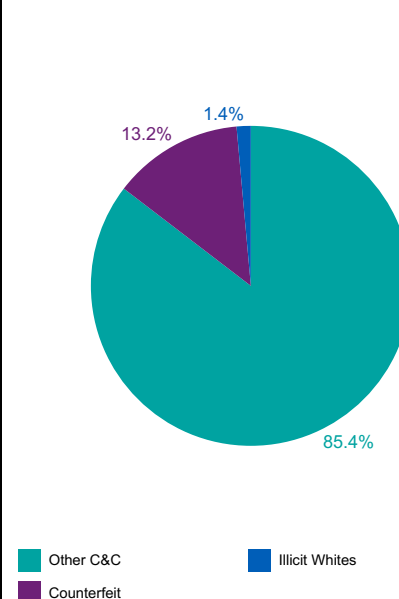
Overview

- C&C consumption fell by 0.1 billion cigarettes in 2017 to 6.4% of total consumption
- A high proportion of consumption in Austria was non-domestic legal, owing to its proximity to lower-priced markets
- The largest C&C source country was the Czech Republic

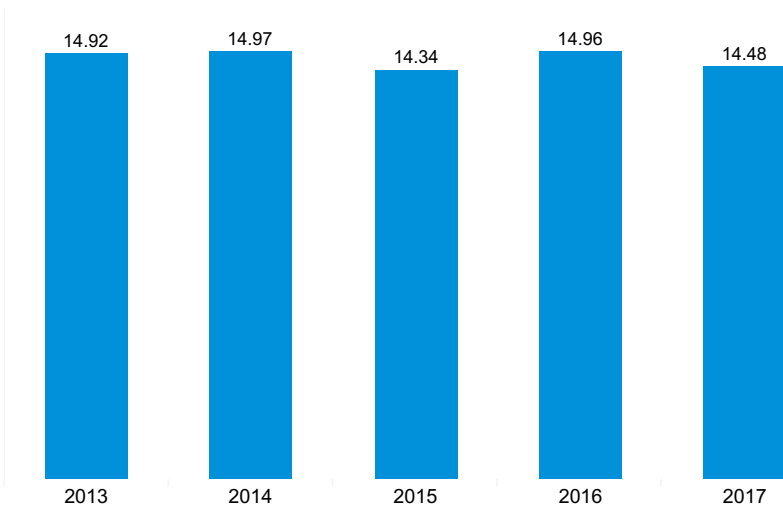
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



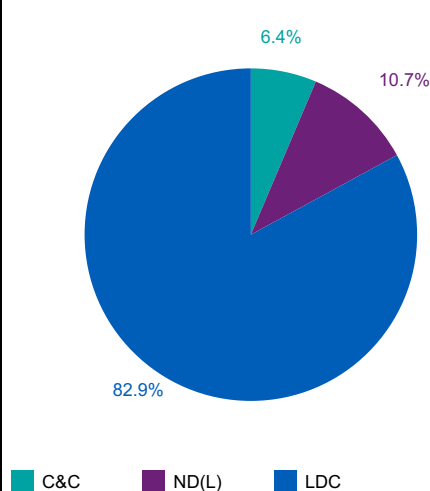
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows

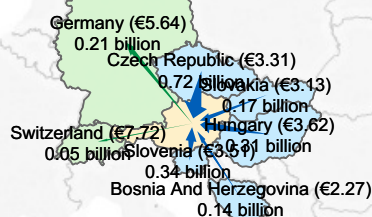


AUSTRIA

Weighted average price: €4.76

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€167m** would have been raised in AUSTRIA

Average prices of manufactured cigarettes in Austria increased by 3.9% in 2017



43% of total non-domestic cigarettes inflows were from the Czech Republic and Slovenia

Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

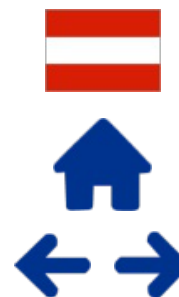
Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); Federal Ministry of Finance, February 2018

Manufactured cigarette consumption, inflows and outflows



TOTAL AUSTRIA CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	13.04	12.90	12.73	12.63	12.40	-2%
Outflows	-0.75	-0.38	-0.36	-0.33	-0.40	19%
Legal domestic consumption (LDC)	12.29	12.52	12.37	12.29	12.01	-2%
Non-domestic legal (ND(L))	1.69	2.11	1.41	1.63	1.55	-5%
Counterfeit and contraband (C&C)	0.95	0.35	0.56	1.04	0.92	-11%
Total non-domestic	2.64	2.46	1.97	2.67	2.47	-7%
Total consumption	14.92	14.97	14.34	14.96	14.48	-3%

- Total consumption decreased by 3%, reflecting both a decline in legal domestic sales and non-domestic inflows
- The number of inflows from the neighbouring Czech Republic increased by 0.22 billion, reflecting a rise in trips between Austria and the Czech Republic
- Outflows were reflective of Austria's lower prices compared to neighbouring Germany and Switzerland and traveller flows to other higher priced countries

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO AUSTRIA

	2013	2014	2015	2016	2017
Czech Republic	0.61	0.47	0.41	0.50	0.72
Slovenia	0.68	0.74	0.42	0.37	0.34
Hungary	0.71	0.56	0.25	0.40	0.31
Slovakia	0.03	0.06	0.09	0.13	0.17
Bosnia And Herzegovina	0.05	0.08	0.10	0.13	0.14
Other	0.56	0.54	0.70	1.13	0.79
Total Inflows	2.64	2.46	1.97	2.67	2.47

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM AUSTRIA

	2013	2014	2015	2016	2017
Germany	0.62	0.27	0.15	0.18	0.21
Switzerland	0.00	0.02	0.04	0.04	0.05
Netherlands	0.03	0.02	0.02	0.02	0.02
Slovakia	0.00	0.00	0.01	0.01	0.02
Hungary	0.02	0.02	0.02	0.01	0.02
Other	0.08	0.05	0.11	0.07	0.07
Total Outflows	0.75	0.38	0.36	0.33	0.40

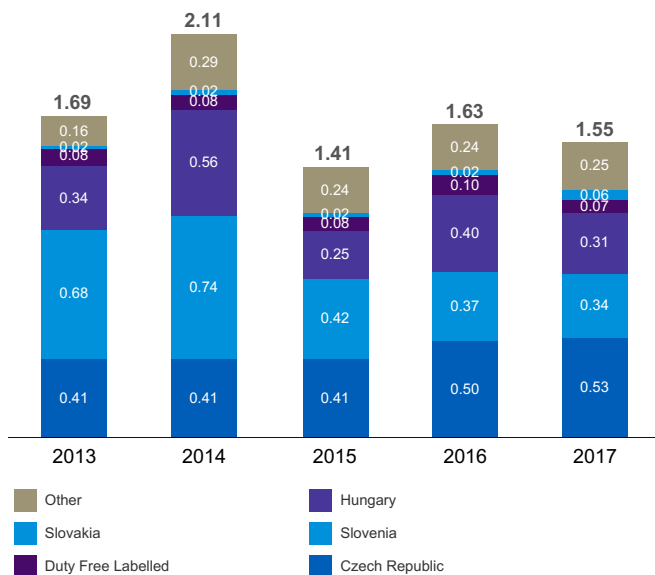
Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Illicit Whites with no country-specific labelling comprise Illicit Whites labelled as "Duty Free" and "Unspecified". Data from previous years reflects the same definition; please refer to the methodology (b) Duty Free and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and Unspecified labelling except the 2013 values (c) Norway was included for the first time in 2014
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

ND(L) and C&C flows

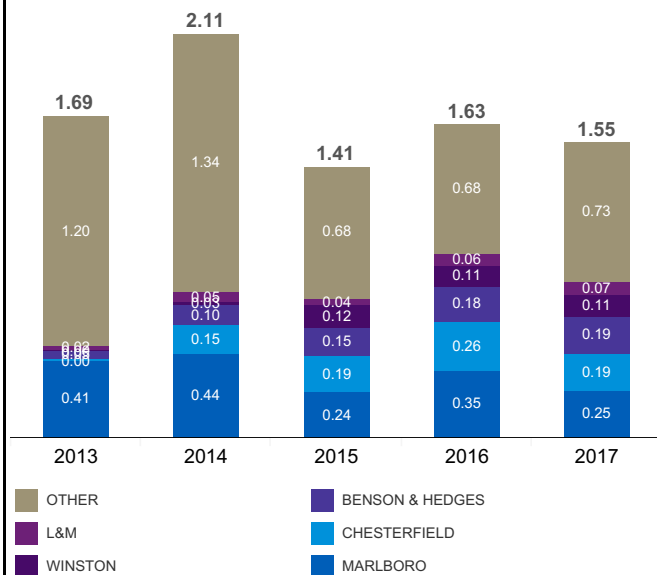


- A considerable non-domestic legal flow into Austria was from Slovenia, which reflected the lower prices and large numbers of travellers between these two countries
- The largest C&C flow was from the Czech Republic, where cigarettes were cheaper and the total flow could not be explained by traveller numbers taking the legal amount back with them when visiting
- The majority of the decline in C&C came from three of the largest C&C brands, while counterfeit remained stable

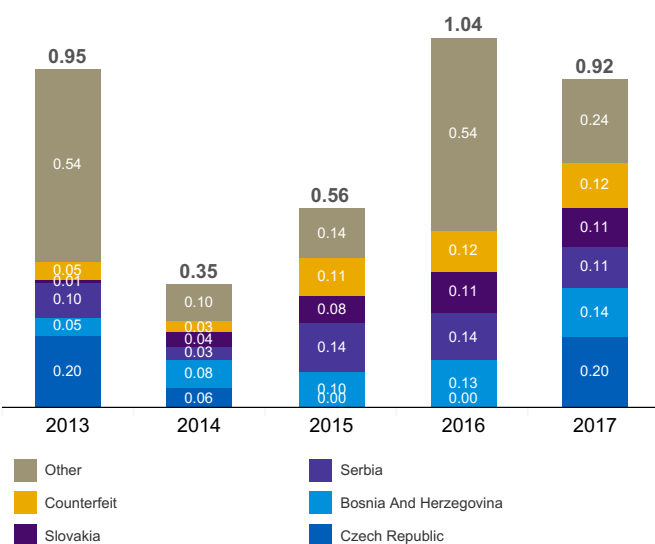
ND(L) by country of origin, 2013-2017 (bn cigarettes)



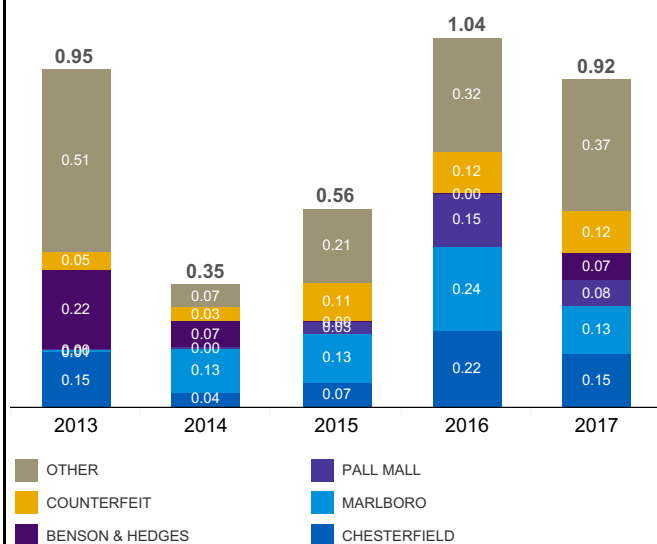
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook

Countries included in this study



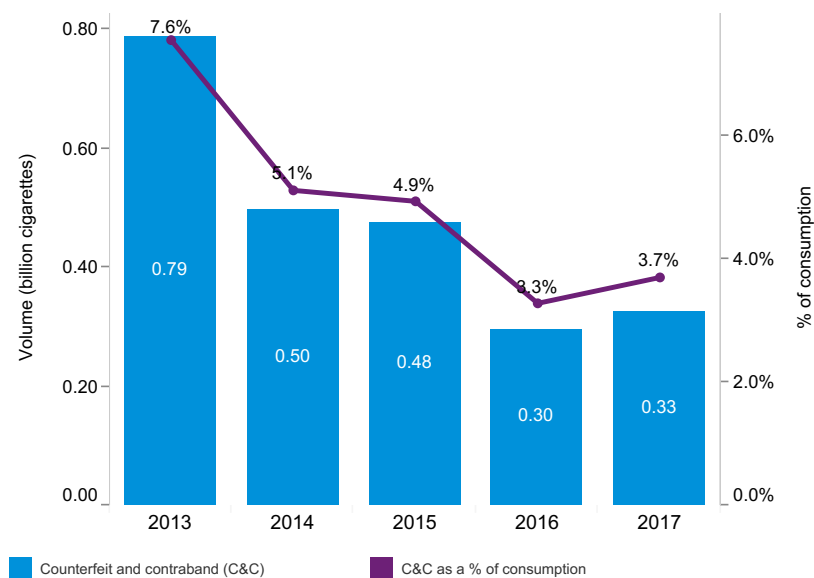
Belgium



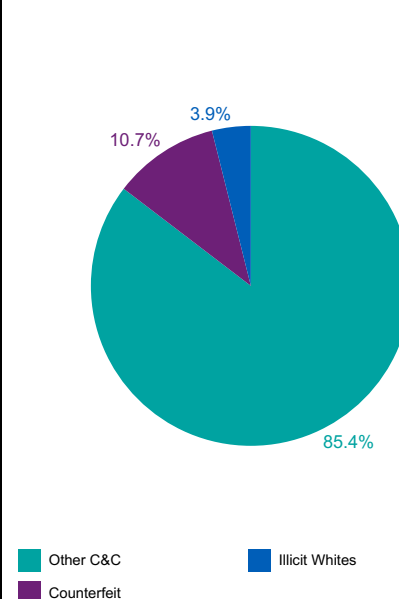
Overview

- After a continuous decline in previous years, illicit cigarette consumption slightly increased to 3.7% of total consumption in 2017
- Bulgaria and Belarus were amongst the largest source countries for flows of C&C into Belgium
- As Belgium borders a number of countries with higher prices, a significant amount of Belgian domestic sales went to other countries as outflows, predominantly France

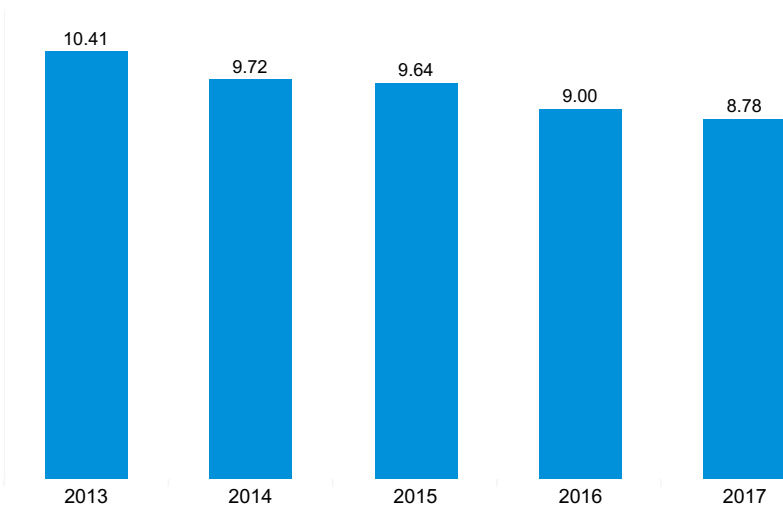
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



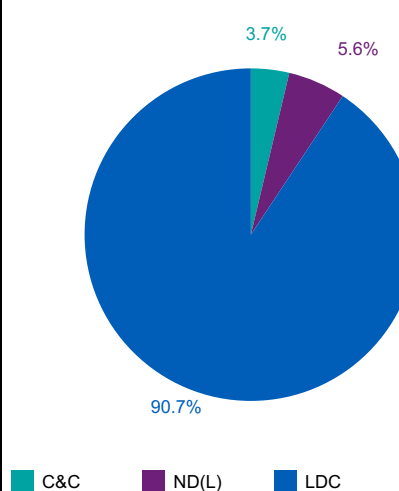
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows

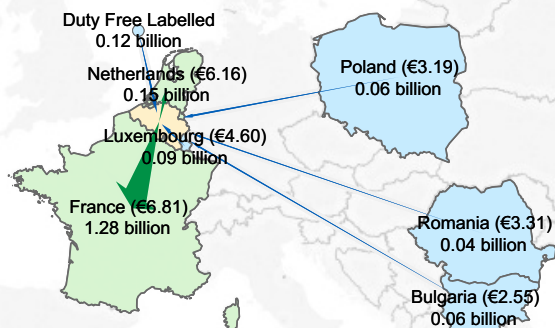


BELGIUM

Weighted average price: €5.88

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€76m** would have been raised in **BELGIUM**

Average prices of manufactured cigarettes in Belgium increased by 2.7% in 2017



13% of legal domestic sales were consumed in France

Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:

Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL BELGIUM CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	11.00	10.92	10.60	10.18	9.51	-7%
Outflows	-2.48	-2.47	-2.15	-1.94	-1.55	-20%
Legal domestic consumption (LDC)	8.52	8.45	8.45	8.23	7.96	-3%
Non-domestic legal (ND(L))	1.10	0.78	0.71	0.48	0.49	3%
Counterfeit and contraband (C&C)	0.79	0.50	0.48	0.30	0.33	10%
Total non-domestic	1.89	1.27	1.18	0.77	0.82	6%
Total consumption	10.41	9.72	9.64	9.00	8.78	-3%

• The 7% drop in legal domestic sales came as outflows to both France and the Netherlands declined, which reflected the narrowing price gap, due to the 3% increase in Belgian cigarette prices in 2017

– A 20% drop was seen in outflows from Belgium, driven by a decrease of 0.22 billion cigarettes in outflows to the Netherlands and 0.19 billion outflows to France

• France continued to remain the largest outflow destination from Belgium

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO BELGIUM

	2013	2014	2015	2016	2017
Duty Free Labelled	0.21	0.20	0.20	0.17	0.12
Luxembourg	0.42	0.25	0.17	0.13	0.09
Poland	0.09	0.07	0.06	0.04	0.06
Bulgaria	0.04	0.02	0.06	0.03	0.06
Romania	0.03	0.02	0.06	0.02	0.04
Other	1.09	0.72	0.64	0.37	0.44
Total Inflows	1.89	1.27	1.18	0.77	0.82

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM BELGIUM

	2013	2014	2015	2016	2017
France	2.00	2.08	1.69	1.47	1.28
Netherlands	0.38	0.28	0.29	0.37	0.15
Germany	0.02	0.03	0.03	0.03	0.03
UK	0.04	0.03	0.04	0.03	0.03
Portugal	0.00	0.01	0.00	0.00	0.01
Other	0.04	0.05	0.09	0.05	0.06
Total Outflows	2.48	2.47	2.15	1.94	1.55

Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Illicit Whites with no country-specific labelling comprise Illicit Whites labelled as "Duty Free" and "Unspecified". Data from previous years reflects the same definition; please refer to the methodology (b) Duty Free and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and Unspecified labelling except the 2013 values (c) Norway was included for the first time in 2014

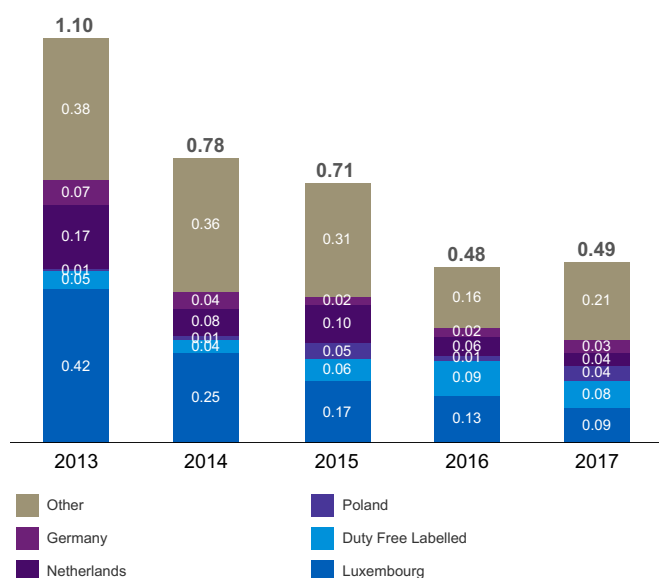
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

ND(L) and C&C flows

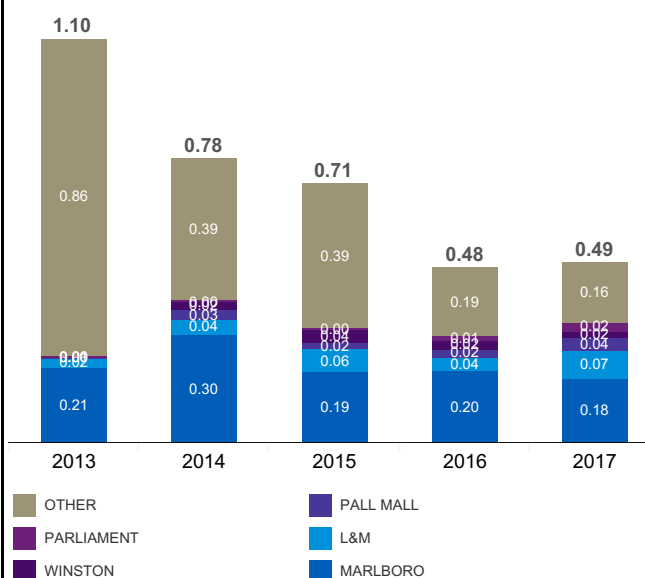
- Non-domestic legal increased marginally as outbound traveller numbers increased, with travellers purchasing cigarettes for lower prices abroad
- C&C flows increased by 10%, mainly originating from countries with lower prices such as Belarus and Bulgaria



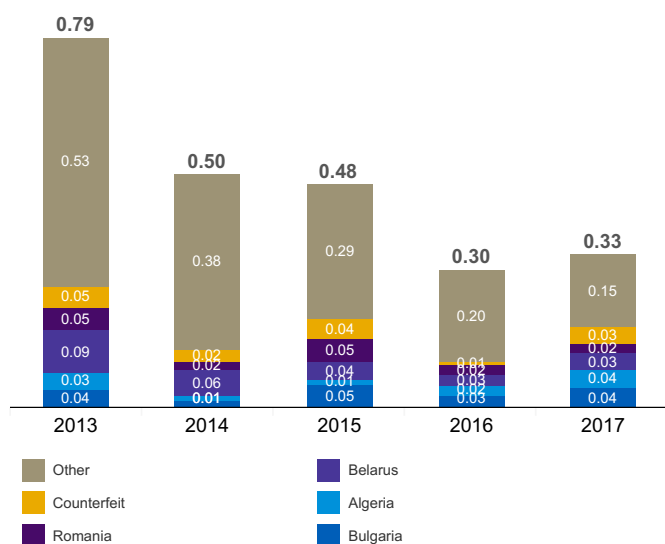
ND(L) by country of origin, 2013-2017 (bn cigarettes)



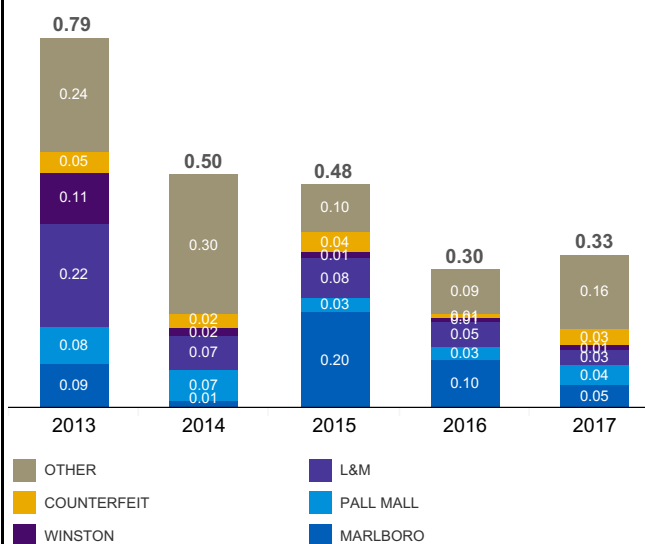
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



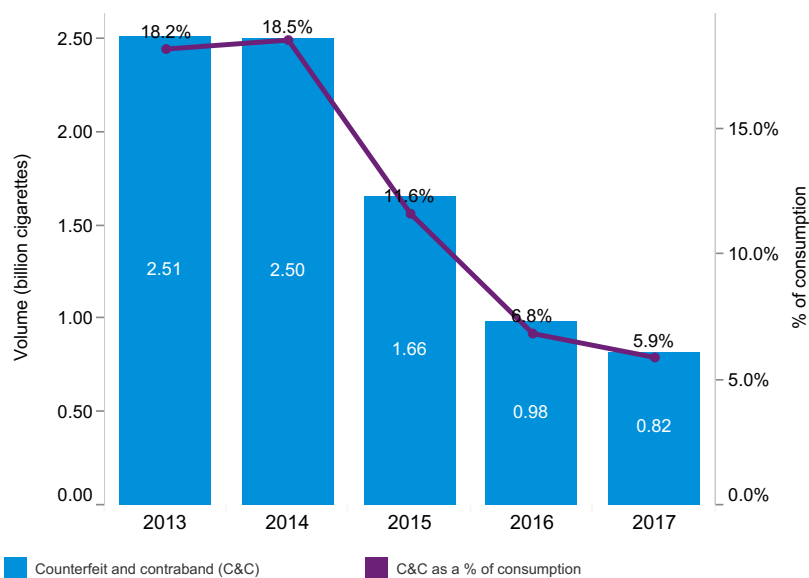
Bulgaria



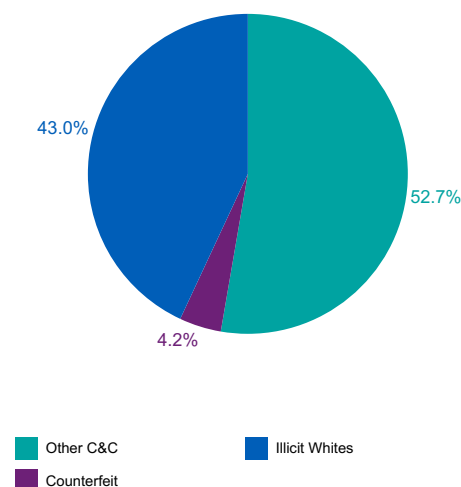
Overview

- C&C volumes fell by 16% in 2017 to 0.82 billion cigarettes alongside rising GDP
- The total C&C volume equated to 5.9% of total consumption
- Around 43% of C&C consumption came from Illicit Whites; the Illicit Whites brands Premium, Business Royals, Capital and Roseman made up 23% of all C&C volume

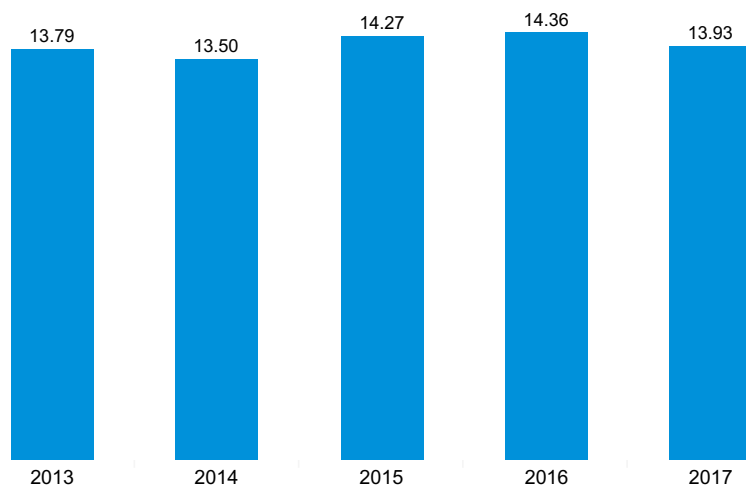
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



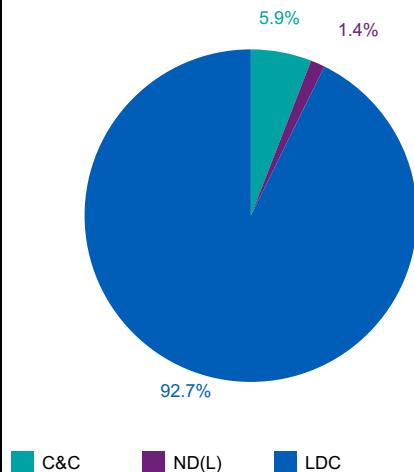
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers; GDP Statistics, World Bank, 2017

Key inflows and outflows



BULGARIA

Weighted average price: €2.55 (BGN4.97)

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€89m (BGN174m)** would have been raised in BULGARIA

Average prices of manufactured cigarettes in Bulgaria increased by 1.4% in 2017



Country Colours
 Country of Study
 Destination
 Source

Flow Colours
 Inflow to Country of Study
 Outflow from Country of Study

Country label format:
 Country Name (Average price per pack)
 Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL BULGARIA CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	11.500	11.340	13.160	13.834	13.705	-1%
Outflows	-0.365	-0.411	-0.608	-0.639	-0.793	24%
Legal domestic consumption (LDC)	11.135	10.935	12.555	13.195	12.912	-2%
Non-domestic legal (ND(L))	0.151	0.068	0.058	0.179	0.194	9%
Counterfeit and contraband (C&C)	2.508	2.502	1.658	0.983	0.821	-16%
Total non-domestic	2.659	2.570	1.716	1.162	1.015	-13%
Total consumption	13.795	13.499	14.267	14.357	13.927	-3%

- One of the largest inflows into Bulgaria came from Illicit White brands with no country-specific labelling, including Premium, Business Royals and Karelia
- The incidence of non-domestic inflows varied by region and was more prominent in the smaller cities and towns than in the large cities included in the study. For example, two of the largest cities, Sofia and Varna had a non-domestic incidence of 5.6% and 2.9%, respectively, while smaller towns had higher rates; 14.6% in Pazardzik and 7.8% in Veliko Tarnovo
- Outflows grew in line with an increase in Bulgarians working in other countries, especially the UK

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO BULGARIA

	2013	2014	2015	2016	2017
Duty Free Labelled	1.871	0.901	0.416	0.338	0.368
IWs with no country-specific labelling	0.366	1.284	0.816	0.365	0.365
FYROM	0.037	0.029	0.130	0.159	0.059
Unspecified	0.072	0.016	0.034	0.143	0.056
Counterfeit	0.000	0.009	0.074	0.042	0.035
Other	0.313	0.332	0.245	0.115	0.133
Total Inflows	2.659	2.570	1.716	1.162	1.015

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM BULGARIA

	2013	2014	2015	2016	2017
France	0.086	0.072	0.126	0.109	0.216
UK	0.034	0.046	0.084	0.091	0.164
Germany	0.076	0.108	0.152	0.123	0.144
Greece	0.033	0.039	0.042	0.097	0.066
Belgium	0.040	0.018	0.063	0.031	0.058
Other	0.096	0.128	0.140	0.188	0.144
Total Outflows	0.365	0.411	0.608	0.639	0.793

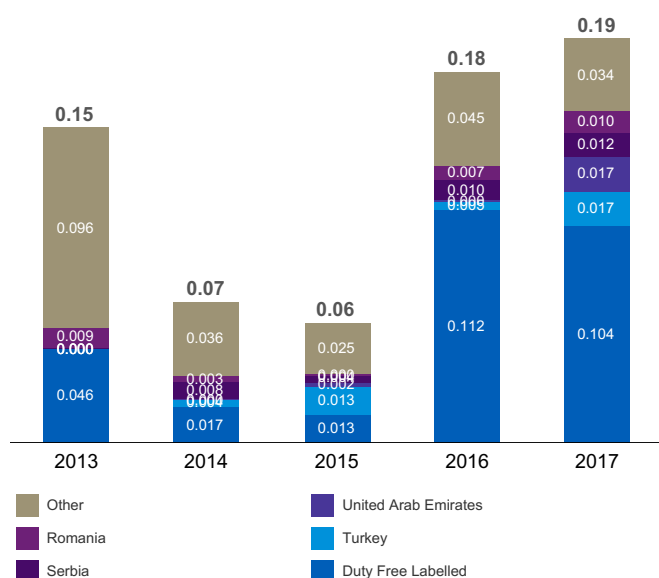
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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); UK and non-UK people working in the labour market, ONS, May 2018

ND(L) and C&C flows

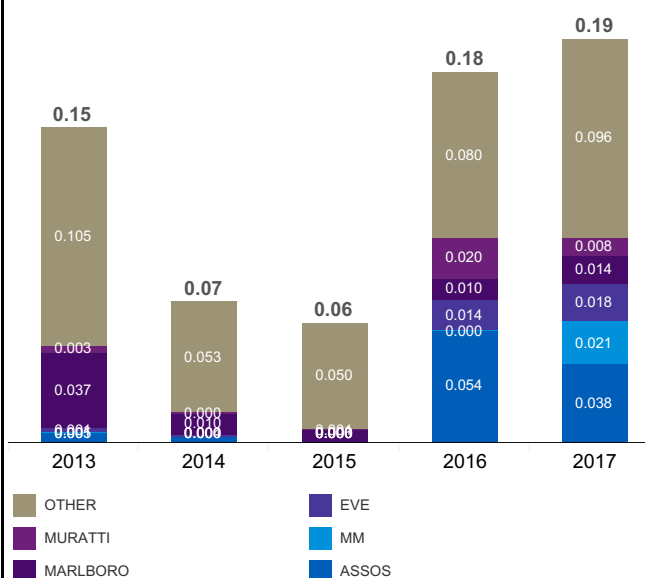
- Despite an overall decrease of C&C from neighbouring lower-priced countries, Illicit Whites with no country-specific labelling remained stable
- Premium and Business Royals were the most prevalent Illicit White brands; Business Royals increased by 0.06 in 2017
- Non-domestic legal inflows were low, reflecting Bulgaria's position as one of the lowest-priced countries in the study, with little incentive to bring in cigarettes from other EU markets; the two pack maximum for non-EU travel also limited legal inflows from non-EU countries



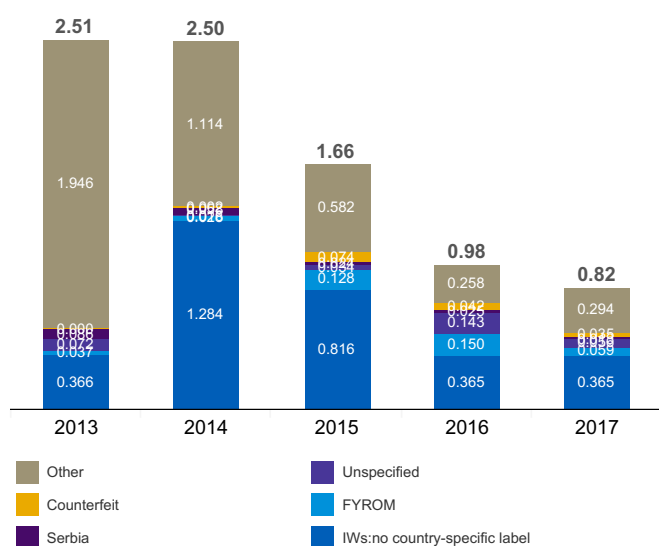
ND(L) by country of origin, 2013-2017 (bn cigarettes)



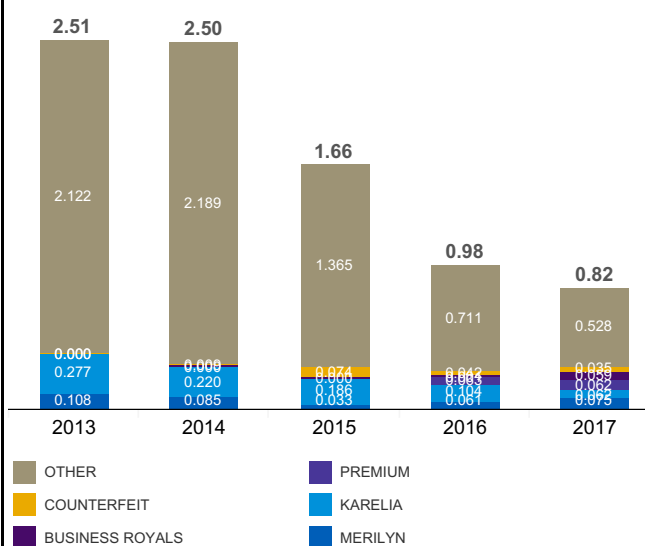
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



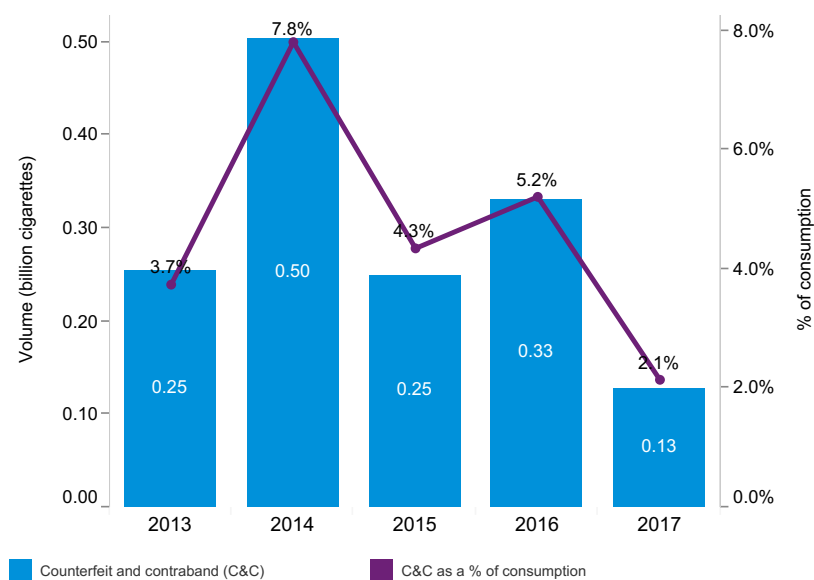
Croatia



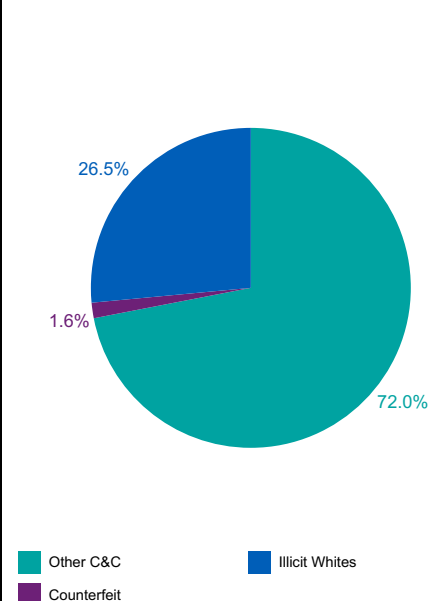
Overview

- C&C consumption in Croatia reduced to 2.1%, one of the lowest levels in the study
- C&C declines came from a reduction in flows from Bosnia and Herzegovina. This occurred alongside increased law enforcement activity and the introduction of more severe penalties in the Croatian Criminal Code, following the European Commission's suggested strategy against cigarette smuggling
- Macro-economic conditions improved in 2017 including a decrease in the unemployment rate, which dropped by 2.3 percentage points

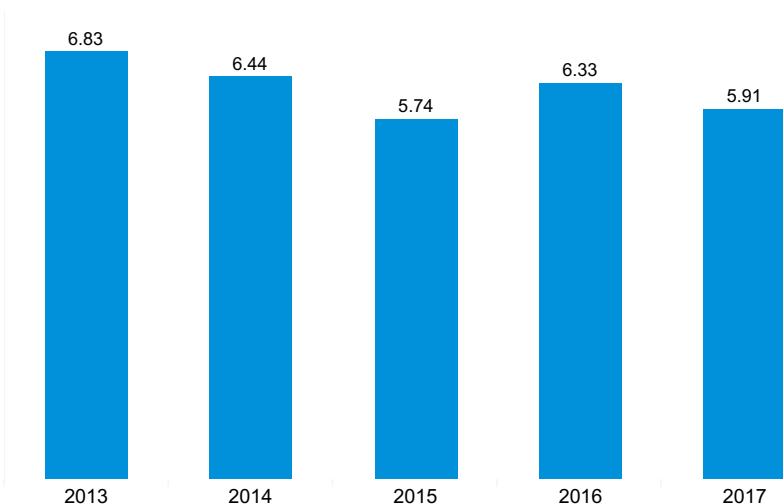
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



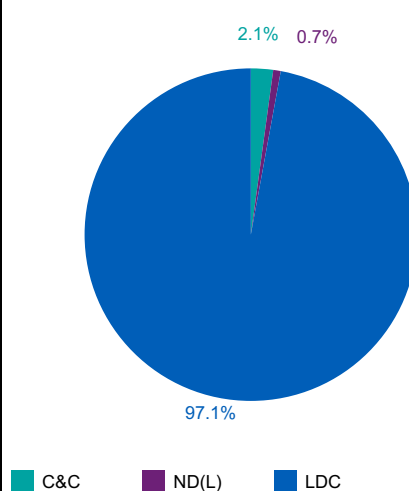
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers; Unemployment Rates, Euromonitor, 2017

Key inflows and outflows

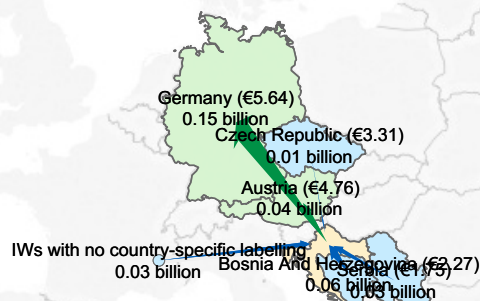


CROATIA

Weighted average price: €3.05 (kn22.75)

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€16m (kn117m)** would have been raised in CROATIA

Average prices of manufactured cigarettes in Croatia increased by 0.1% in 2017



The largest inflows to Croatia were from Bosnia and Herzegovina, which accounted for 37% of total inflows

Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL CROATIA CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	6.706	6.070	5.863	6.304	6.072	-4%
Outflows	-0.234	-0.264	-0.419	-0.325	-0.334	3%
Legal domestic consumption (LDC)	6.472	5.814	5.444	5.979	5.737	-4%
Non-domestic legal (ND(L))	0.101	0.134	0.045	0.032	0.043	35%
Counterfeit and contraband (C&C)	0.255	0.503	0.249	0.330	0.126	-62%
Total non-domestic	0.354	0.637	0.294	0.352	0.169	-52%
Total consumption	6.825	6.443	5.738	6.331	5.907	-7%

- The decline in non-domestic flows from Bosnia and Herzegovina, where the non-domestic volume dropped from 0.27 billion to 0.06 billion, came as prices rose by 7% and additional tobacco legislation controlling the sale of tobacco was passed in Bosnia and Herzegovina
- Croatia was a popular holiday destination with high numbers of tourists in 2017, especially from Germany, reflecting large outflow volumes

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO CROATIA

	2013	2014	2015	2016	2017
Bosnia And Herzegovina	0.202	0.382	0.160	0.272	0.063
IWs with no country-specific labelling	0.020	0.043	0.029	0.000	0.033
Serbia	0.048	0.091	0.023	0.044	0.033
FYROM	0.000	0.000	0.002	0.010	0.008
Czech Republic	0.000	0.000	0.006	0.000	0.006
Other	0.085	0.122	0.075	0.025	0.026
Total Inflows	0.354	0.637	0.294	0.352	0.169

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM CROATIA

	2013	2014	2015	2016	2017
Germany	0.087	0.140	0.270	0.112	0.155
Austria	0.030	0.030	0.028	0.050	0.038
Slovenia	0.030	0.024	0.038	0.026	0.036
UK	0.004	0.004	0.005	0.017	0.019
Italy	0.023	0.026	0.014	0.017	0.018
Other	0.060	0.039	0.064	0.103	0.068
Total Outflows	0.234	0.264	0.419	0.325	0.334

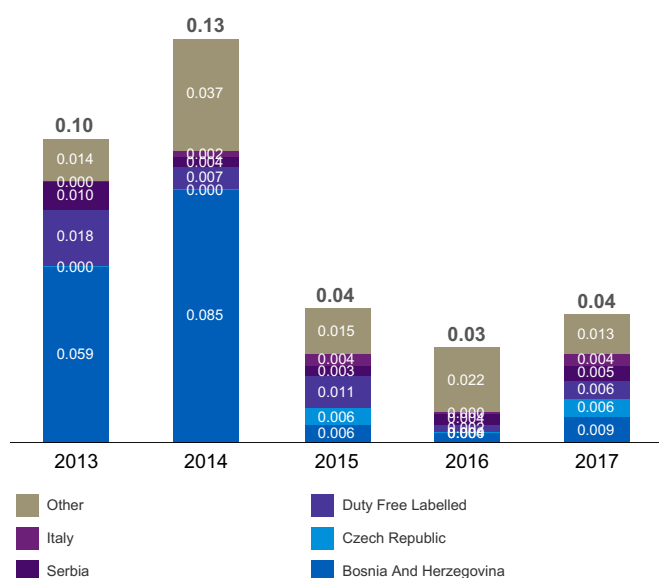
Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Illicit Whites with no country-specific labelling comprise Illicit Whites labelled as "Duty Free" and "Unspecified". Data from previous years reflects the same definition; please refer to the methodology (b) Duty Free and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and Unspecified labelling except the 2013 values (c) Norway was included for the first time in 2014
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); Tobacco in Bosnia and Herzegovina, Euromonitor, July 2017

ND(L) and C&C flows

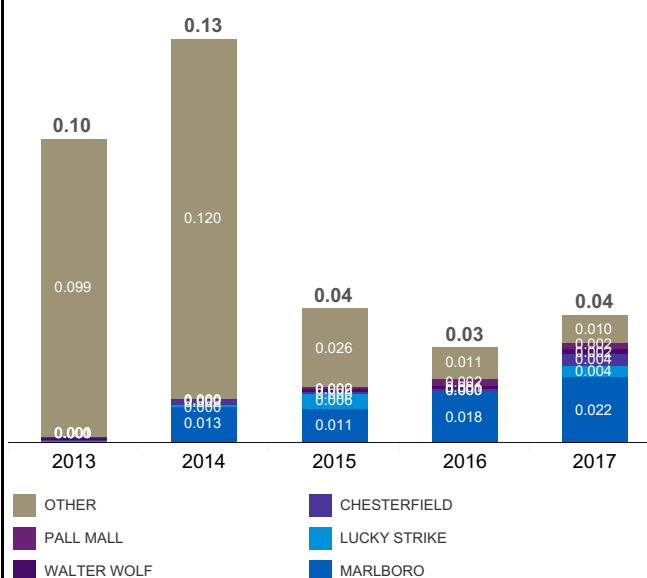


- Non-domestic legal flows to Croatia increased by 35% alongside an increase in traveller numbers
- Traveller numbers to and from Croatia's largest source country (Bosnia and Herzegovina) increased by 22%, however non-domestic flows declined despite increased travel between the two countries, and despite Bosnia and Herzegovina being a known border shopping destination for Croatians
- As Bosnia and Herzegovina is a non-EU country, travellers are limited to two packs of cigarettes per trip, resulting in low volumes of non-domestic legal

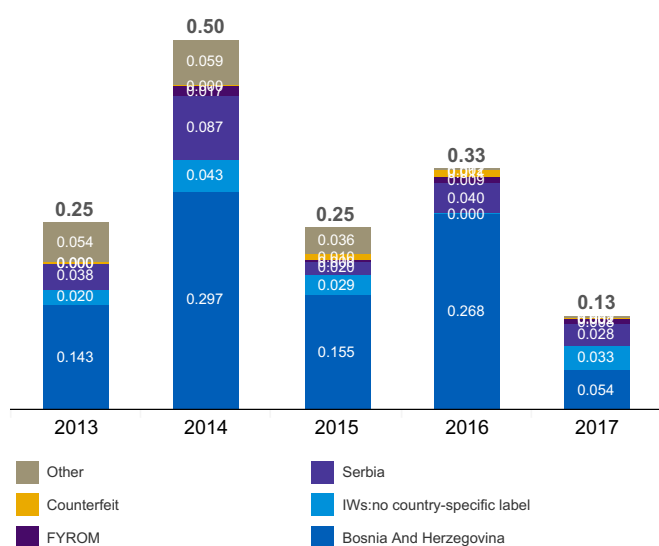
ND(L) by country of origin, 2013-2017 (bn cigarettes)



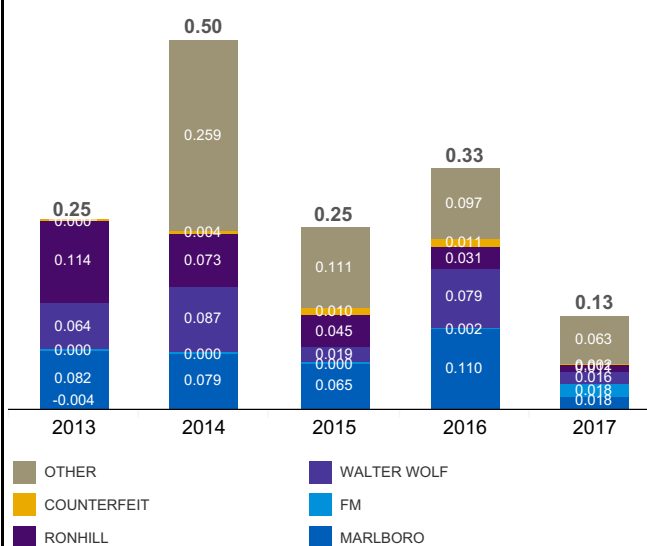
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) KPMG calculates the split between C&C and Non-Domestic Legal by calculating the Non-Domestic Legal volumes and subtracting from the total inflows (b) In years 2014-2017 the Non-Domestic Legal analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) Additional information about the process for identifying Illicit Whites is provided in the appendix
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook

Countries included in this study



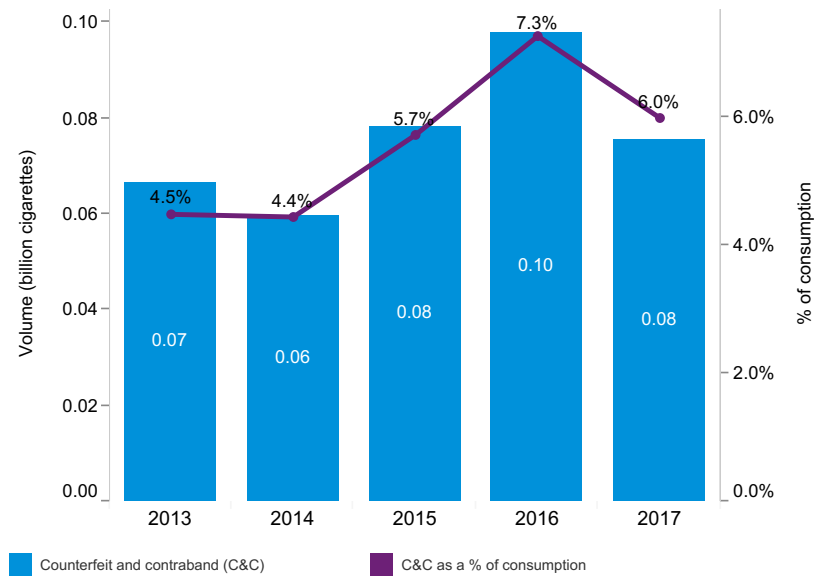
Cyprus



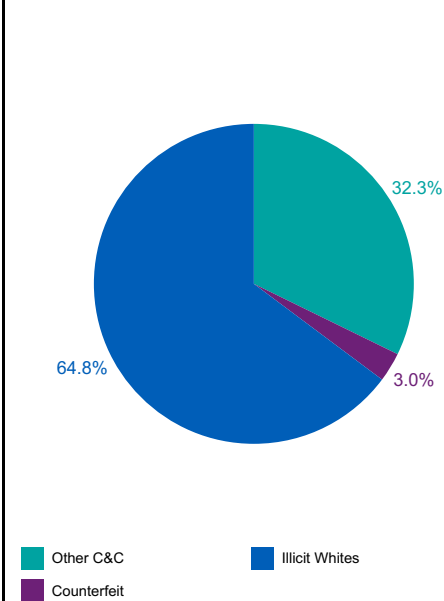
Overview

- In 2017 C&C consumption declined by 0.02 billion in Cyprus, and accounted for 6% of total consumption
- The decline occurred alongside an improvement in macro-economic indicators such as a decreasing unemployment rate and GDP growth
- Illicit Whites continued to be the main source of C&C in Cyprus, with Double V One, Cooper and Gaulwaz brands accounting for 61% of C&C volume in 2017

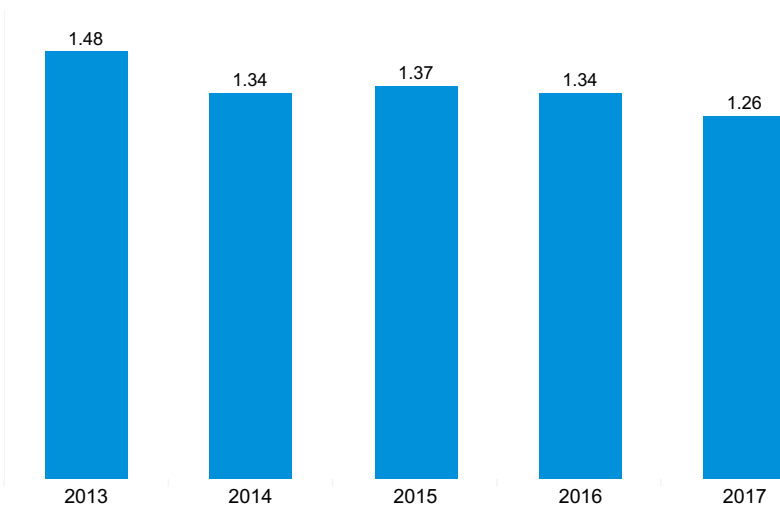
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



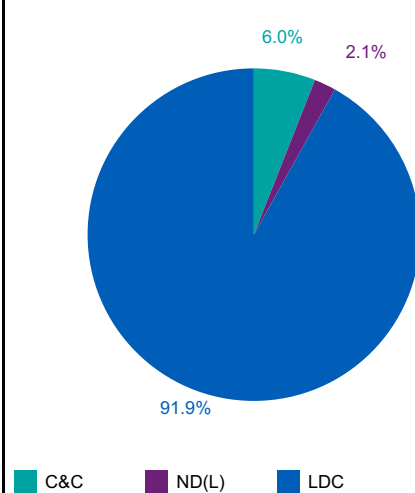
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



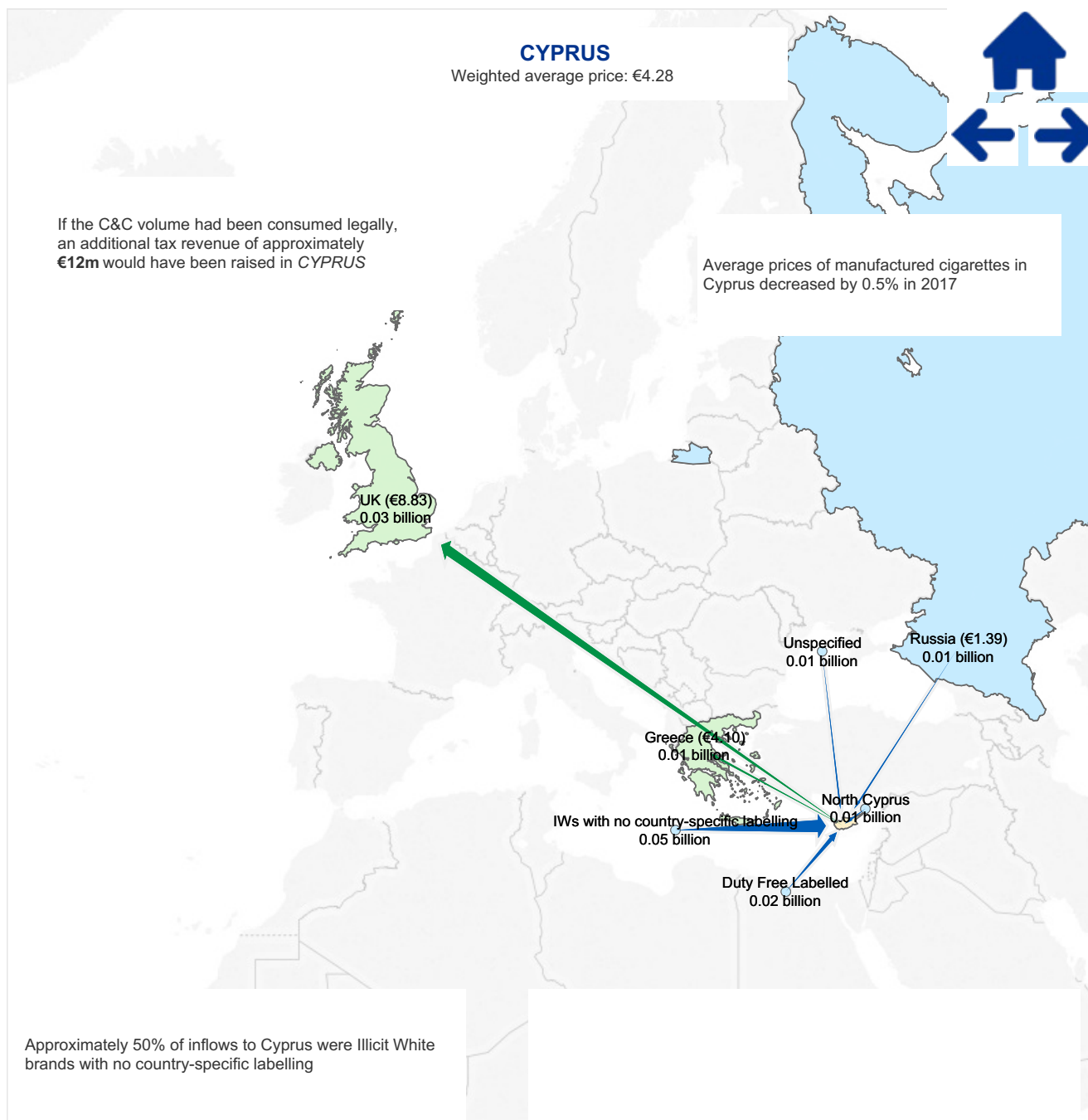
Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers; Unemployment Rates, Euromonitor, 2017; GDP Statistics, World Bank, 2017

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)



Manufactured cigarette consumption, inflows and outflows

TOTAL CYPRUS CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	1.445	1.305	1.306	1.278	1.216	-5%
Outflows	-0.048	-0.032	-0.034	-0.054	-0.057	7%
Legal domestic consumption (LDC)	1.397	1.272	1.272	1.225	1.159	-5%
Non-domestic legal (ND(L))	0.020	0.010	0.015	0.022	0.027	20%
Counterfeit and contraband (C&C)	0.066	0.060	0.078	0.098	0.075	-23%
Total non-domestic	0.087	0.070	0.093	0.119	0.102	-14%
Total consumption	1.484	1.342	1.365	1.344	1.261	-6%

- Outflows reflected traveller flows to more expensive countries such as the UK and Switzerland, where the price gaps were €4.55 and €3.44 between Cyprus and each country respectively
- Travellers from the UK and Switzerland increased by 18%
- Inflows from North Cyprus (which is not under control of the Republic of Cyprus) doubled in 2017, against an increasing price gap from €1.28 to €2.24

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO CYPRUS

	2013	2014	2015	2016	2017
IWs with no country-specific labelling	0.002	0.022	0.049	0.065	0.050
Duty Free Labelled	0.040	0.021	0.016	0.019	0.017
North Cyprus	0.006	0.004	0.012	0.004	0.008
Unspecified	0.024	0.004	0.000	0.000	0.007
Russia	0.002	0.003	0.003	0.004	0.007
Other	0.013	0.014	0.013	0.027	0.014
Total Inflows	0.087	0.070	0.093	0.119	0.102

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM CYPRUS

	2013	2014	2015	2016	2017
UK	0.034	0.016	0.021	0.025	0.034
Greece	0.004	0.002	0.007	0.015	0.008
Switzerland	0.000	0.001	0.000	0.000	0.005
Netherlands	0.003	0.002	0.002	0.002	0.003
Germany	0.004	0.001	0.001	0.001	0.002
Other	0.003	0.010	0.003	0.010	0.005
Total Outflows	0.048	0.032	0.034	0.054	0.057

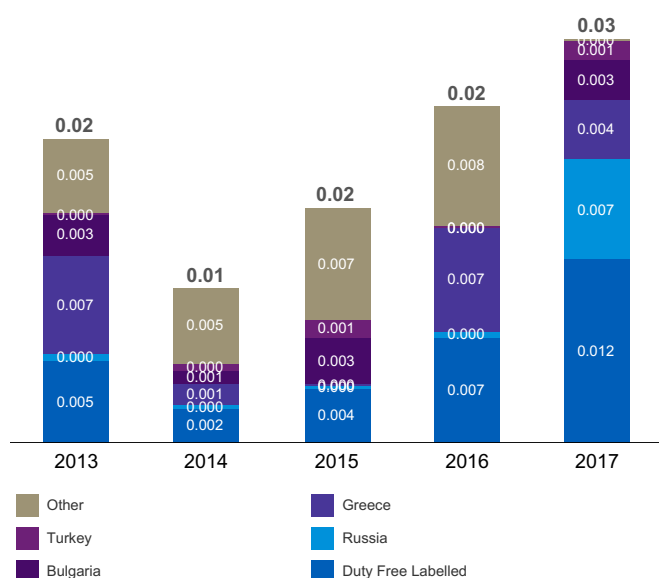
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ND(L) and C&C flows

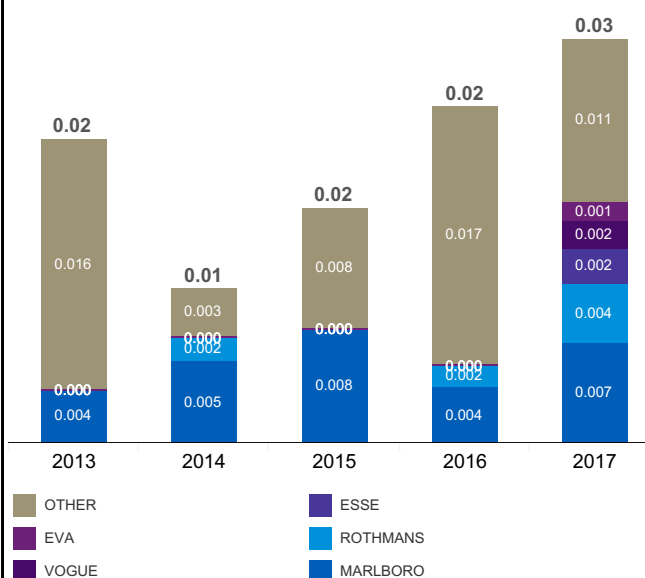


- The decrease in C&C could be explained by the reduced prevalence of the Illicit White brand Gaulwaz, which was a prominent Illicit White brand in 2016
- The primary source of Illicit White brand flows was Double V One, which is trademark owned by Nicosia Tobacco Company and manufactured in North Cyprus (which is not under the control of the Republic of Cyprus)

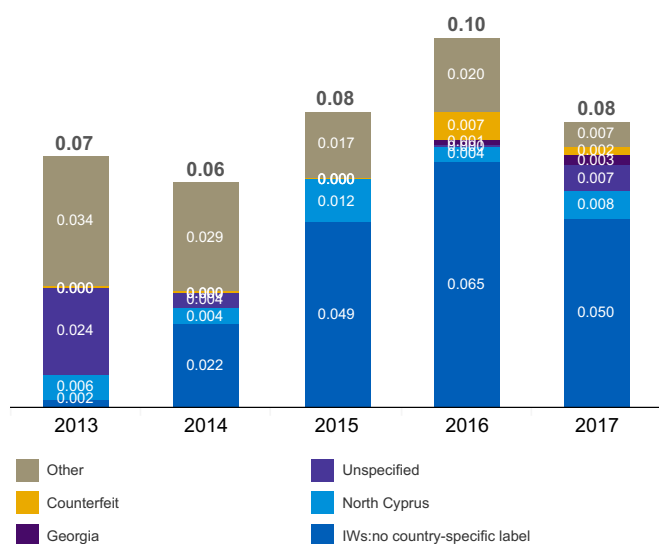
ND(L) by country of origin, 2013-2017 (bn cigarettes)



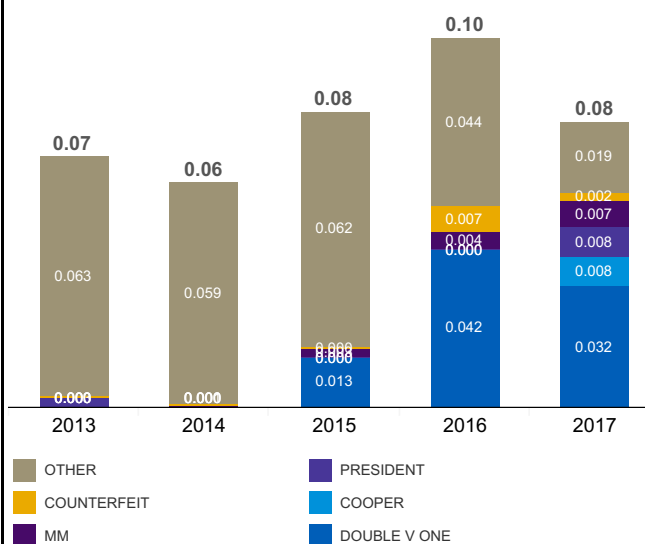
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook

Countries included in this study



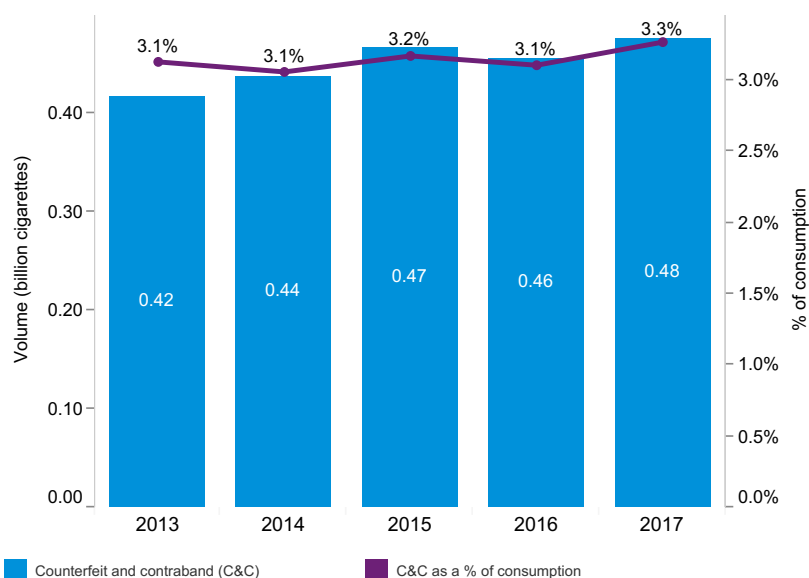
Czech Republic



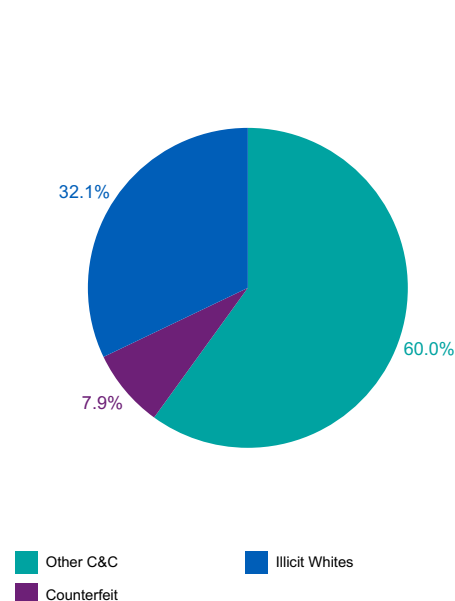
Overview

- While C&C consumption increased to 3.3% of total consumption, the Czech Republic retained one of the lowest rates of C&C consumption in the countries of study
- The increase was driven by higher volumes of C&C from Belarus, alongside an increase in Illicit Whites with no country specific labelling
- C&C volume from the Ukraine decreased by 2.1% alongside an increase in traveller numbers and a 6.6% increase in migration from the Ukraine, but remained the highest source of C&C, contributing 31% to the overall volume

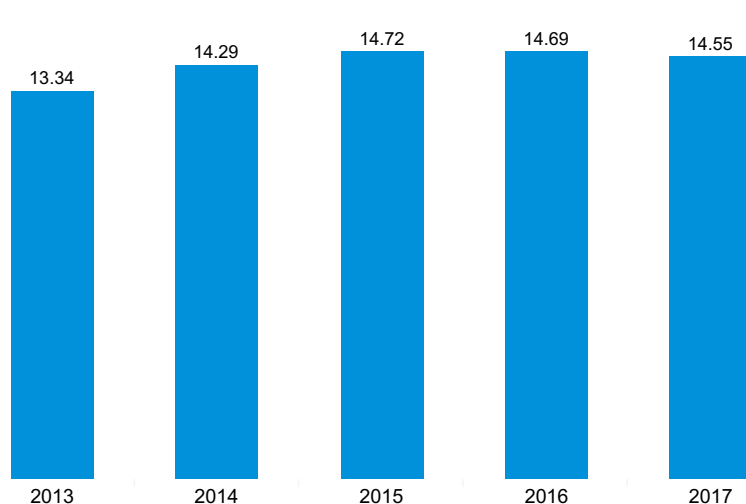
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



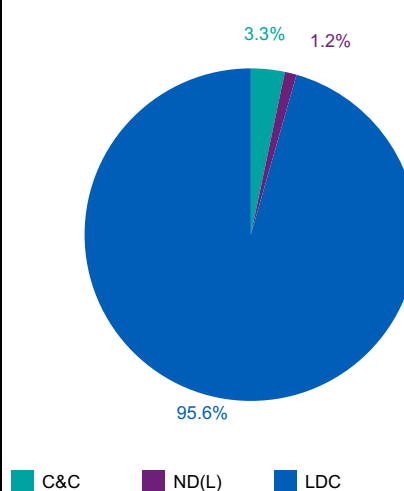
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



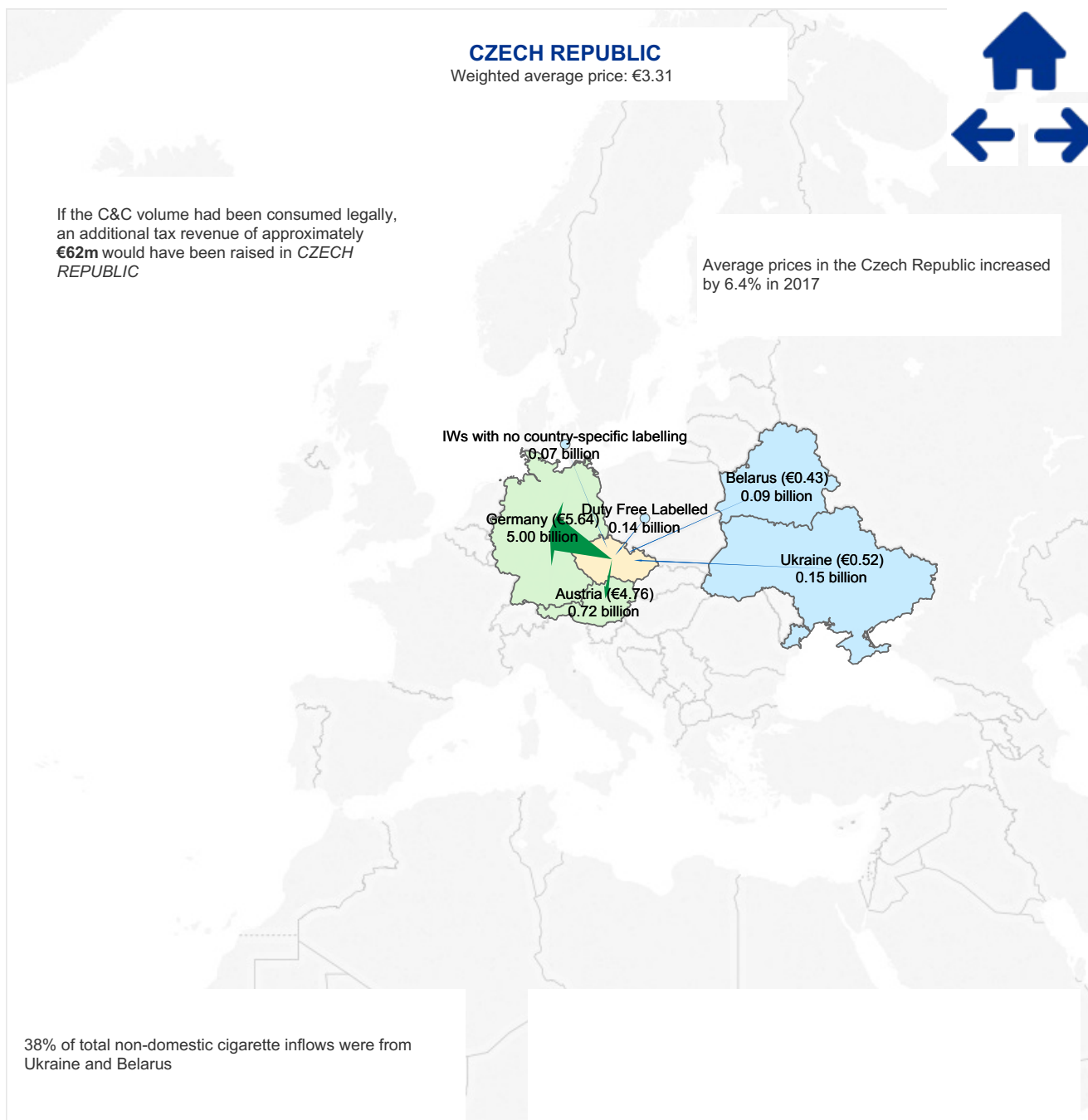
Breakdown of total consumption - 2017 (%)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers; Czech Statistical Office, 2017

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

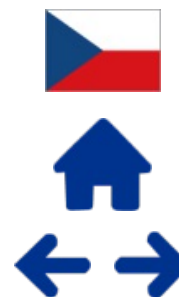
Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL CZECH REPUBLIC CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	19.65	19.87	20.13	20.50	20.10	-2%
Outflows	-6.99	-6.16	-6.06	-6.43	-6.19	-4%
Legal domestic consumption (LDC)	12.67	13.71	14.07	14.07	13.91	-1%
Non-domestic legal (ND(L))	0.26	0.14	0.19	0.16	0.17	3%
Counterfeit and contraband (C&C)	0.42	0.44	0.47	0.46	0.48	4%
Total non-domestic	0.68	0.58	0.65	0.62	0.64	4%
Total consumption	13.34	14.29	14.72	14.69	14.55	-1%

- Non-domestic inflows from non-EU countries such as Ukraine, Belarus and Russia contributed to C&C as traveller numbers did not support the overall non-domestic volume; however migration and travel to the Czech Republic from the Ukraine increased, resulting in a slightly higher proportion of non-domestic legal
- The Czech Republic had lower prices than its Western EU neighbours and was a popular tourist destination in 2017, with inbound traveller numbers increasing by 10% on 2016
- Outflows were 6.2 billion cigarettes, down 3.7% on the previous year, with almost 5 billion in outflows to neighbouring Germany

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO CZECH REPUBLIC

	2013	2014	2015	2016	2017
Ukraine	0.11	0.03	0.08	0.15	0.15
Duty Free Labelled	0.09	0.11	0.13	0.11	0.14
Belarus	0.10	0.13	0.09	0.07	0.09
IWs with no country-specific labelling	0.06	0.08	0.08	0.05	0.07
Counterfeit	0.08	0.04	0.04	0.06	0.04
Other	0.23	0.19	0.23	0.17	0.15
Total Inflows	0.68	0.58	0.65	0.62	0.64

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM CZECH REPUBLIC

	2013	2014	2015	2016	2017
Germany	6.14	5.45	5.24	5.45	5.00
Austria	0.61	0.47	0.41	0.50	0.72
UK	0.06	0.10	0.18	0.27	0.19
Slovakia	0.02	0.01	0.04	0.03	0.07
Netherlands	0.03	0.03	0.02	0.03	0.05
Other	0.12	0.09	0.17	0.15	0.16
Total Outflows	6.99	6.16	6.06	6.43	6.19

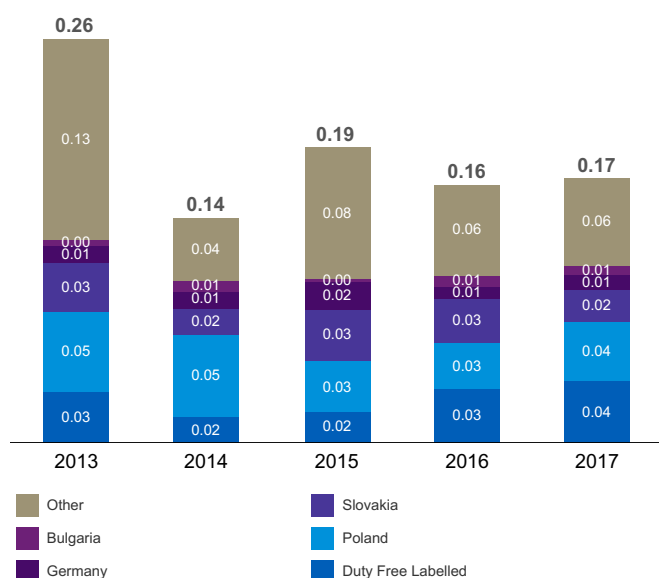
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ND(L) and C&C flows

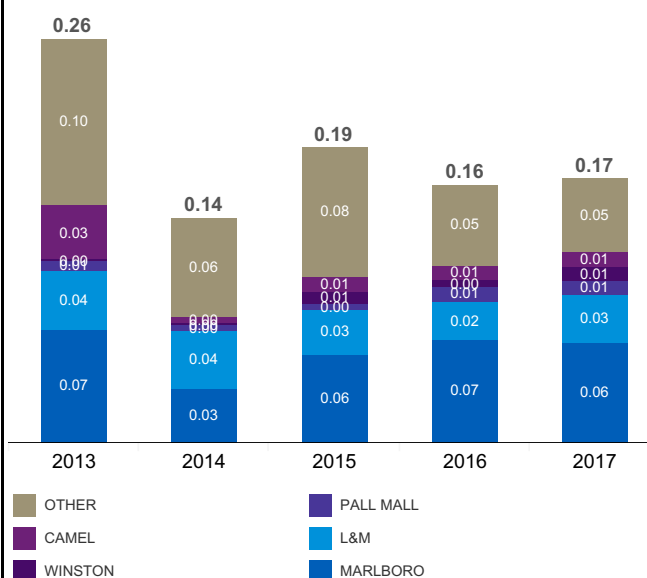
- C&C from the Ukraine and Belarus accounted for half of the total C&C volume
- Travel to the Czech Republic from both EU and non-EU countries increased in 2017 by 8.8% and 12.7% respectively



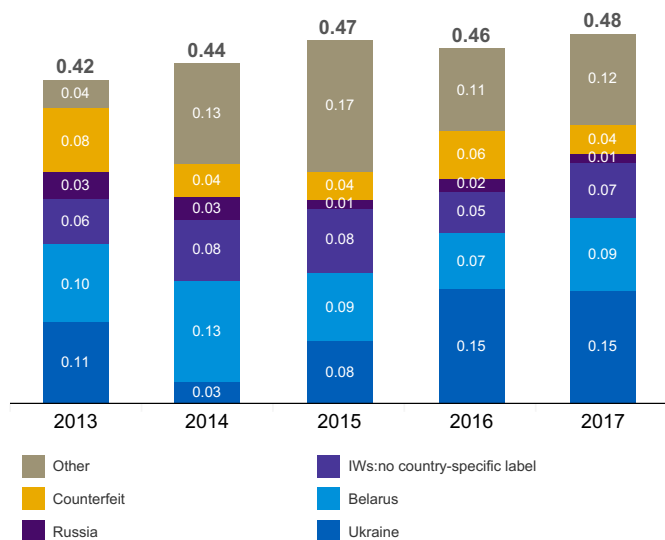
ND(L) by country of origin, 2013-2017 (bn cigarettes)



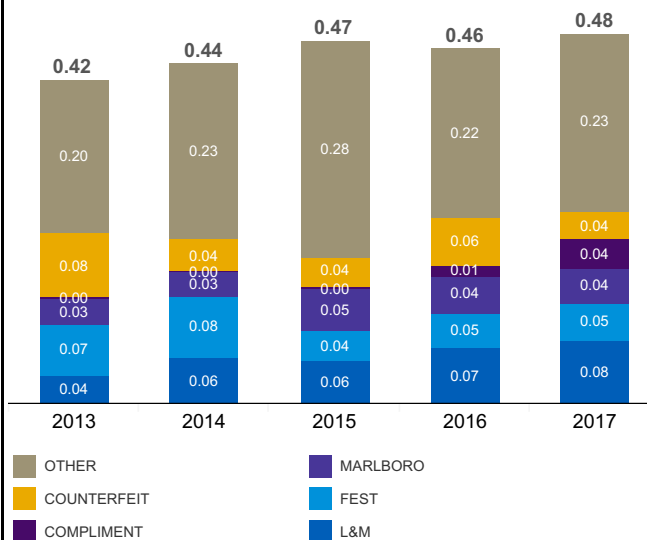
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) KPMG calculates the split between C&C and Non-Domestic Legal by calculating the Non-Domestic Legal volumes and subtracting from the total inflows (b) In years 2014-2017 the Non-Domestic Legal analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) Additional information about the process for identifying Illicit Whites is provided in the appendix
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Countries included in this study



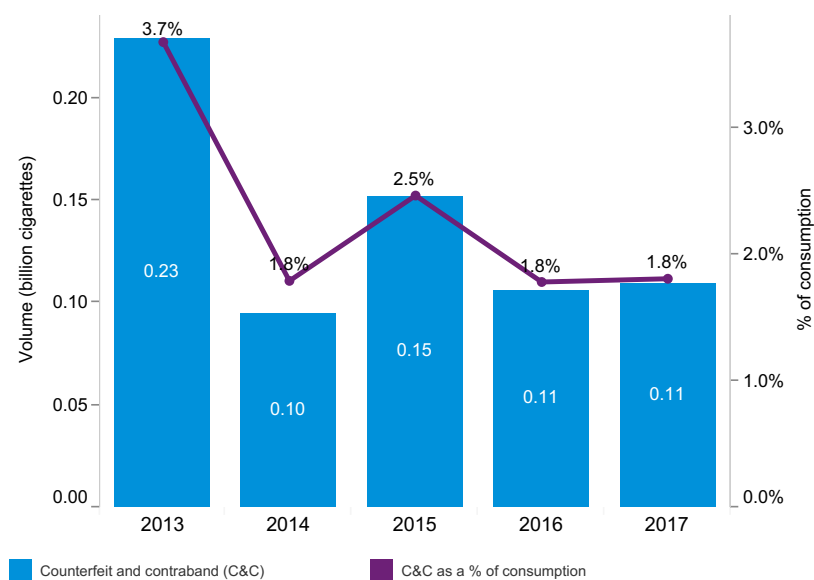
Denmark



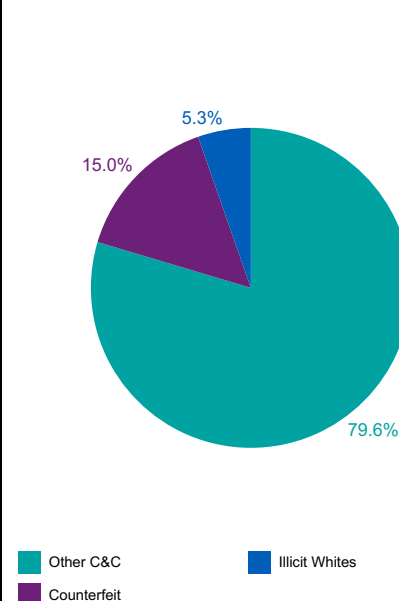
Overview

- C&C in Denmark remained one of the lowest in the study at 1.8%. The majority of C&C came from Romania
- Total consumption remained stable at 6.04 billion cigarettes
- Most non-domestic consumption in Denmark was non-domestic legal from neighbouring countries, with 30% from Sweden and Poland

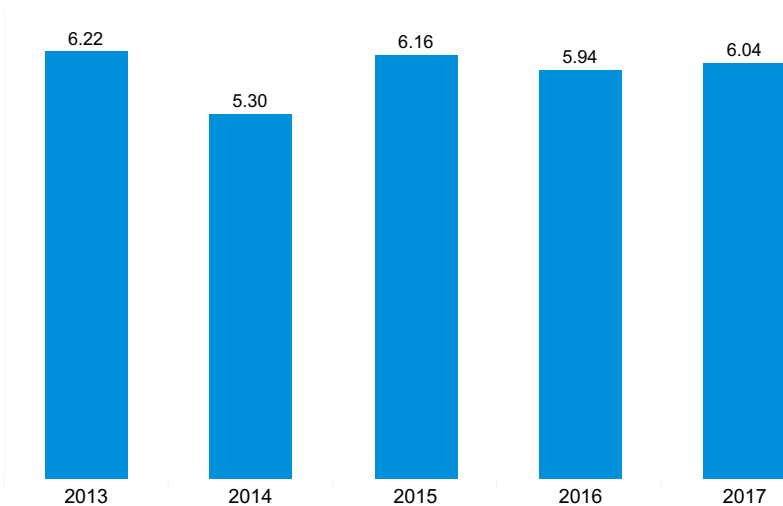
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



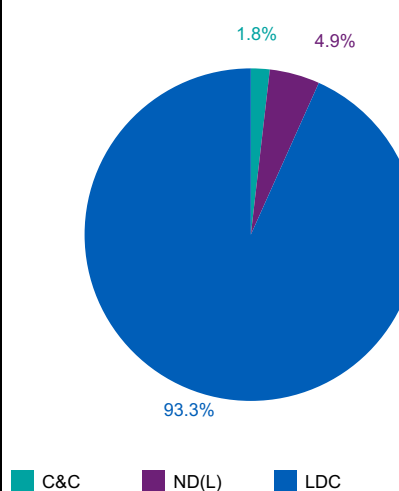
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL DENMARK CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	5.95	5.05	5.98	5.78	5.74	-1%
Outflows	-0.10	-0.10	-0.17	-0.10	-0.10	2%
Legal domestic consumption (LDC)	5.85	4.95	5.81	5.67	5.63	-1%
Non-domestic legal (ND(L))	0.14	0.16	0.20	0.16	0.30	79%
Counterfeit and contraband (C&C)	0.23	0.10	0.15	0.11	0.11	3%
Total non-domestic	0.37	0.25	0.35	0.27	0.40	51%
Total consumption	6.22	5.30	6.16	5.94	6.04	2%

- Inflows into Denmark increased by 51%, driven by increases in flows from Sweden, possibly as prices between the countries changed throughout the year
- Increases in outflows reflected travel from Denmark to the surrounding countries of Sweden and Germany
- Romania was one of the largest inflow countries with a price difference of €2.05 between the two countries

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO DENMARK

	2013	2014	2015	2016	2017
Duty Free Labelled	0.16	0.10	0.13	0.10	0.11
Sweden	0.04	0.03	0.05	0.04	0.07
Romania	0.01	0.00	0.01	0.00	0.03
Poland	0.04	0.02	0.02	0.02	0.02
Counterfeit	0.01	0.02	0.03	0.00	0.02
Other	0.11	0.09	0.11	0.10	0.16
Total Inflows	0.37	0.25	0.35	0.27	0.40

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM DENMARK

	2013	2014	2015	2016	2017
Netherlands	0.02	0.03	0.01	0.02	0.02
Sweden	0.01	0.01	0.06	0.01	0.02
Germany	0.01	0.01	0.02	0.01	0.01
UK	0.02	0.01	0.01	0.01	0.01
Norway	0.00	0.01	0.02	0.02	0.01
Other	0.03	0.02	0.04	0.03	0.03
Total Outflows	0.10	0.10	0.17	0.10	0.10

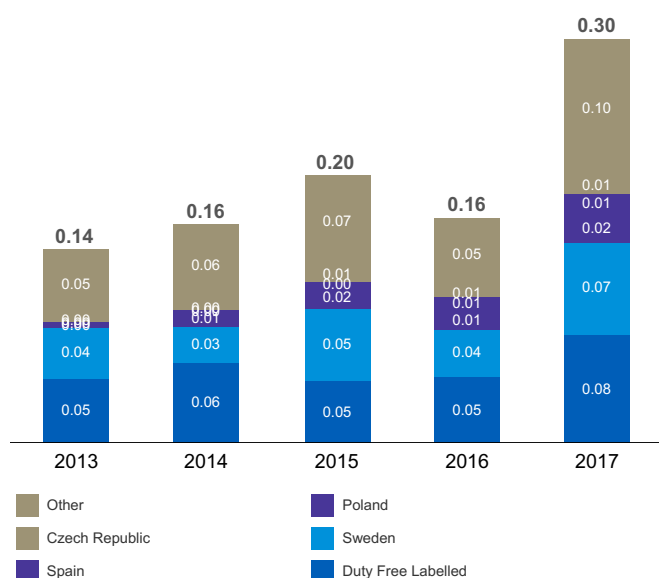
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ND(L) and C&C flows

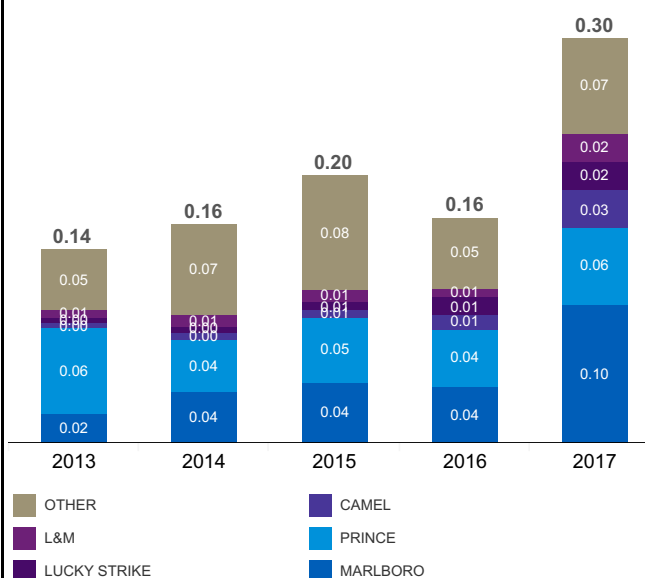
- Non-domestic legal remained high from Sweden, reflecting the large number of travellers between these countries
- C&C increased as additional inflows were identified as counterfeit alongside the increase in inflows from Romania



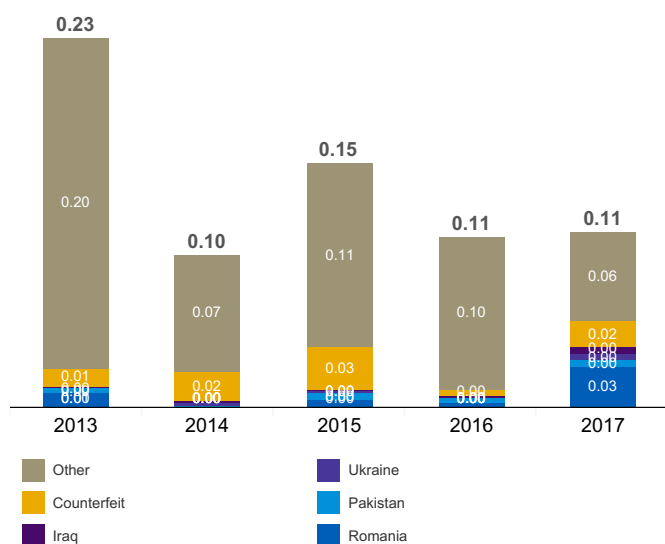
ND(L) by country of origin, 2013-2017 (bn cigarettes)



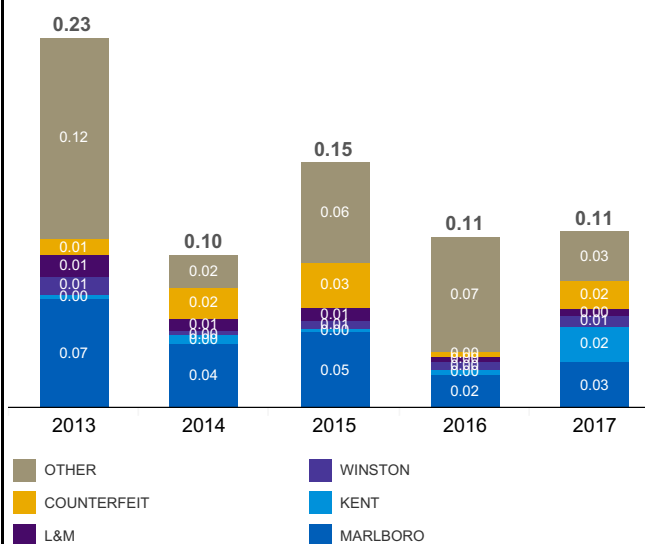
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)

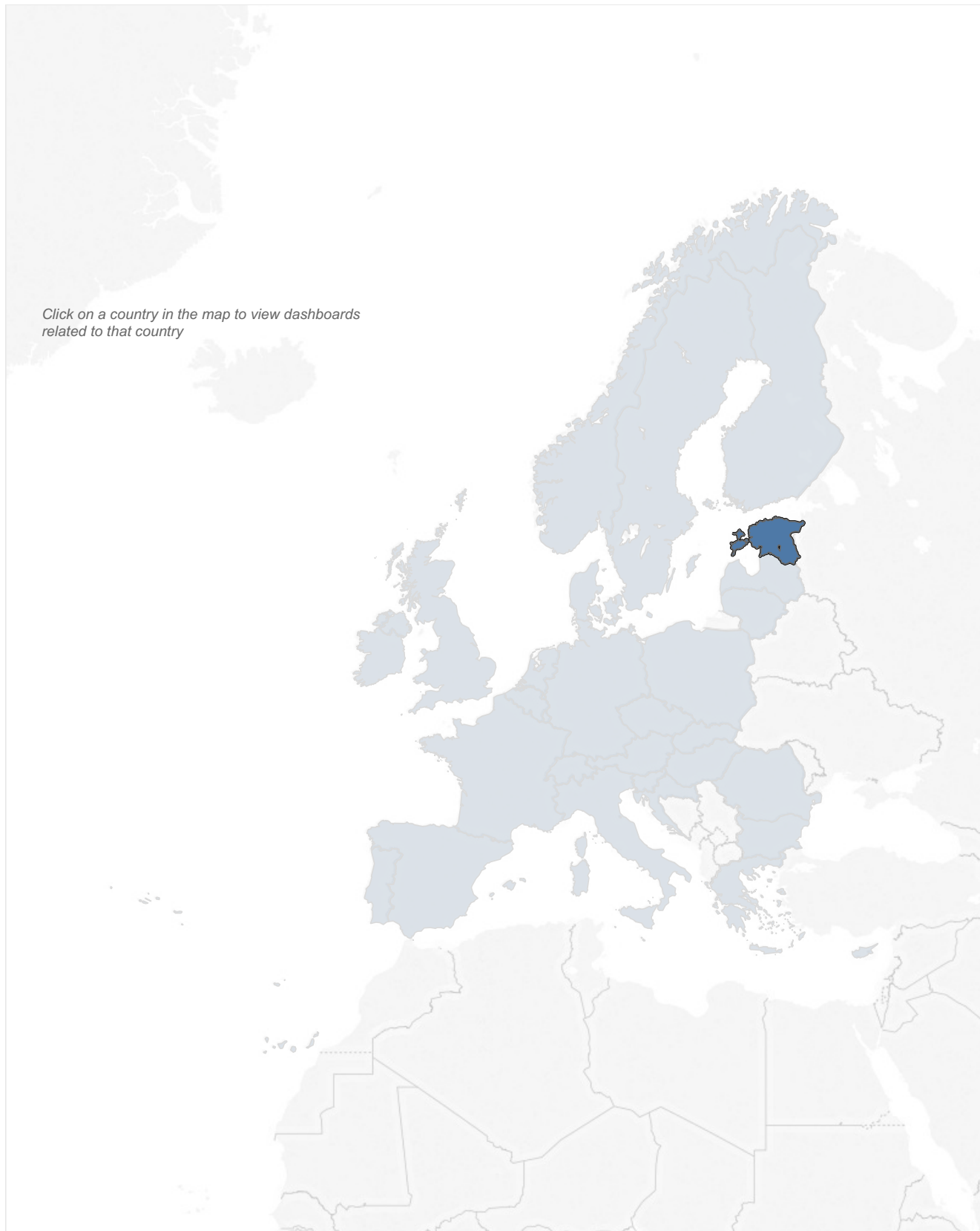


C&C by brand, 2013-2017 (bn cigarettes)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook

Countries included in this study



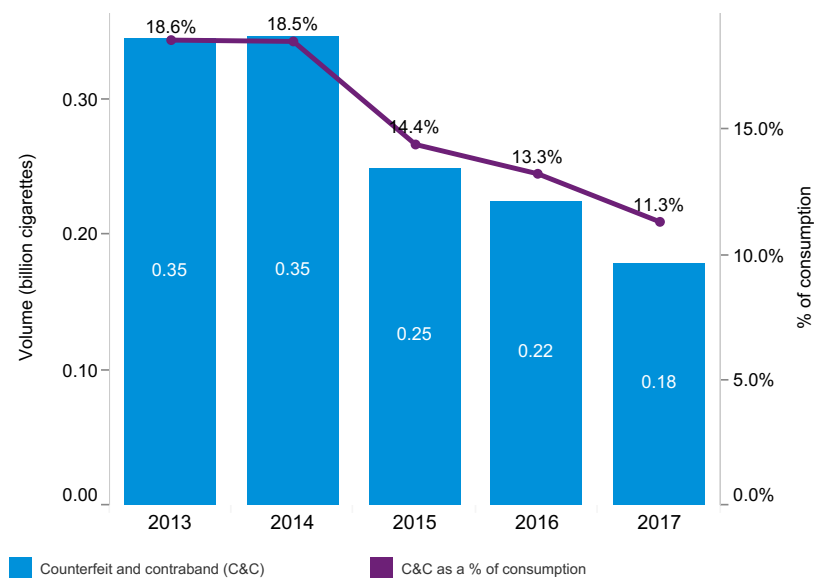
Estonia



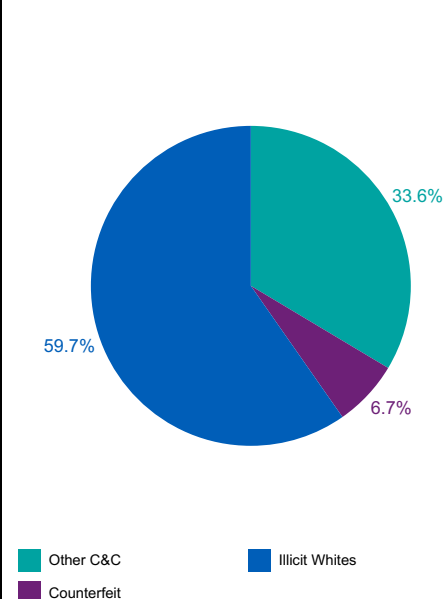
Overview

- C&C volumes continued to decline in 2017, falling by 21%, alongside continued law enforcement activities on the border
- The overall volume of C&C halved over the past five years, from 0.35bn in 2013 to 0.18bn in 2017
- 77% of C&C flows originated from Russia and Belarus. Bayron and NZ were identified as the largest non-domestic flows brands from Russia and Belarus respectively

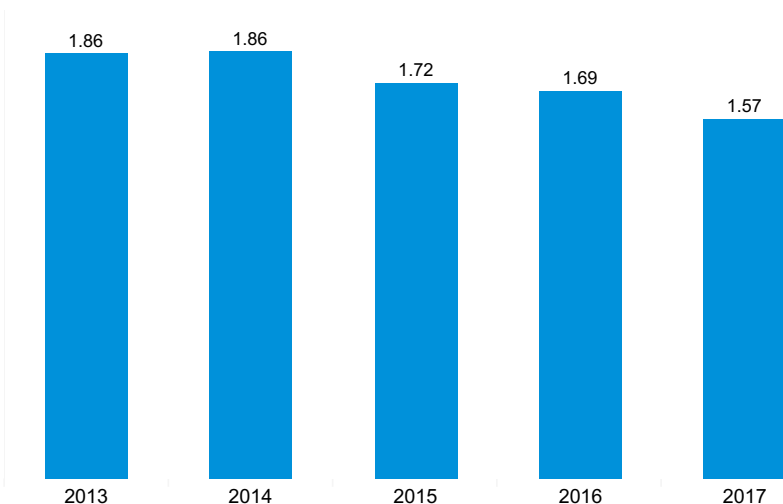
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



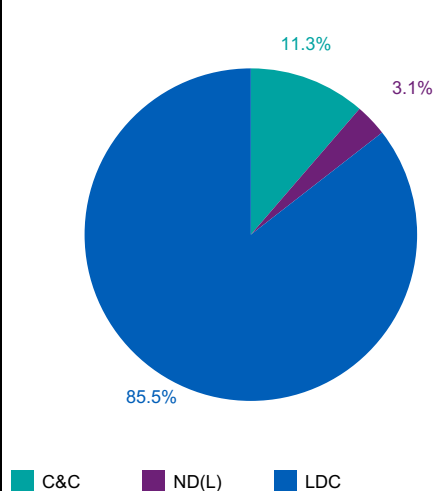
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



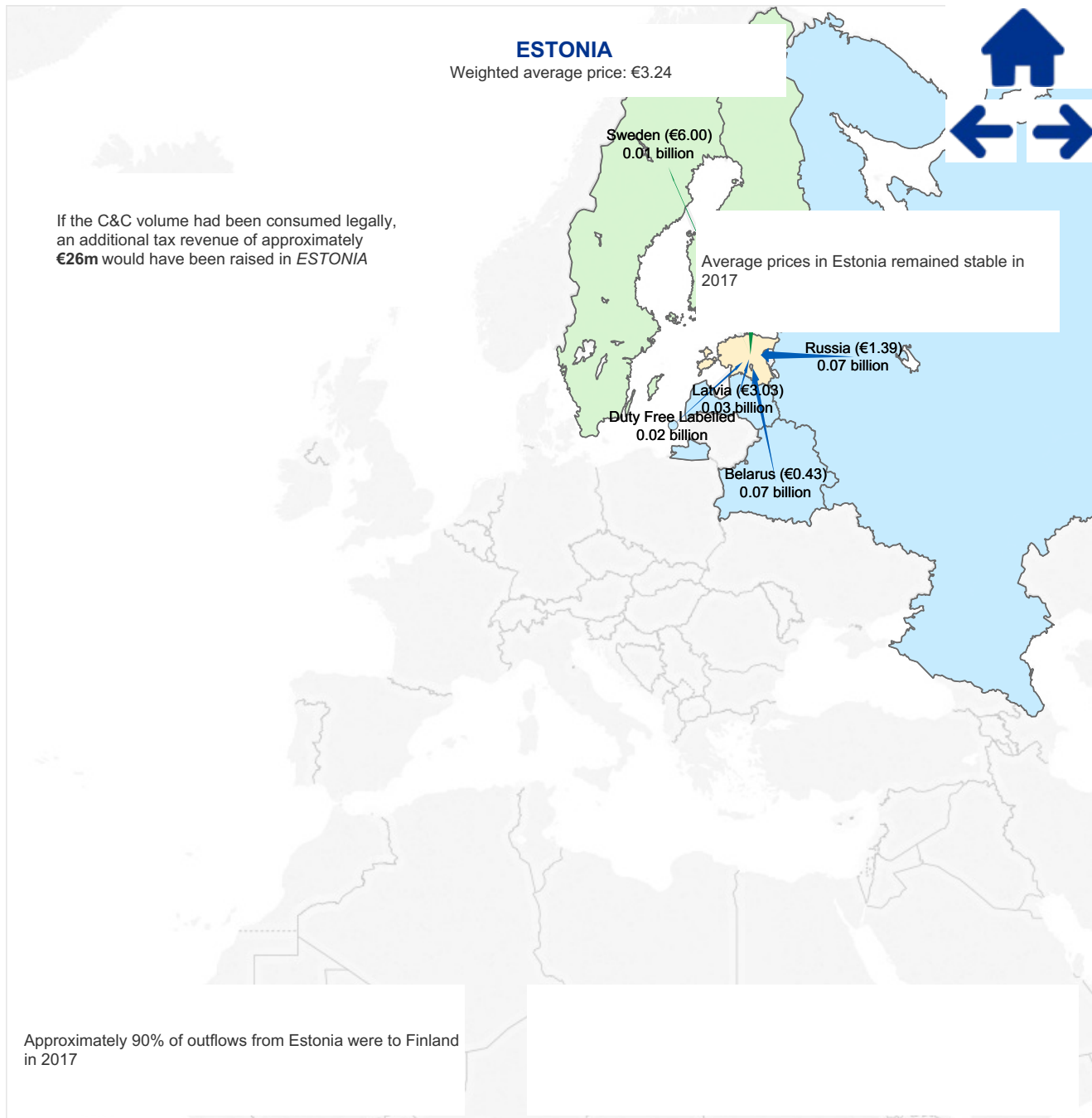
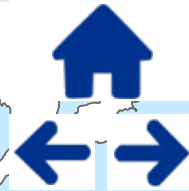
Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL ESTONIA CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	1.777	1.827	1.796	1.743	1.648	-5%
Outflows	-0.336	-0.331	-0.351	-0.309	-0.305	-1%
Legal domestic consumption (LDC)	1.441	1.505	1.445	1.434	1.344	-6%
Non-domestic legal (ND(L))	0.066	0.022	0.030	0.036	0.049	35%
Counterfeit and contraband (C&C)	0.345	0.346	0.249	0.225	0.178	-21%
Total non-domestic	0.415	0.367	0.279	0.261	0.227	-13%
Total consumption	1.856	1.863	1.724	1.695	1.571	-7%

- Most inflows to Estonia originated from countries outside of the EU, where cigarettes were on average almost €2 less expensive
- When travelling by land from these countries, travellers are restricted to 40 cigarettes per trip. Therefore, a low proportion of the non-domestic flow can be attributed to legal purchases
- Outflows, mainly to neighbouring Finland, remained stable, as did passenger numbers
- Legal domestic sales continued to decline alongside falling smoking prevalence in Estonia

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO ESTONIA

	2013	2014	2015	2016	2017
Belarus	0.111	0.121	0.090	0.097	0.071
Russia	0.254	0.169	0.119	0.073	0.071
Latvia	0.004	0.007	0.003	0.015	0.029
Duty Free Labelled	0.027	0.028	0.024	0.032	0.020
Counterfeit	0.010	0.031	0.024	0.016	0.012
Other	0.009	0.011	0.018	0.027	0.024
Total Inflows	0.415	0.367	0.279	0.261	0.227

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM ESTONIA

	2013	2014	2015	2016	2017
Finland	0.317	0.294	0.291	0.266	0.271
Sweden	0.001	0.006	0.005	0.005	0.008
Norway	0.000	0.006	0.008	0.005	0.004
Latvia	0.001	0.001	0.001	0.002	0.004
Italy	0.002	0.002	0.000	0.002	0.003
Other	0.015	0.022	0.046	0.030	0.015
Total Outflows	0.336	0.331	0.351	0.309	0.305

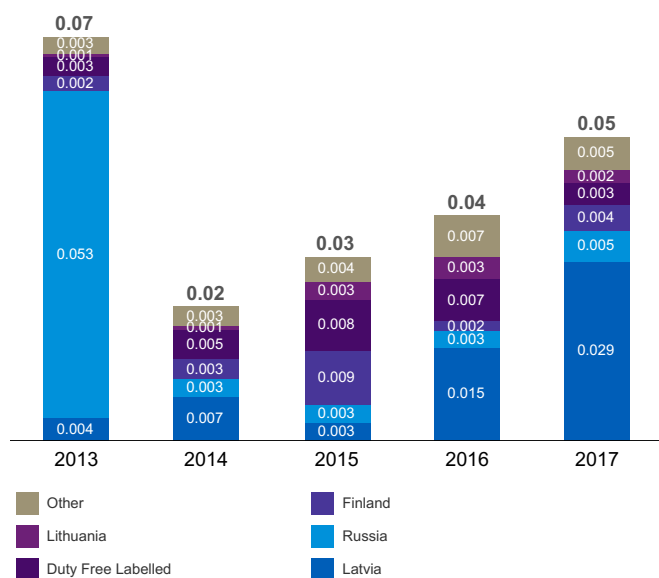
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ND(L) and C&C flows

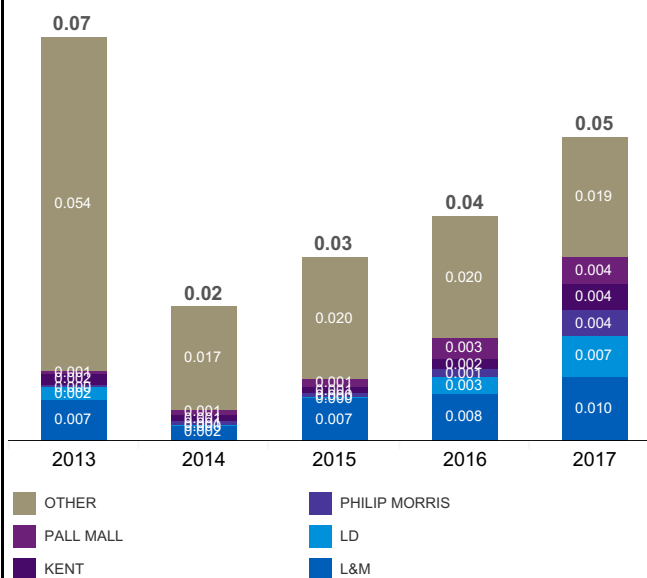


- Belarus continued to be the largest source of C&C followed by Russia
- NZ, a Belarussian brand remained the largest C&C brand, with 19% of total C&C volume
- Estonia was an increasingly popular destination for EU tourists, and the increase in tourist numbers accounted for the increase in non-domestic legal volume

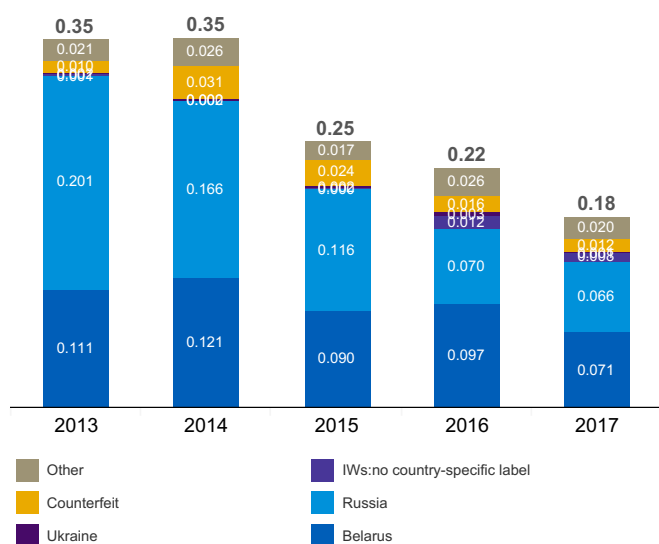
ND(L) by country of origin, 2013-2017 (bn cigarettes)



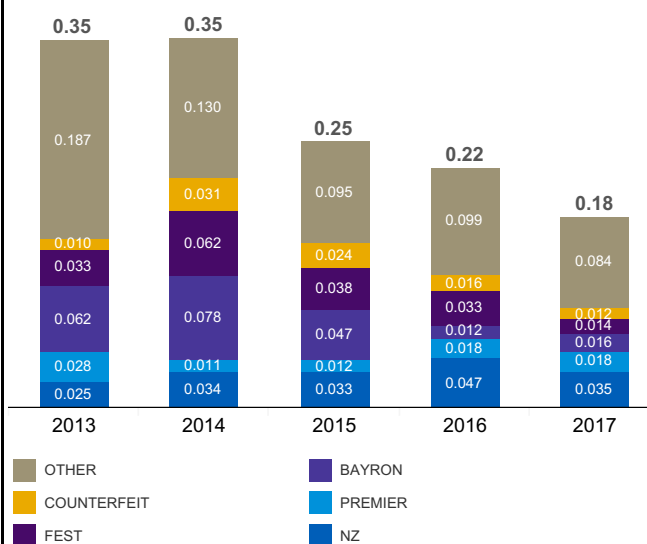
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



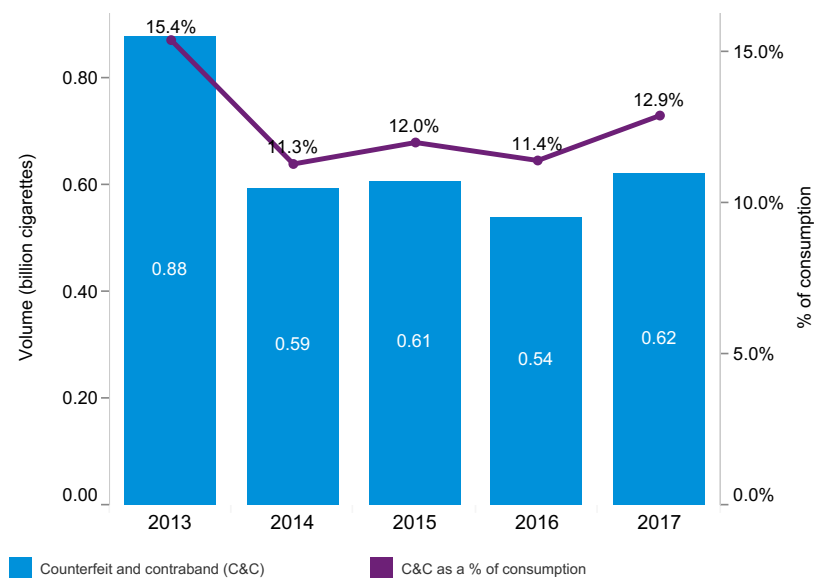
Finland



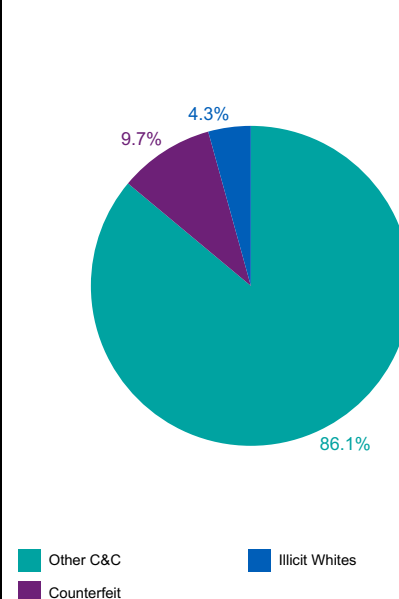
Overview

- C&C as a proportion of total consumption increased from 11.4% to 12.9% in 2017
- The largest C&C source countries were Russia and Estonia, together accounting for 46% of total C&C volume
- The counterfeit proportion increased from 5.9% in 2016 to 9.7% in 2017

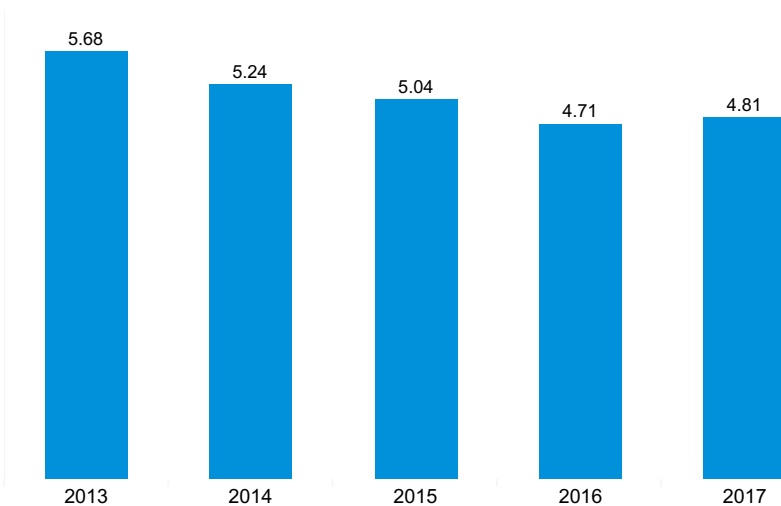
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



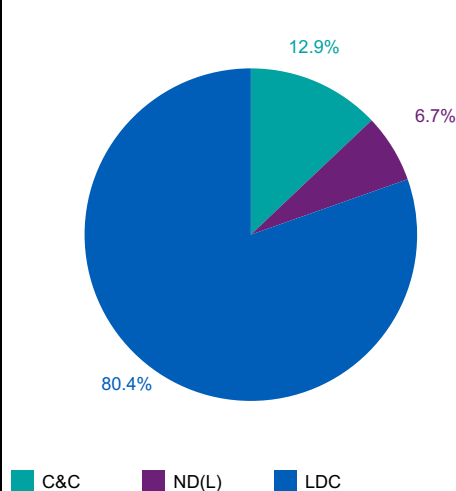
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



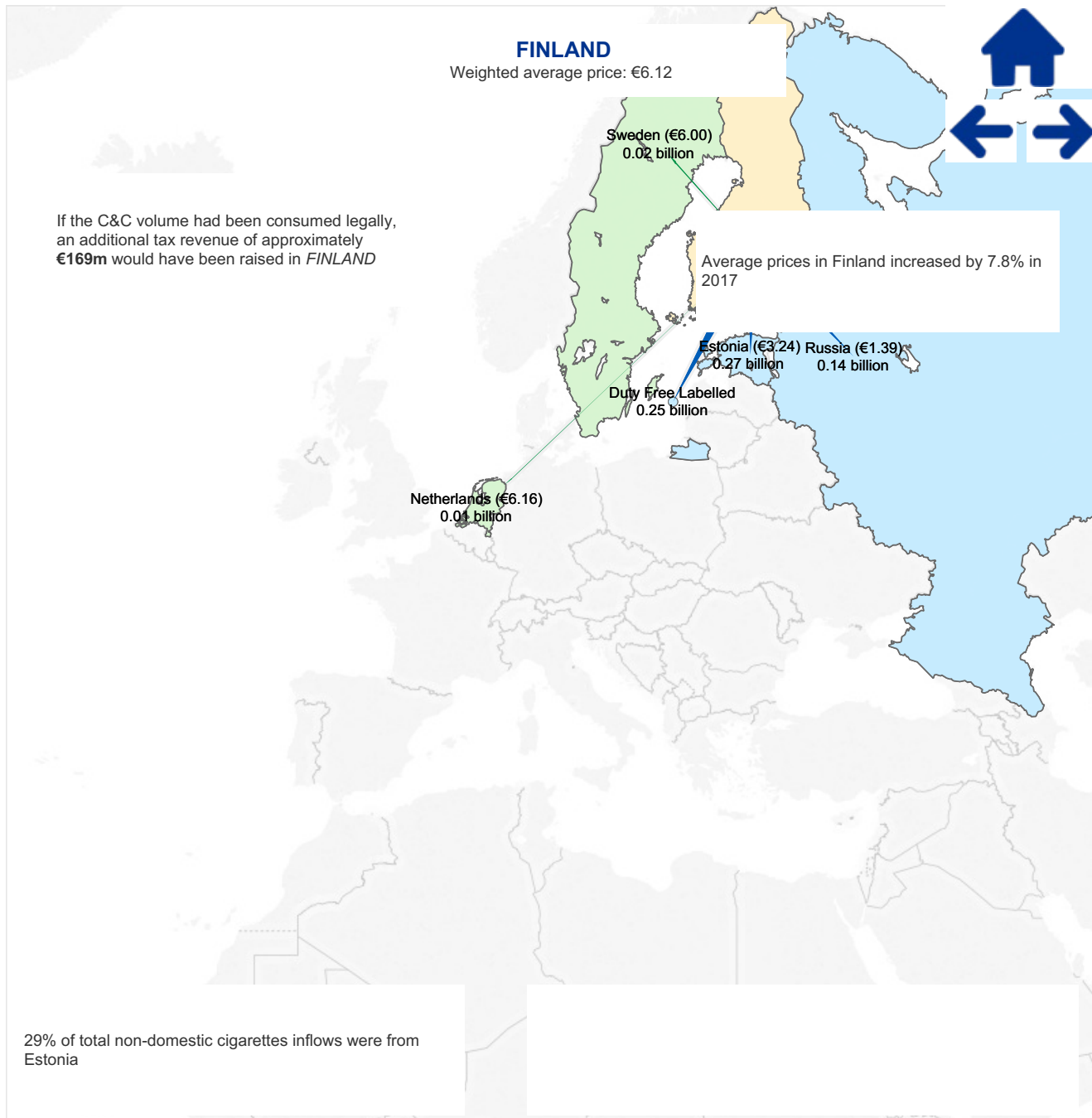
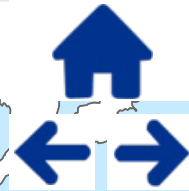
Breakdown of total consumption - 2017 (%)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
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Country label format:
Country Name (Average price per pack)
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Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL FINLAND CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	4.49	4.43	4.20	4.00	3.91	-2%
Outflows	-0.02	-0.05	-0.07	-0.04	-0.05	15%
Legal domestic consumption (LDC)	4.47	4.39	4.12	3.96	3.87	-2%
Non-domestic legal (ND(L))	0.33	0.26	0.31	0.21	0.32	54%
Counterfeit and contraband (C&C)	0.88	0.59	0.61	0.54	0.62	15%
Total non-domestic	1.20	0.86	0.92	0.75	0.94	26%
Total consumption	5.68	5.24	5.04	4.71	4.81	2%

- The majority of inflows were from Duty Free labelled and Estonian cigarettes
- Large numbers of Finns travel to Estonia for cheaper goods
- It is possible to purchase Duty Free cigarettes on the Åland Islands off the coast of Finland. Ferries travelling between Finland and Sweden may stop at these islands where passengers can purchase Duty Free

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO FINLAND

	2013	2014	2015	2016	2017
Estonia	0.32	0.29	0.29	0.27	0.27
Duty Free Labelled	0.24	0.21	0.25	0.22	0.25
Russia	0.43	0.24	0.19	0.11	0.14
Counterfeit	0.00	0.01	0.01	0.03	0.06
Sweden	0.01	0.00	0.02	0.01	0.02
Other	0.20	0.09	0.15	0.11	0.20
Total Inflows	1.20	0.86	0.92	0.75	0.94

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM FINLAND

	2013	2014	2015	2016	2017
Sweden	0.00	0.00	0.01	0.02	0.02
Netherlands	0.00	0.01	0.01	0.00	0.01
Estonia	0.00	0.00	0.01	0.00	0.00
France	0.00	0.01	0.00	0.00	0.00
Denmark	0.00	0.00	0.00	0.00	0.00
Other	0.01	0.02	0.04	0.02	0.01
Total Outflows	0.02	0.05	0.07	0.04	0.05

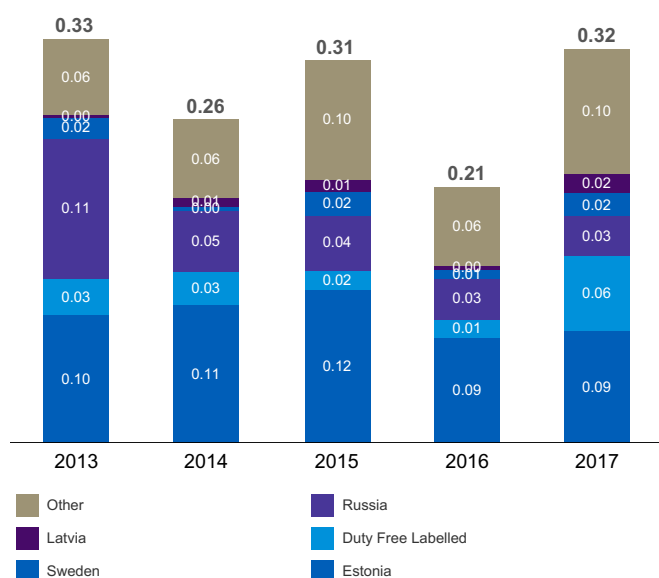
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ND(L) and C&C flows

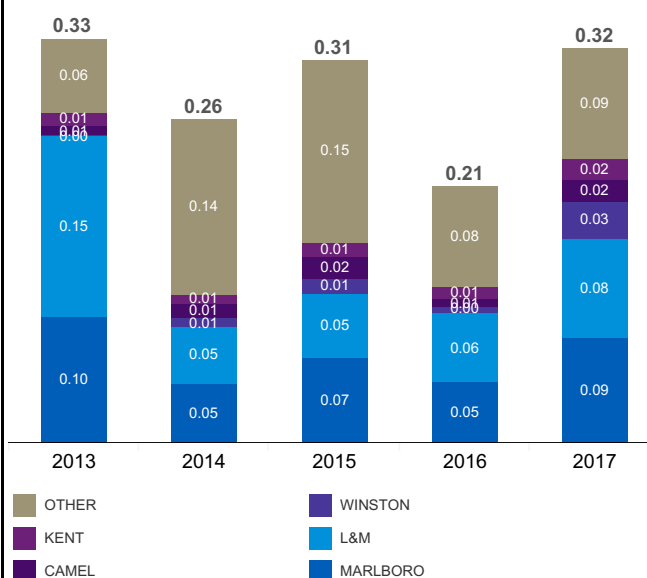


- The growth in non-domestic legal consumption reflected growth in traveller numbers between Estonia and Finland, which increased by 5.9%
- The price gap with Sweden was €0.12 in 2017
- Total C&C rose by 15%; the majority of C&C came from Estonia and Russia where the overall number of trips made did not support the volume of cigarettes identified

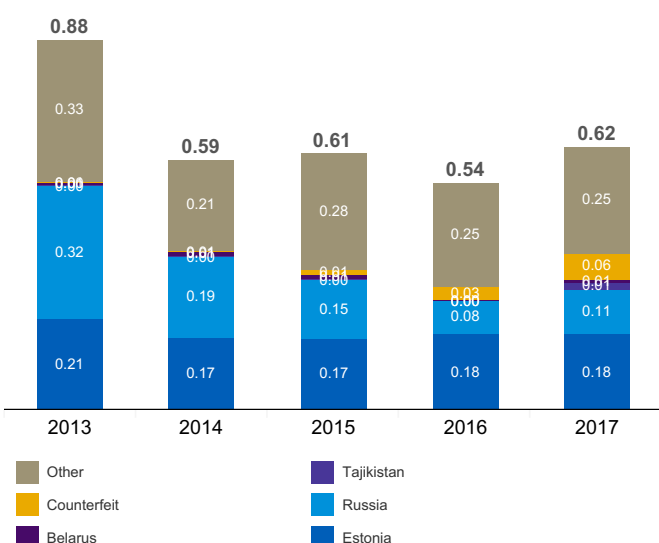
ND(L) by country of origin, 2013-2017 (bn cigarettes)



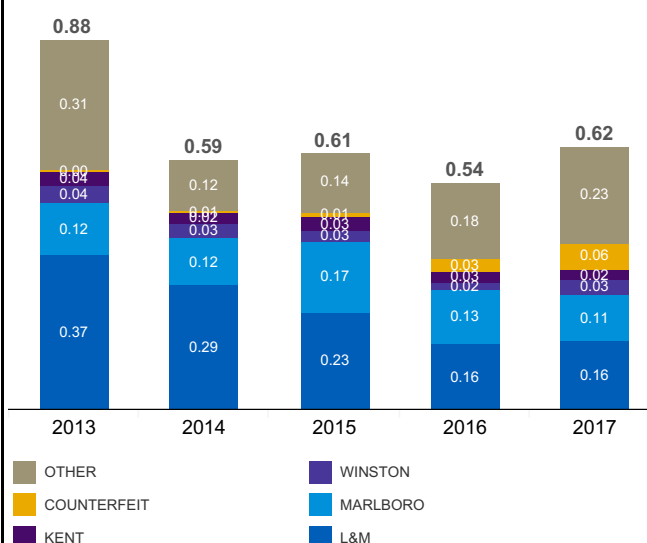
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)

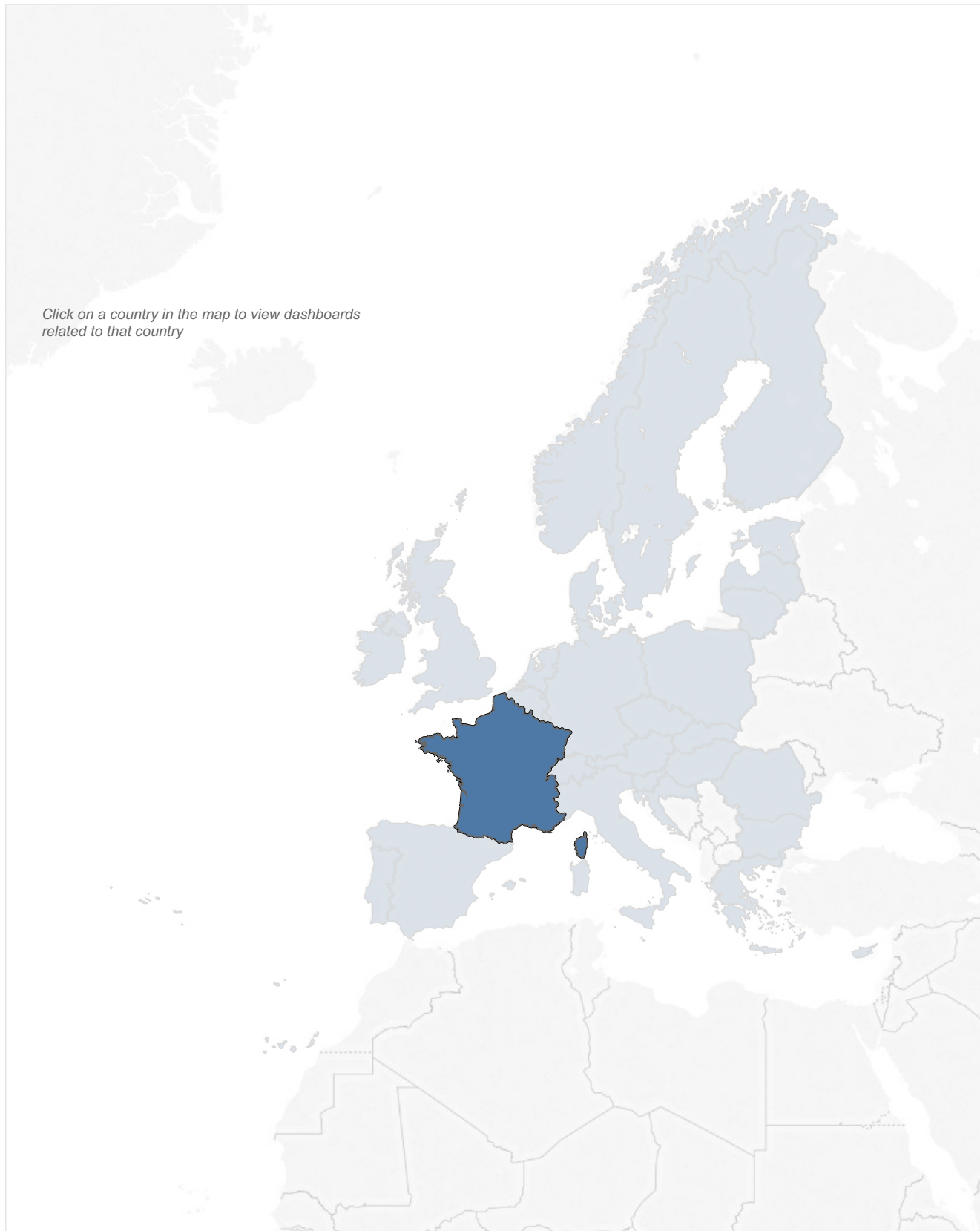


C&C by brand, 2013-2017 (bn cigarettes)



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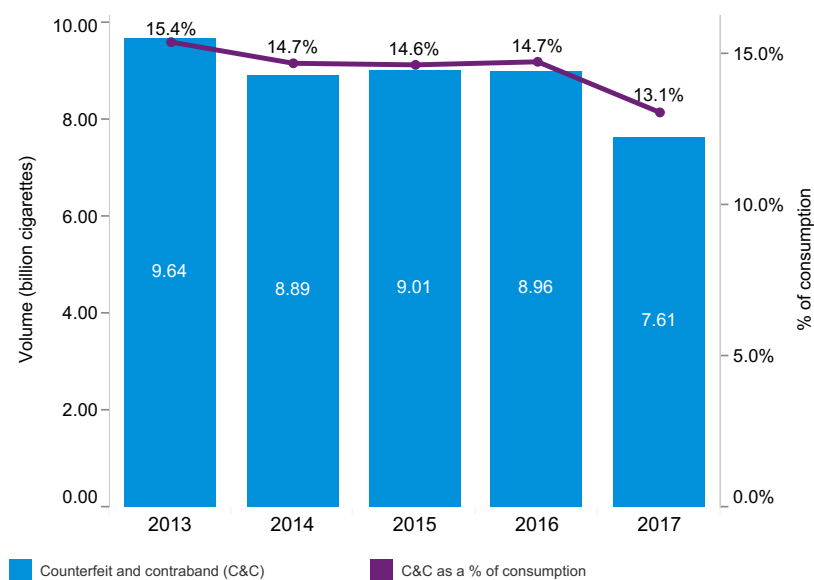
France



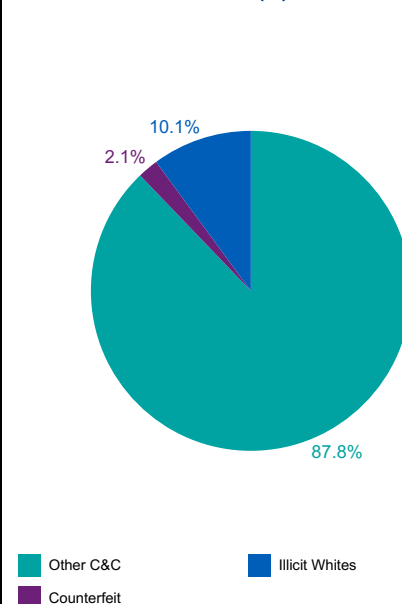
Overview

- C&C volumes in France declined by 15% but remained the highest in the study at 7.61 billion
- Despite a decline, Algeria remained the largest source of C&C inflows
- Total consumption decline was reflected mainly in the C&C fall, alongside a 1% fall in legal domestic sales and 11% decline in non-domestic legal. The overall decline was partially offset by increased inflows from Luxembourg and Spain

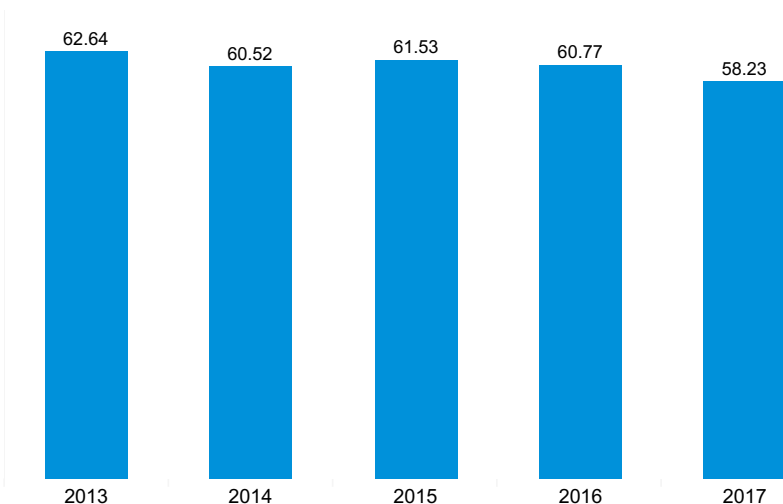
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



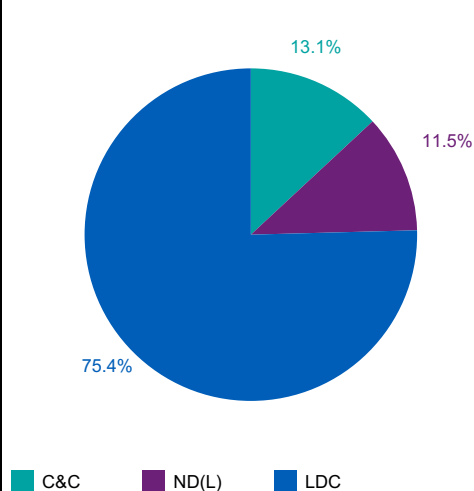
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows

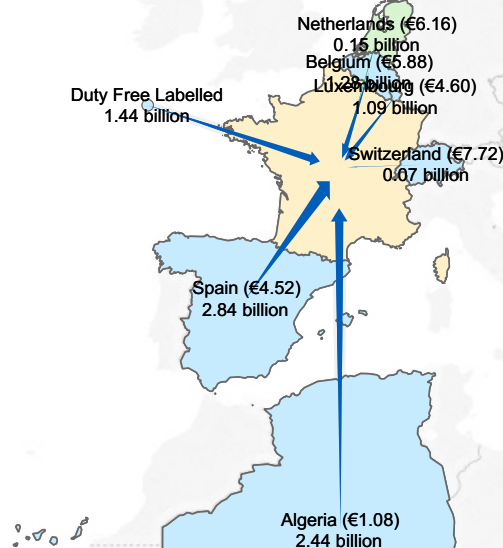


FRANCE

Weighted average price: €6.81

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€2,093m** would have been raised in **FRANCE**

Average prices of manufactured cigarettes in France increased by 0.9% from €6.75 to €6.81



Legal domestic sales remained broadly stable alongside legislation introduced in January, requiring all cigarettes sold in France to have plain packaging

Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

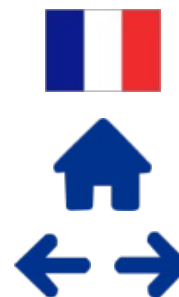
Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); Legifrance, January 2018

Manufactured cigarette consumption, inflows and outflows



TOTAL FRANCE CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	47.53	45.08	45.46	44.93	44.37	-1%
Outflows	-0.66	-0.47	-0.60	-0.61	-0.45	-27%
Legal domestic consumption (LDC)	46.87	44.61	44.85	44.31	43.92	-1%
Non-domestic legal (ND(L))	6.13	7.02	7.67	7.50	6.71	-11%
Counterfeit and contraband (C&C)	9.64	8.89	9.01	8.96	7.61	-15%
Total non-domestic	15.77	15.91	16.68	16.46	14.31	-13%
Total consumption	62.64	60.52	61.53	60.77	58.23	-4%

- The main driver of consumption decline was non-domestic inflows with key declines from Algeria, Duty Free and Illicit Whites with no country specific labelling
- The drop in total consumption could also be explained by consumers switching to both other tobacco products and non-combustible products, such as vaping and Heat-not-Burn
- 36% of inflows to France came from Spain, Belgium and Luxembourg, as consumers continued to cross the borders to purchase lower priced products

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO FRANCE

	2013	2014	2015	2016	2017
Spain	1.84	2.70	2.70	2.63	2.84
Algeria	2.00	2.68	3.22	3.19	2.44
Duty Free Labelled	2.59	2.68	1.99	2.01	1.44
Belgium	2.00	2.08	1.69	1.47	1.28
Luxembourg	1.08	1.11	0.93	0.84	1.09
Other	6.26	4.65	6.15	6.32	5.22
Total Inflows	15.77	15.91	16.68	16.46	14.31

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM FRANCE

	2013	2014	2015	2016	2017
Netherlands	0.14	0.13	0.10	0.08	0.15
Switzerland	0.00	0.04	0.09	0.28	0.07
Germany	0.02	0.04	0.06	0.03	0.06
Ireland	0.01	0.02	0.01	0.03	0.04
UK	0.02	0.03	0.04	0.03	0.03
Other	0.47	0.21	0.30	0.15	0.11
Total Outflows	0.66	0.47	0.60	0.61	0.45

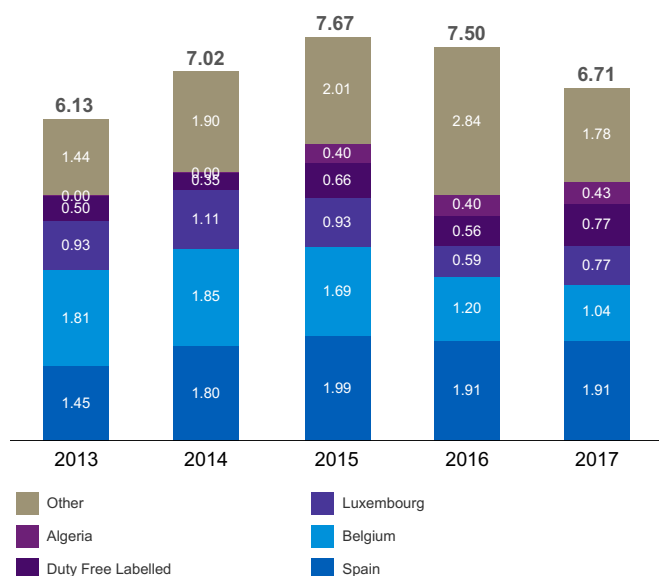
Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Illicit Whites with no country-specific labelling comprise Illicit Whites labelled as "Duty Free" and "Unspecified". Data from previous years reflects the same definition; please refer to the methodology (b) Duty Free and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and Unspecified labelling except the 2013 values (c) Norway was included for the first time in 2014
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

ND(L) and C&C flows

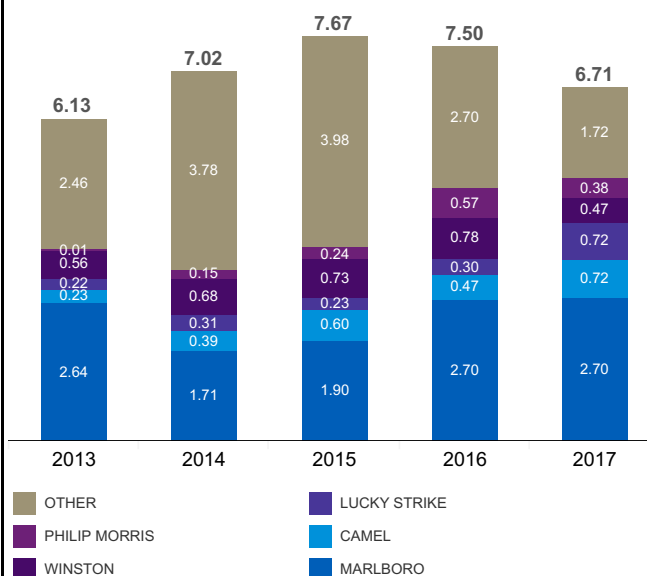
- As prices in France were higher than in many surrounding countries, non-domestic legal volumes were high in comparison to other EU countries, especially in regions close to the border
- Inflows from Algeria, whilst declining by 23%, accounted for 26% of total C&C; travel volumes and the limit of 200 cigarettes per trip did not support the volumes identified in France, resulting in 82% of the Algerian flow reported as C&C
- The €10 pack price policy led by the French Government, with continuous excise increases scheduled from 2018 to 2020, is likely to result in higher price gaps with bordering countries. Initial EPS results in 2018 have indicated a reversal of the 2017 trend of reduced C&C



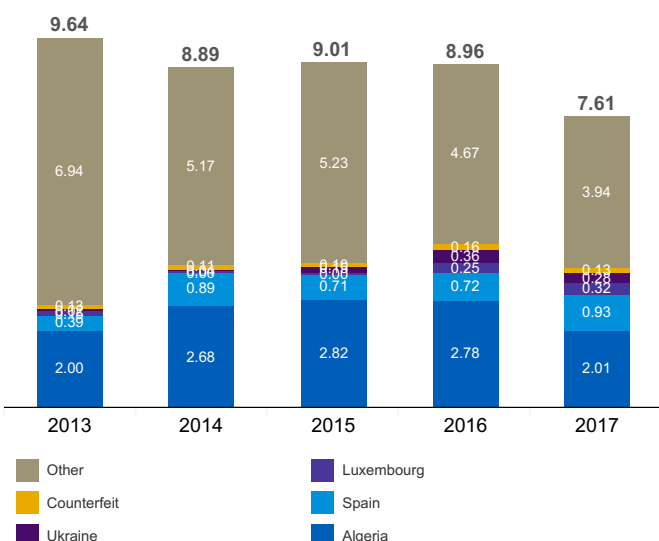
ND(L) by country of origin, 2013-2017 (bn cigarettes)



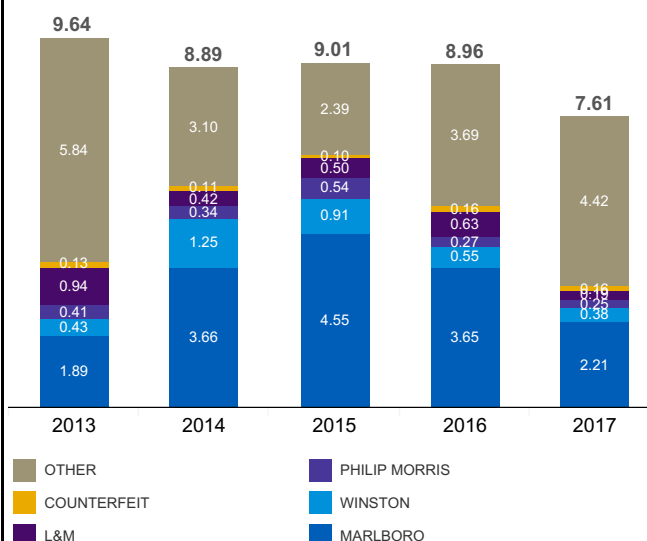
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)

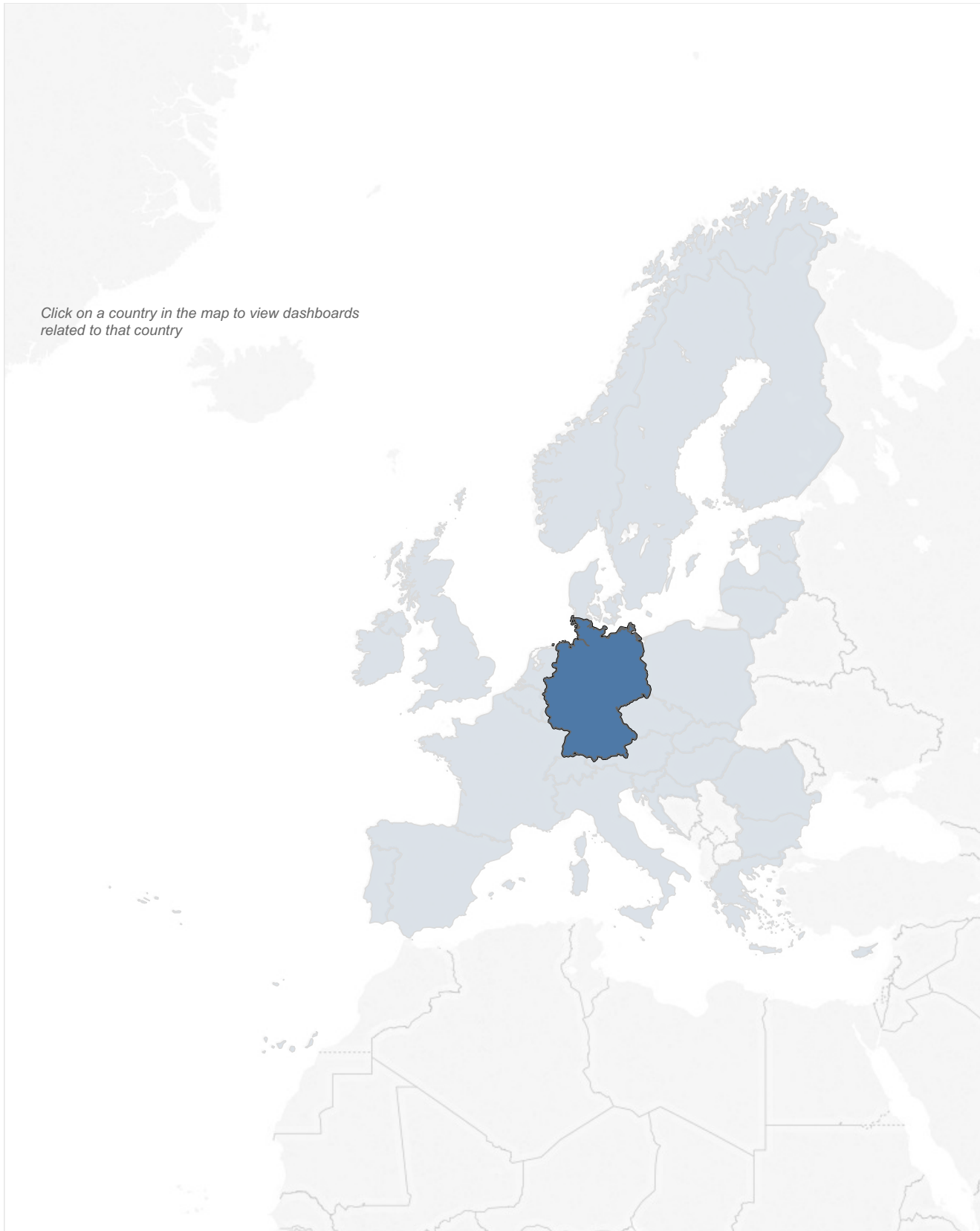


C&C by brand, 2013-2017 (bn cigarettes)



Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) KPMG calculates the split between C&C and Non-Domestic Legal by calculating the Non-Domestic Legal volumes and subtracting from the total inflows (b) In years 2014-2017 the Non-Domestic Legal analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) Additional information about the process for identifying Illicit Whites is provided in the appendix
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook

Countries included in this study



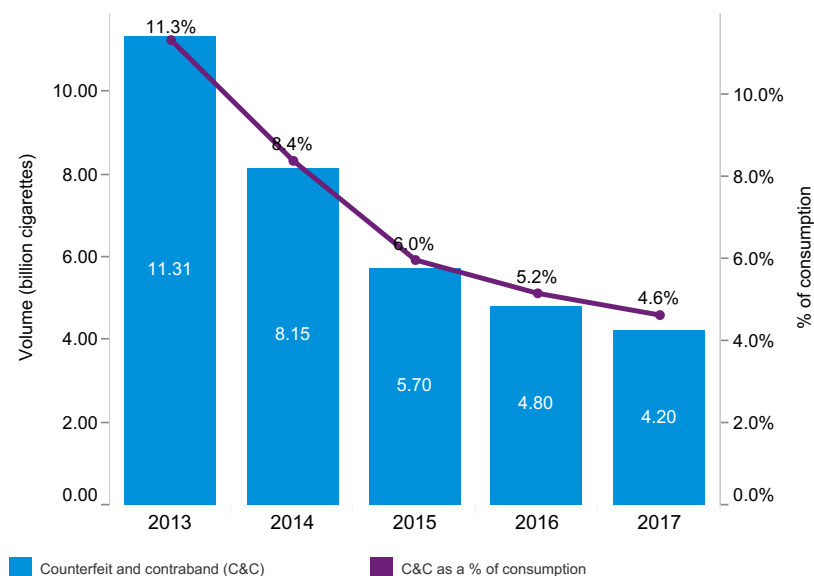
Germany



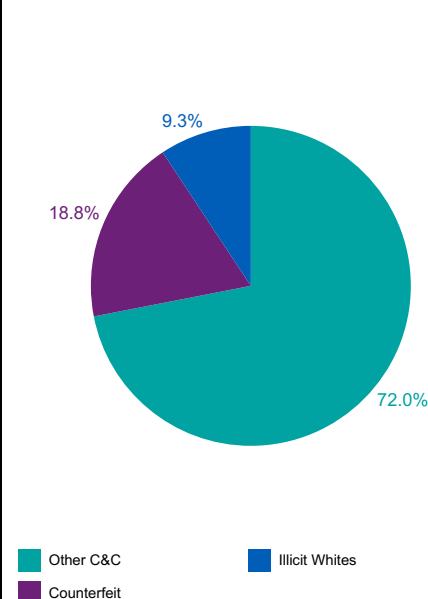
Overview

- C&C consumption continued to fall, decreasing to 4.6% of overall consumption in 2017
- The decline in both non-domestic and C&C volume occurred against a backdrop of steadily declining total consumption and a strong macro-economic environment
- The Czech Republic and Poland accounted for 62% of non-domestic volume and 36.6% of C&C volume; both of which fell in 2017 while traveller numbers between these two countries and Germany continued to increase

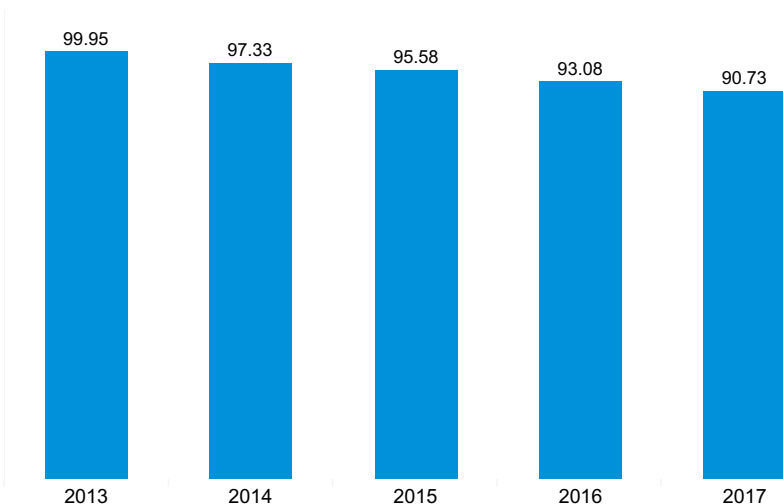
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



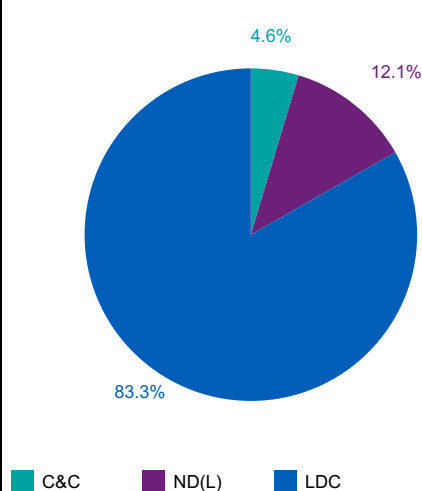
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers; Unemployment Rates, Euromonitor, 2017; GDP Statistics, World Bank, 2017

Key inflows and outflows

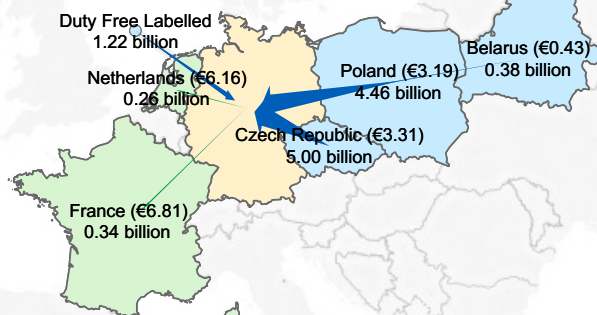


GERMANY

Weighted average price: €5.64

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€845m** would have been raised in *GERMANY*

Average prices in Germany increased by 3.1% in 2017



62% of total non-domestic cigarettes inflows were from Czech Republic and Poland

Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); Federal Statistics Office, 2017

Manufactured cigarette consumption, inflows and outflows



TOTAL GERMANY CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	79.63	80.35	80.04	78.13	76.74	-2%
Outflows	-1.42	-1.49	-1.42	-1.27	-1.20	-6%
Legal domestic consumption (LDC)	78.21	78.86	78.62	76.86	75.54	-2%
Non-domestic legal (ND(L))	10.43	10.32	11.26	11.42	11.00	-4%
Counterfeit and contraband (C&C)	11.31	8.15	5.70	4.80	4.20	-13%
Total non-domestic	21.73	18.47	16.96	16.22	15.19	-6%
Total consumption	99.95	97.33	95.58	93.08	90.73	-3%

- 62% of inflows in to Germany came from neighbouring Czech Republic and Poland, which both have substantially lower prices
- The price gap with the Czech Republic narrowed, alongside a 8.2% decrease in non-domestic volume from Czech Republic
- Non-domestic flows from Poland also decreased against a backdrop of increased regulation in Poland and a positive macro-economic environment
- Outflows to the Netherlands increased by 0.06 billion cigarettes in 2017, aligned with an increase in travel flows; Dutch travellers made 6% more trips to Germany in 2017 than in 2016

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO GERMANY

	2013	2014	2015	2016	2017
Czech Republic	6.14	5.45	5.24	5.45	5.00
Poland	7.54	5.67	4.79	4.57	4.46
Duty Free Labelled	1.92	1.84	1.81	1.71	1.22
Counterfeit	0.66	0.59	0.58	0.47	0.79
Belarus	0.96	0.98	0.72	0.48	0.38
Other	4.51	3.95	3.82	3.55	3.35
Total Inflows	21.73	18.47	16.96	16.22	15.19

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM GERMANY

	2013	2014	2015	2016	2017
France	0.62	0.47	0.45	0.45	0.34
Netherlands	0.33	0.36	0.27	0.20	0.26
Switzerland	0.00	0.17	0.26	0.22	0.21
Ireland	0.03	0.02	0.03	0.04	0.06
Austria	0.05	0.14	0.06	0.06	0.05
Other	0.38	0.34	0.36	0.30	0.28
Total Outflows	1.42	1.49	1.42	1.27	1.20

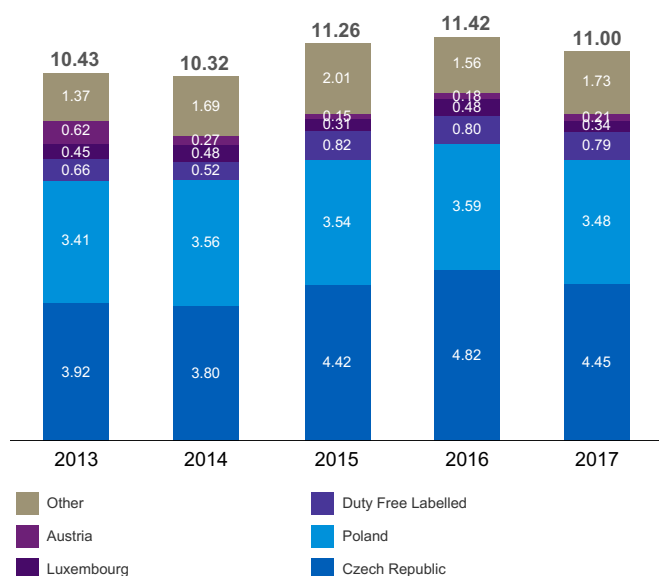
Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Illicit Whites with no country-specific labelling comprise Illicit Whites labelled as "Duty Free" and "Unspecified". Data from previous years reflects the same definition; please refer to the methodology (b) Duty Free and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and Unspecified labelling except the 2013 values (c) Norway was included for the first time in 2014
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ND(L) and C&C flows

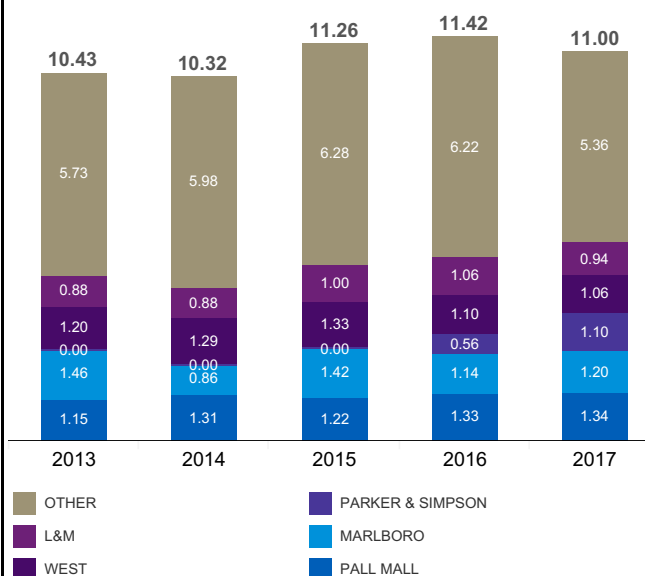


- Poland made up the largest volume of C&C flows, contributing 23% of C&C volume
- Total C&C declined alongside strong macro-economic conditions and increased travel between Germany and Poland, meaning more of the flow was accounted for by traveller numbers and was attributed to flows of non-domestic legal
- Much of the non-domestic legal volume came from brands that are sold on the Polish-German and Czech-German border such as West (9.6% of non-domestic legal) and Parker and Simpson (10.0% of non-domestic legal)
- Germany experienced an increase in counterfeit volumes of 0.32 billion cigarettes, coming to a total of 0.79 billion, the largest volume identified in Germany during the study

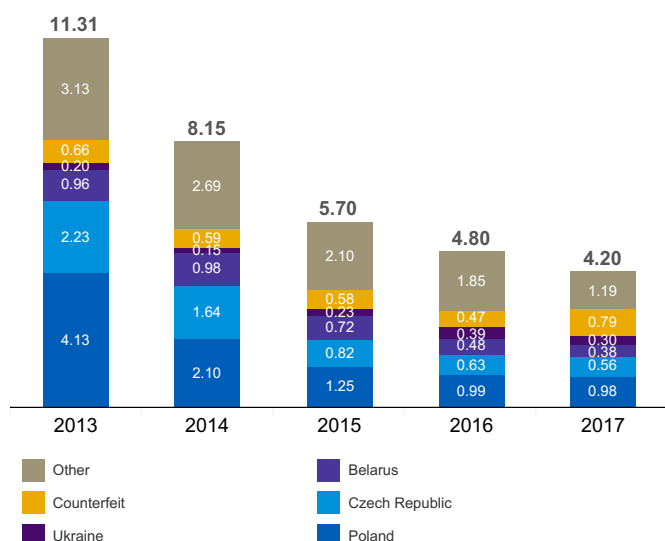
ND(L) by country of origin, 2013-2017 (bn cigarettes)



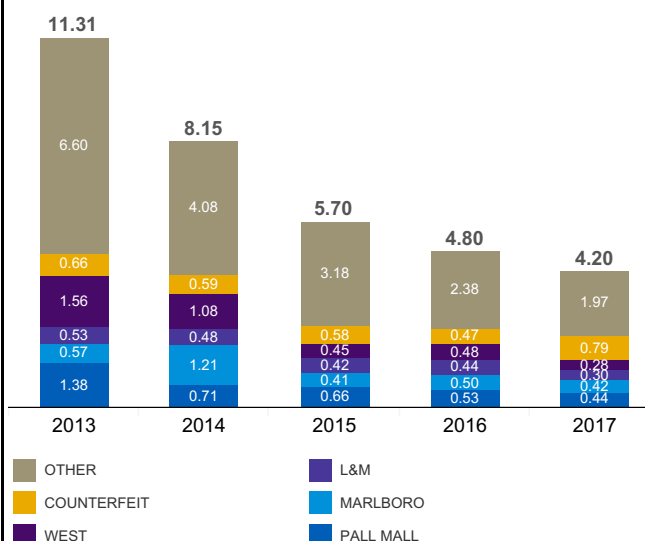
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) KPMG calculates the split between C&C and Non-Domestic Legal by calculating the Non-Domestic Legal volumes and subtracting from the total inflows (b) In years 2014-2017 the Non-Domestic Legal analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) Additional information about the process for identifying Illicit Whites is provided in the appendix
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook

Countries included in this study



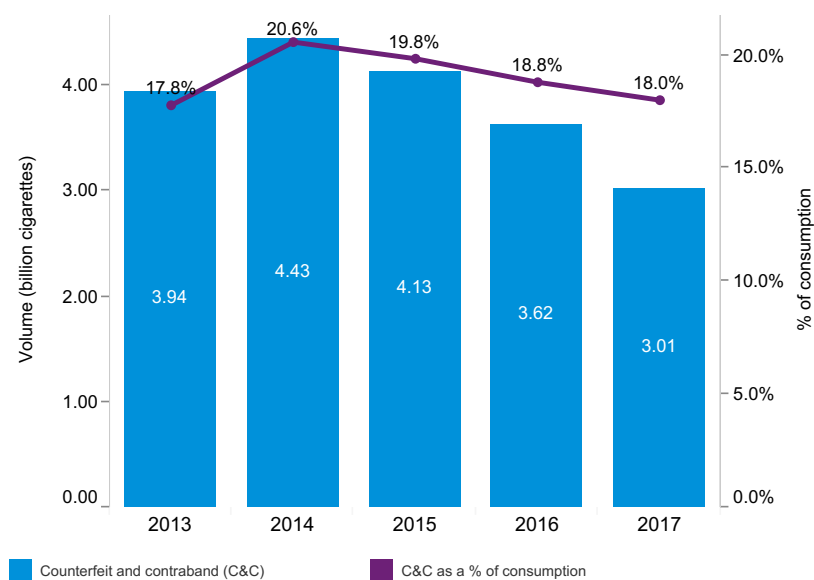
Greece



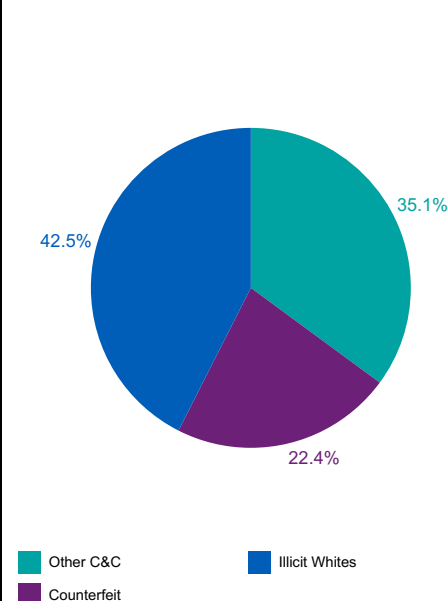
Overview

- The total volume of C&C in Greece declined by 0.61 billion cigarettes, as customs increased efforts to target illicit tobacco smuggling
- Greece continued to have one of the highest rates of C&C consumption in the EU, at 18% of total consumption
- Nearly one quarter of C&C flows were counterfeit and these together with Illicit Whites, made up 65% of C&C volume in 2017

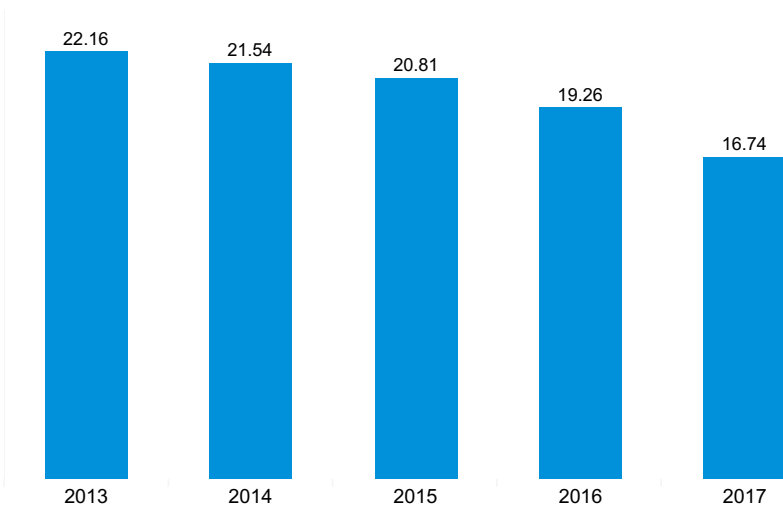
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



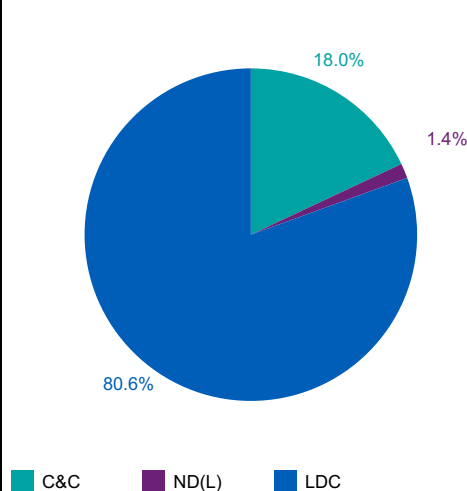
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



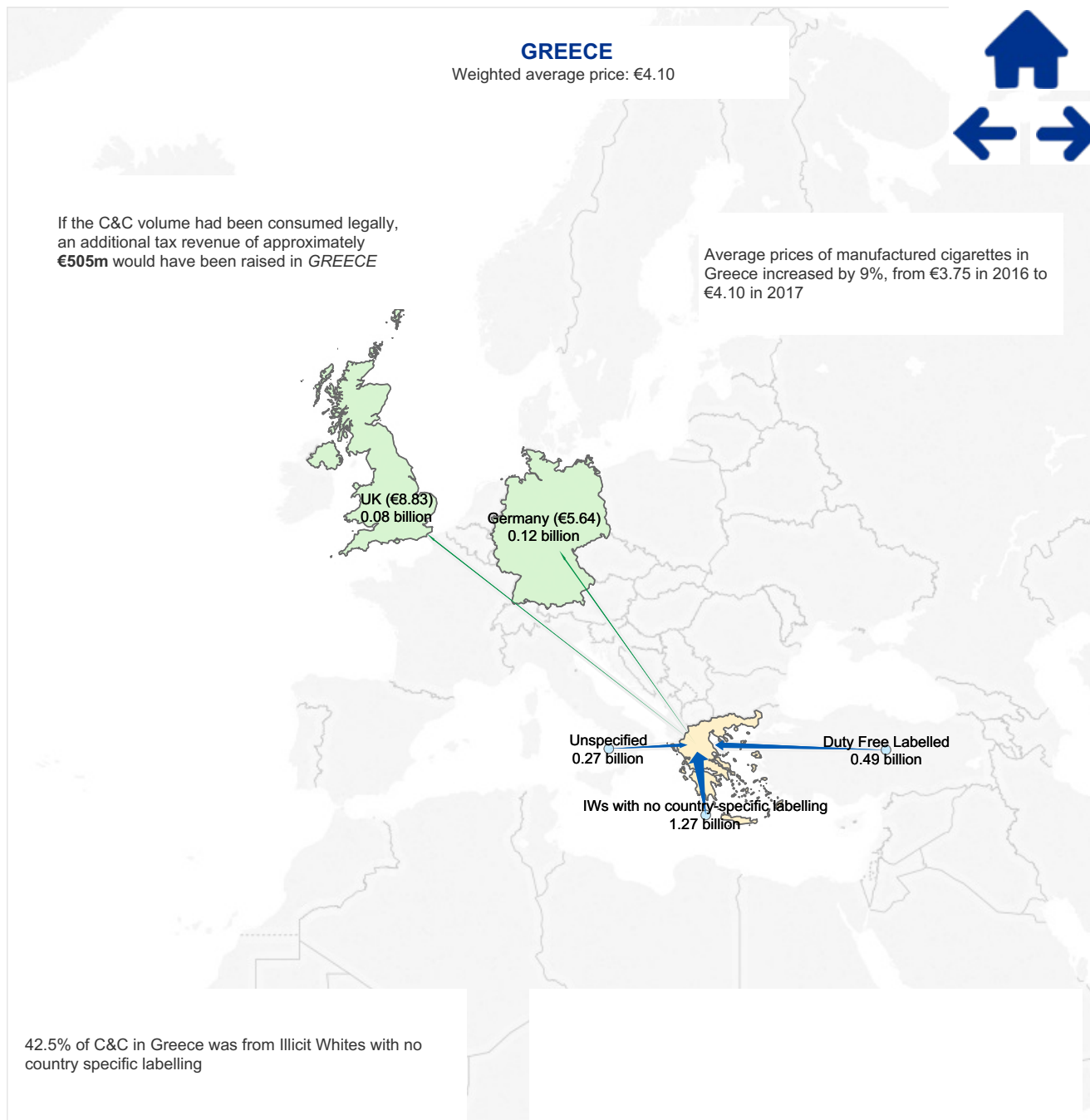
Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers; 'Police smash illegal tobacco racket', Ekathimerini, July 2017

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Notes: Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Analysis of tax revenues lost due to illicit bulk tobacco has not been included in this report

Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); Government Gazette, January 2018

Manufactured cigarette consumption, inflows and outflows



TOTAL GREECE CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	18.46	17.27	16.79	15.77	13.82	-12%
Outflows	-0.47	-0.33	-0.34	-0.38	-0.34	-12%
Legal domestic consumption (LDC)	17.99	16.93	16.45	15.39	13.48	-12%
Non-domestic legal (ND(L))	0.23	0.18	0.24	0.25	0.24	-3%
Counterfeit and contraband (C&C)	3.94	4.43	4.13	3.62	3.01	-17%
Total non-domestic	4.65	4.61	4.36	3.87	3.25	-16%
Total consumption	22.16	21.54	20.81	19.26	16.74	-13%

- The main source of non-domestic inflows to Greece were from an unspecified country of origin
- Legal domestic sales continued to fall, and saw a 12% reduction in 2017, the decline driven by ongoing economic and political uncertainty, with continued capital controls impacting consumer spending
- Outflows to Germany and the UK were reflected by the large traveller numbers from these countries, with tourist numbers increasing by 10% from Germany and 8% from the UK

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO GREECE

	2013	2014	2015	2016	2017
IWs with no country-specific labelling	2.72	2.65	2.38	1.54	1.27
Counterfeit	0.02	0.03	0.41	0.56	0.67
Duty Free Labelled	0.53	0.59	0.42	0.37	0.49
FYROM	0.02	0.05	0.07	0.17	0.32
Unspecified	0.64	1.00	0.74	0.87	0.27
Other	0.71	0.29	0.35	0.35	0.24
Total Inflows	4.65	4.61	4.36	3.87	3.25

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM GREECE

	2013	2014	2015	2016	2017
Germany	0.15	0.11	0.12	0.11	0.12
UK	0.11	0.08	0.05	0.08	0.08
France	0.12	0.02	0.03	0.09	0.04
Netherlands	0.03	0.02	0.02	0.01	0.01
Italy	0.02	0.03	0.02	0.01	0.01
Other	0.04	0.08	0.11	0.08	0.07
Total Outflows	0.47	0.33	0.34	0.38	0.34

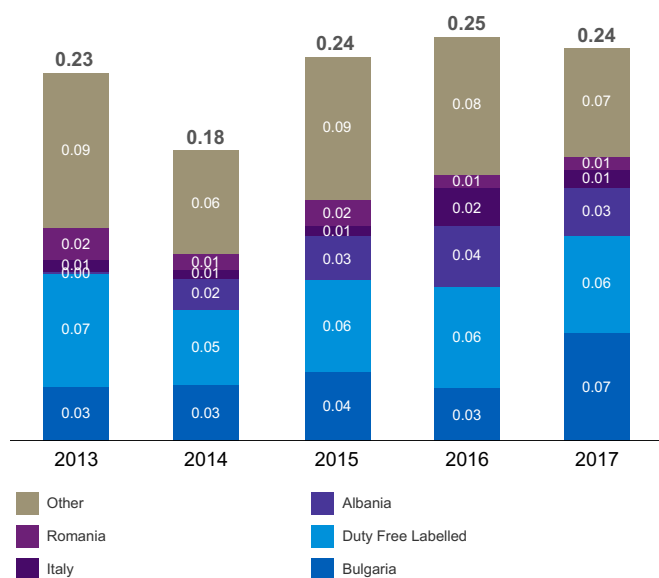
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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

ND(L) and C&C flows

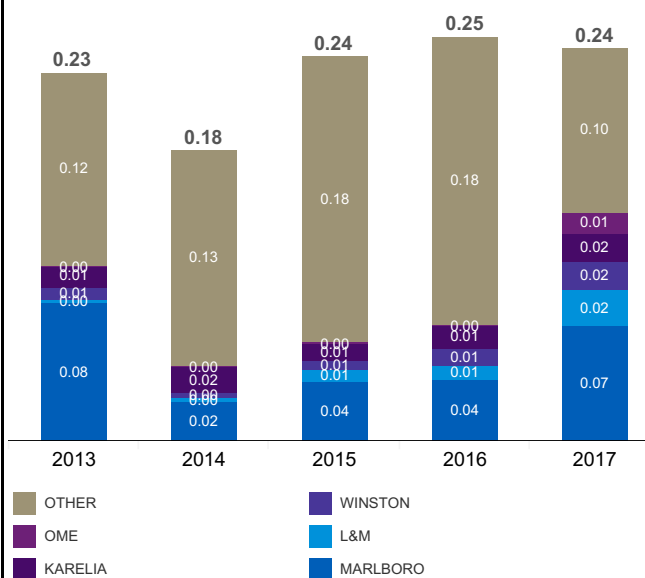


- Whilst overall C&C declined by 17% there was an increase in counterfeit volumes of 0.11 billion sticks, alongside an increase in flows from FYROM of 0.15 billion
- The flows of three prominent Illicit White brands, Royal, Gold Mount and Racquel all fell in 2017; by 0.09 billion, 0.19 billion and 0.08 billion respectively
- The main C&C brands identified are thought to originate from trademark owners that operate in Free Trade Zones

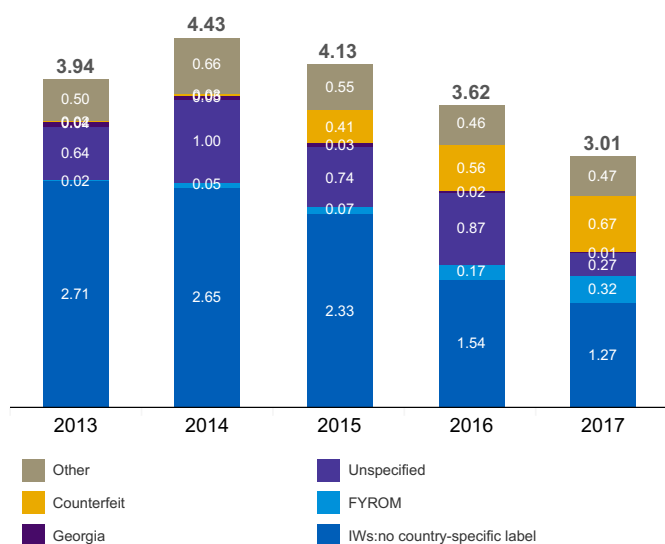
ND(L) by country of origin, 2013-2017 (bn cigarettes)



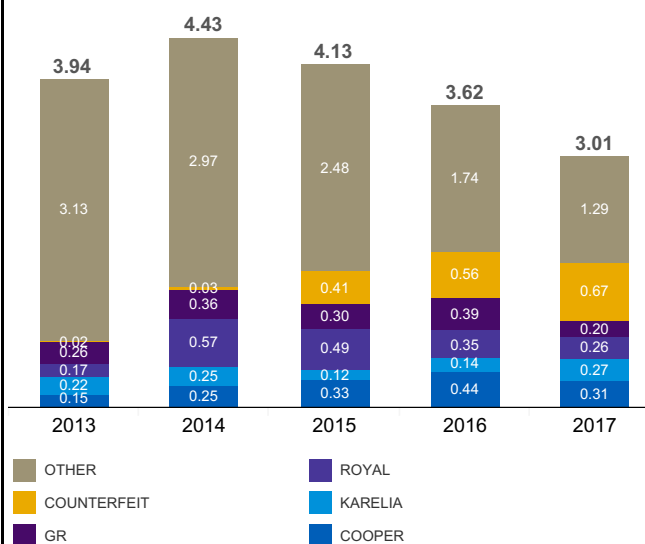
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) KPMG calculates the split between C&C and Non-Domestic Legal by calculating the Non-Domestic Legal volumes and subtracting from the total inflows (b) In years 2014-2017 the Non-Domestic Legal analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) Additional information about the process for identifying Illicit Whites is provided in the appendix
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; KPMG analysis of manufacturers operating in Free Trade Zones

Countries included in this study



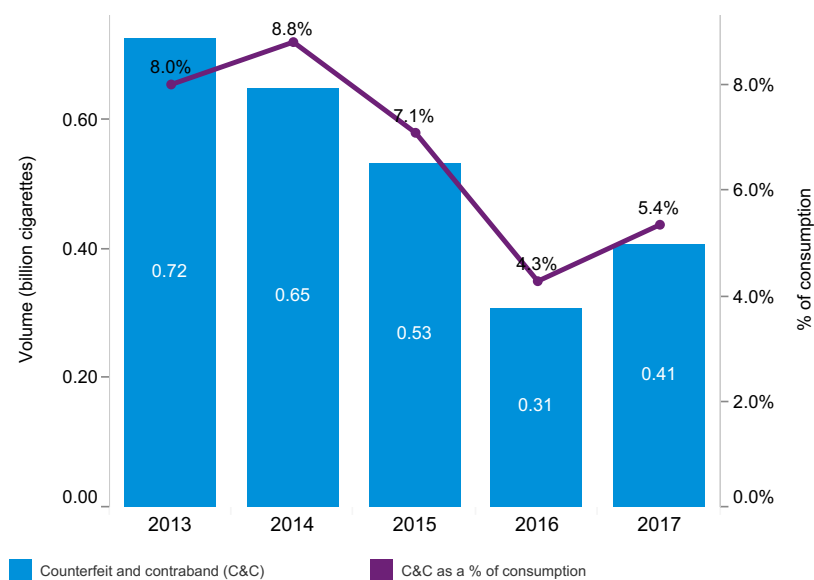
Hungary



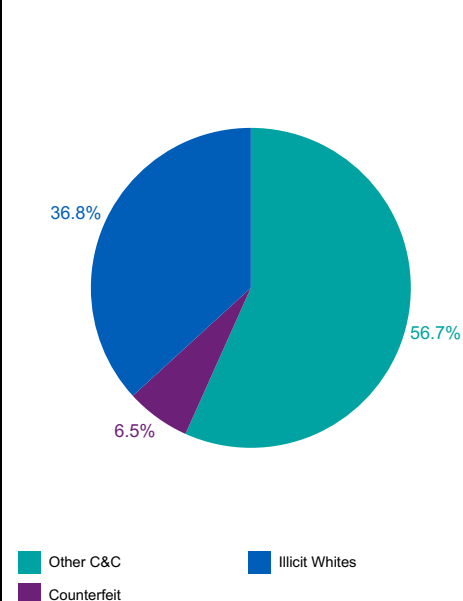
Overview

- C&C consumption grew in Hungary, alongside increased travel flows from Ukraine
- C&C flows from Ukraine grew from 0.13 billion to 0.20 billion cigarettes
- Total consumption increased as positive macroeconomic indicators such as growing disposable income possibly led to consumers switching from fine cut tobacco to manufactured cigarettes

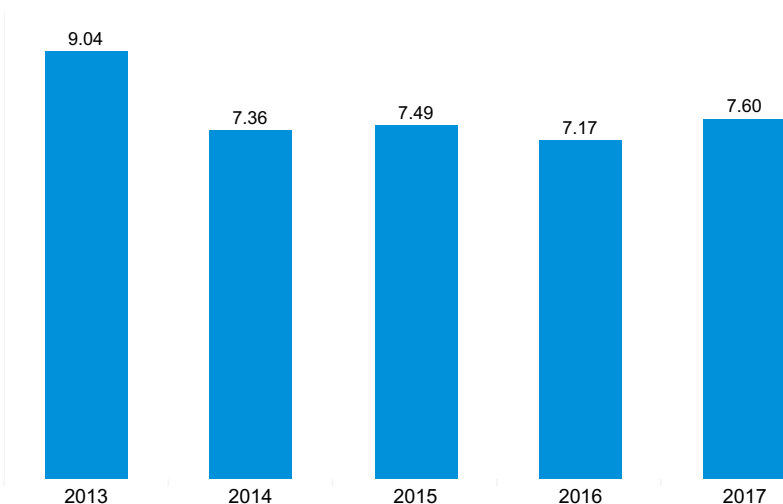
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



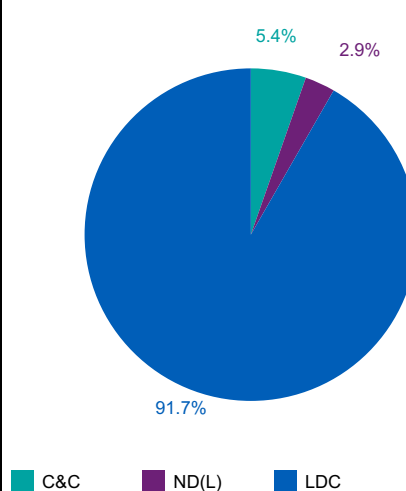
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers; Unemployment Rates, Euromonitor, 2017; GDP Statistics, World Bank, 2017

Key inflows and outflows



HUNGARY

Weighted average price: €3.62 (FT1,118.72)

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€54m (FT16,778m)** would have been raised in HUNGARY

Average prices of manufactured cigarettes in Hungary increased by 2% in 2017



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL HUNGARY CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	9.36	7.47	7.34	7.44	7.59	2%
Outflows	-1.13	-0.87	-0.56	-0.73	-0.62	-15%
Legal domestic consumption (LDC)	8.24	6.60	6.78	6.71	6.97	4%
Non-domestic legal (ND(L))	0.08	0.11	0.17	0.15	0.22	44%
Counterfeit and contraband (C&C)	0.72	0.65	0.53	0.31	0.41	32%
Total non-domestic	0.80	0.76	0.70	0.46	0.63	36%
Total consumption	9.04	7.36	7.49	7.17	7.60	6%

- Flows increased from Ukraine where cigarette prices are €3.10 cheaper. Additionally, tighter Hungarian control of the borders with Croatia, Serbia and Romania could have resulted in increased crossings from Ukraine
- Outflows to Austria fell, despite an increasing price gap between the two countries

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO HUNGARY

	2013	2014	2015	2016	2017
Ukraine	0.07	0.04	0.09	0.15	0.25
IWs with no country-specific labelling	0.15	0.23	0.22	0.12	0.13
Duty Free Labelled	0.02	0.03	0.03	0.02	0.03
Counterfeit	0.03	0.04	0.04	0.02	0.03
Austria	0.02	0.02	0.02	0.01	0.02
Other	0.51	0.41	0.31	0.15	0.18
Total Inflows	0.80	0.76	0.70	0.46	0.63

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM HUNGARY

	2013	2014	2015	2016	2017
Austria	0.71	0.56	0.25	0.40	0.31
UK	0.03	0.08	0.08	0.15	0.10
Germany	0.22	0.11	0.12	0.09	0.09
Slovakia	0.01	0.01	0.01	0.01	0.02
Switzerland	0.00	0.01	0.02	0.01	0.02
Other	0.16	0.10	0.08	0.07	0.09
Total Outflows	1.13	0.87	0.56	0.73	0.62

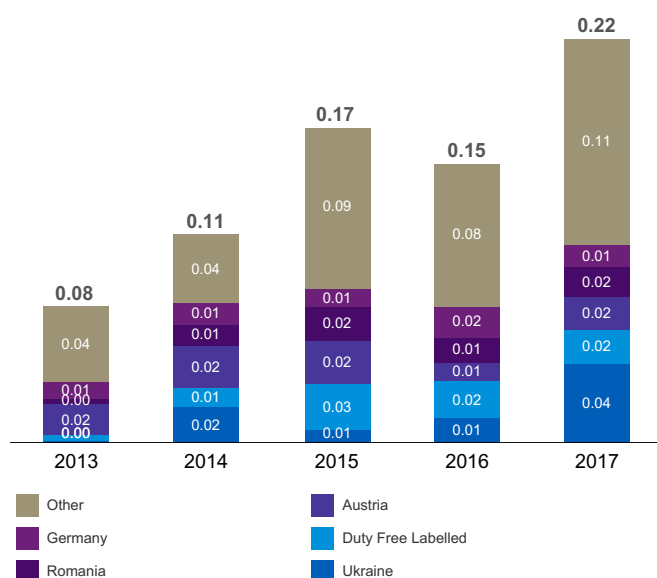
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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); 'Hungary builds new high-tech border fence - with few migrants in sight', Reuters, March 2017

ND(L) and C&C flows

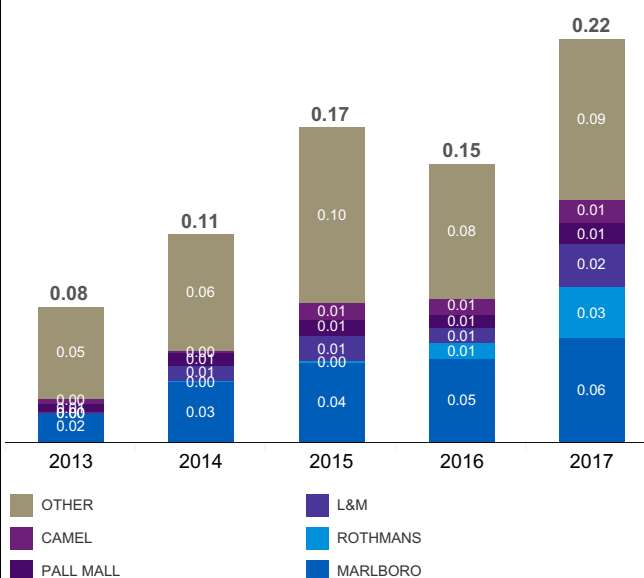
- 50% of C&C originated from Ukraine where prices were as low as the equivalent of €0.52
- Illicit Whites with no country specific labelling accounted for 0.13 billion of C&C with key brands including Complimentary, Lifa and Fest, trademark-owned by Baltic Tobacco Company



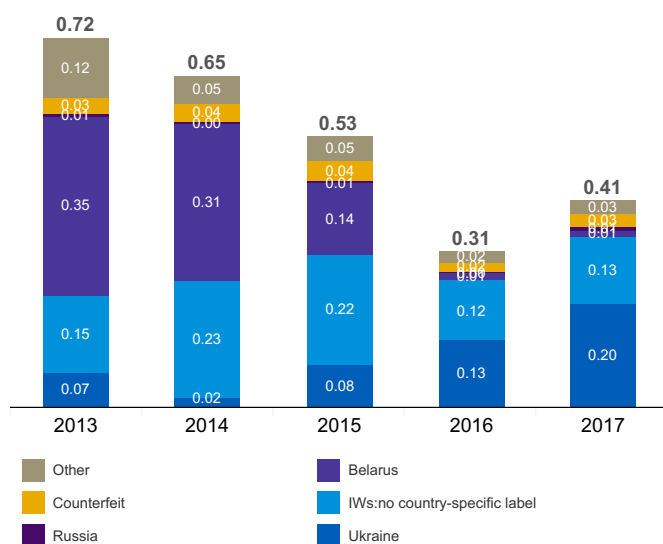
ND(L) by country of origin, 2013-2017 (bn cigarettes)



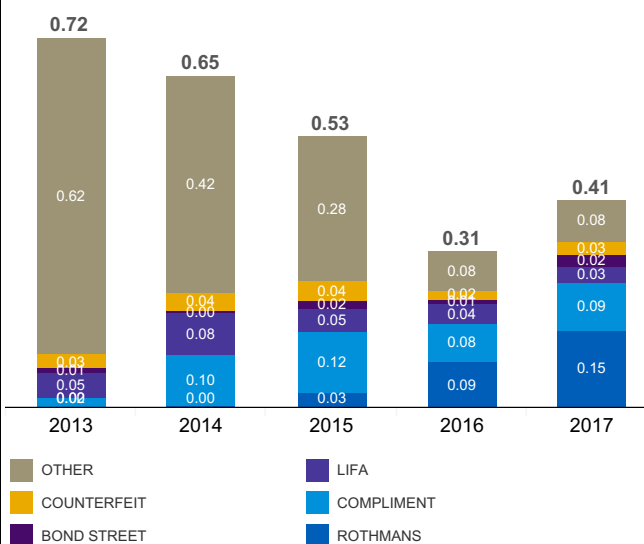
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook

Countries included in this study



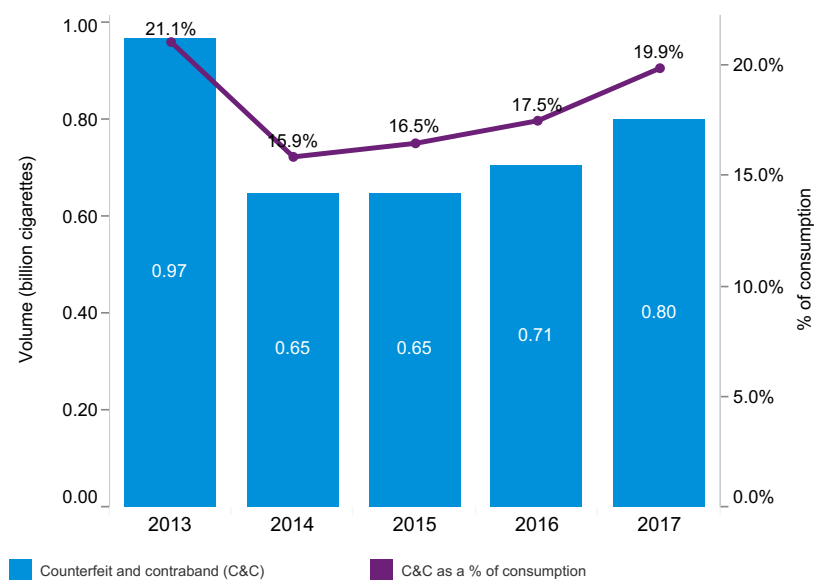
Ireland



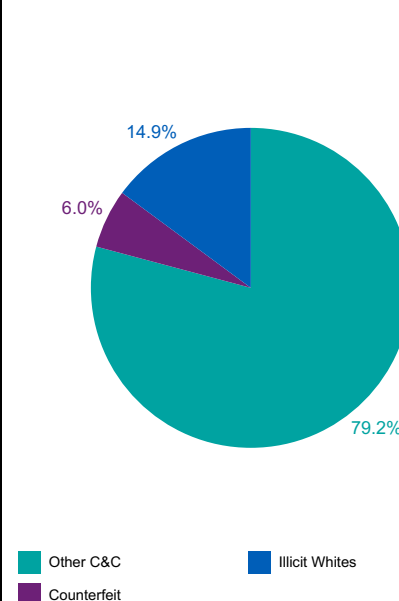
Overview

- C&C in Ireland increased from 17.5% of total consumption in 2016 to 19.9% in 2017, the second highest in the EU
- Despite a decline in legal domestic consumption, total consumption remained stable as a result of an increase in C&C
- C&C in Ireland has historically come from countries in Eastern Europe with lower prices

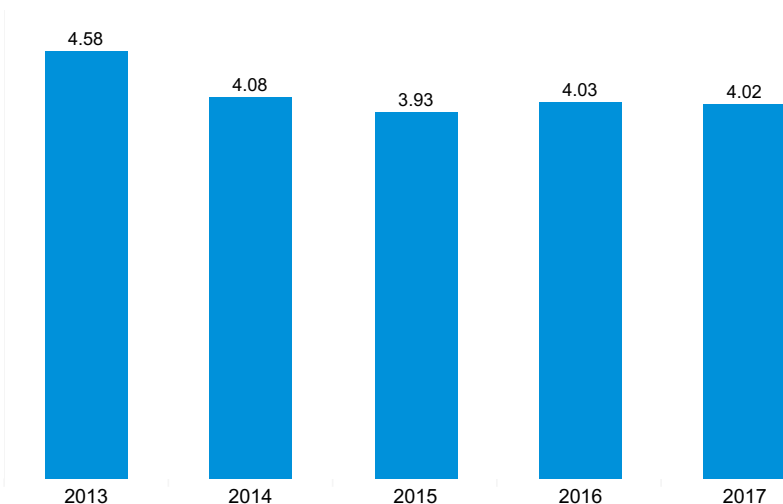
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



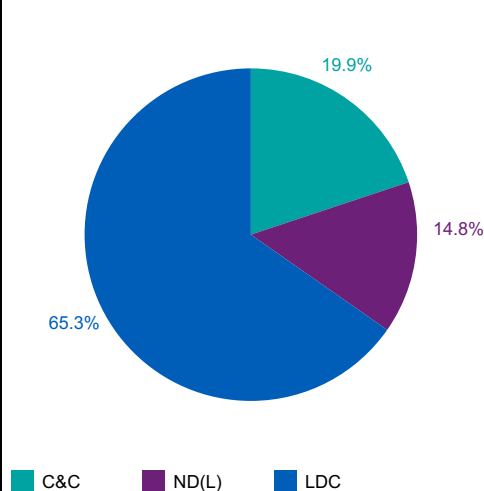
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



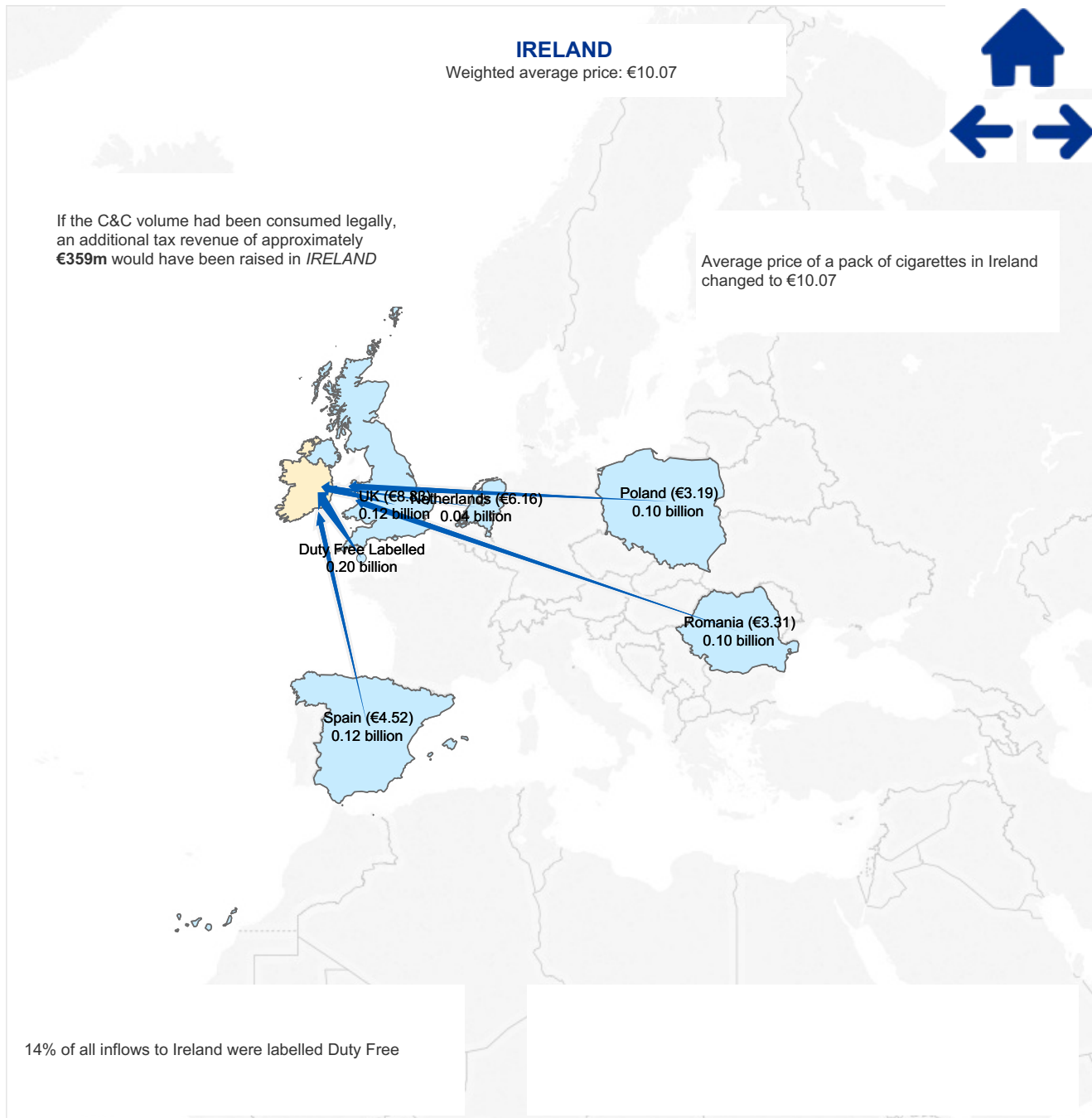
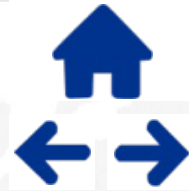
Breakdown of total consumption - 2017 (%)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours
 Country of Study
 Source

Flow Colours
 Inflow to Country of Study

Country label format:
 Country Name (Average price per pack)
 Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL IRELAND CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	3.37	3.18	3.05	2.90	2.73	-6%
Outflows	-0.09	-0.07	-0.12	-0.09	-0.10	9%
Legal domestic consumption (LDC)	3.28	3.11	2.93	2.81	2.63	-7%
Non-domestic legal (ND(L))	0.33	0.33	0.35	0.51	0.60	16%
Counterfeit and contraband (C&C)	0.97	0.65	0.65	0.71	0.80	13%
Total non-domestic	1.30	0.97	1.00	1.22	1.40	15%
Total consumption	4.58	4.08	3.93	4.03	4.02	0%

- Legal domestic consumption continued to decline driven by lower legal domestic sales and higher outflows
- Inflows of both Duty Free labelled and Romanian labelled cigarettes saw the largest increase in 2017, 37% and 24% respectively
- Although the price gap between Ireland and the UK reduced to €1.24, flows from the UK remained stable as consumers may have taken advantage of currency fluctuations to buy cheaper cigarettes in the UK when the pound weakened against the Euro
- Outflows from Ireland were limited as Ireland had the highest cigarette prices in the EU

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO IRELAND

	2013	2014	2015	2016	2017
Duty Free Labelled	0.17	0.13	0.16	0.15	0.20
Spain	0.07	0.08	0.05	0.10	0.12
UK	0.06	0.08	0.08	0.12	0.12
Romania	0.09	0.06	0.08	0.08	0.10
Poland	0.16	0.11	0.12	0.11	0.10
Other	0.74	0.53	0.51	0.65	0.75
Total Inflows	1.30	0.97	1.00	1.22	1.40

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM IRELAND

	2013	2014	2015	2016	2017
UK	0.06	0.05	0.10	0.06	0.06
Netherlands	0.02	0.01	0.01	0.02	0.02
Portugal	0.00	0.00	0.00	0.00	0.01
Poland	0.00	0.00	0.00	0.00	0.01
France	0.00	0.01	0.00	0.00	0.00
Other	0.01	0.00	0.00	0.01	0.01
Total Outflows	0.09	0.07	0.12	0.09	0.10

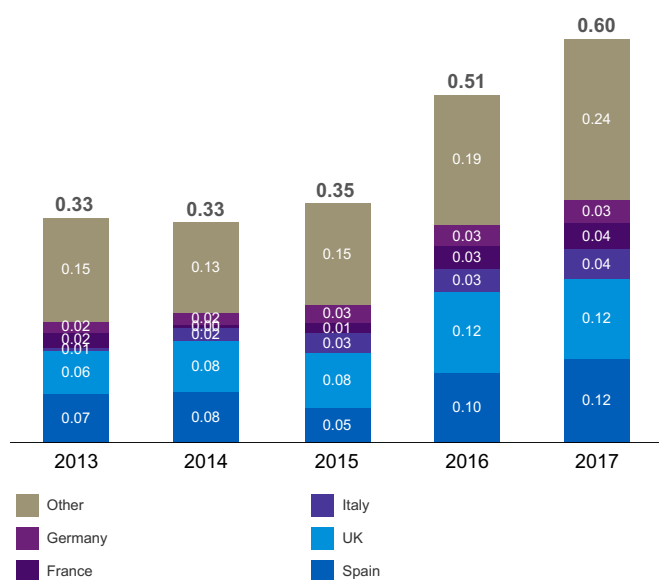
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ND(L) and C&C flows

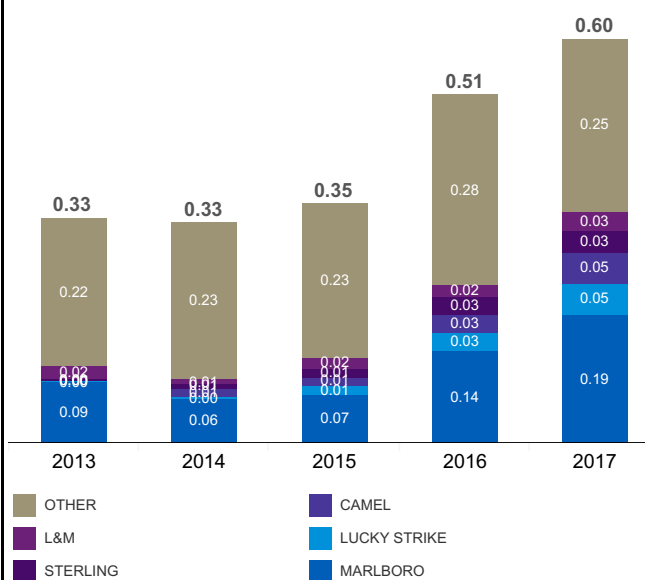


- Non-domestic legal increased against a backdrop of greater travel, predominantly to the UK and other EU countries
- A large proportion of C&C came from Eastern Europe where price differences with Ireland were as high as €6.9 per packet of 20 in 2017
- Inflows from Romania and Poland were not supported by traveller numbers, resulting in C&C flows from these EU countries

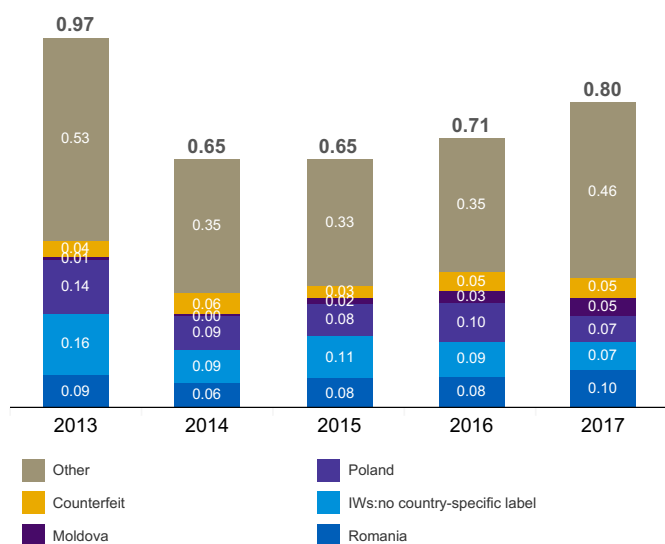
ND(L) by country of origin, 2013-2017 (bn cigarettes)



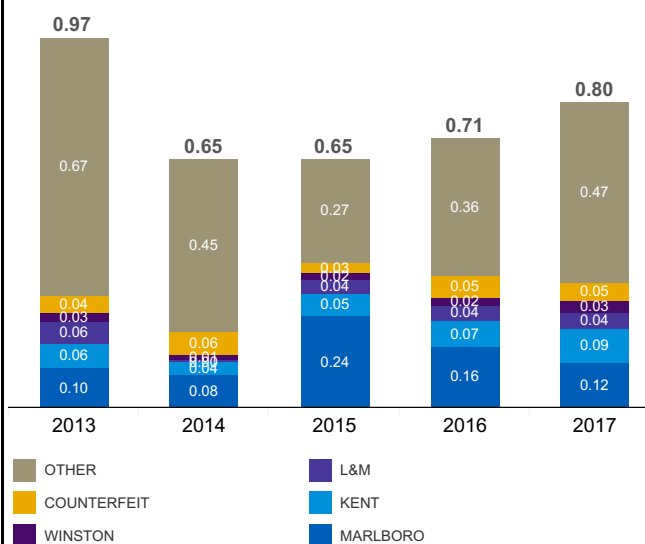
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)

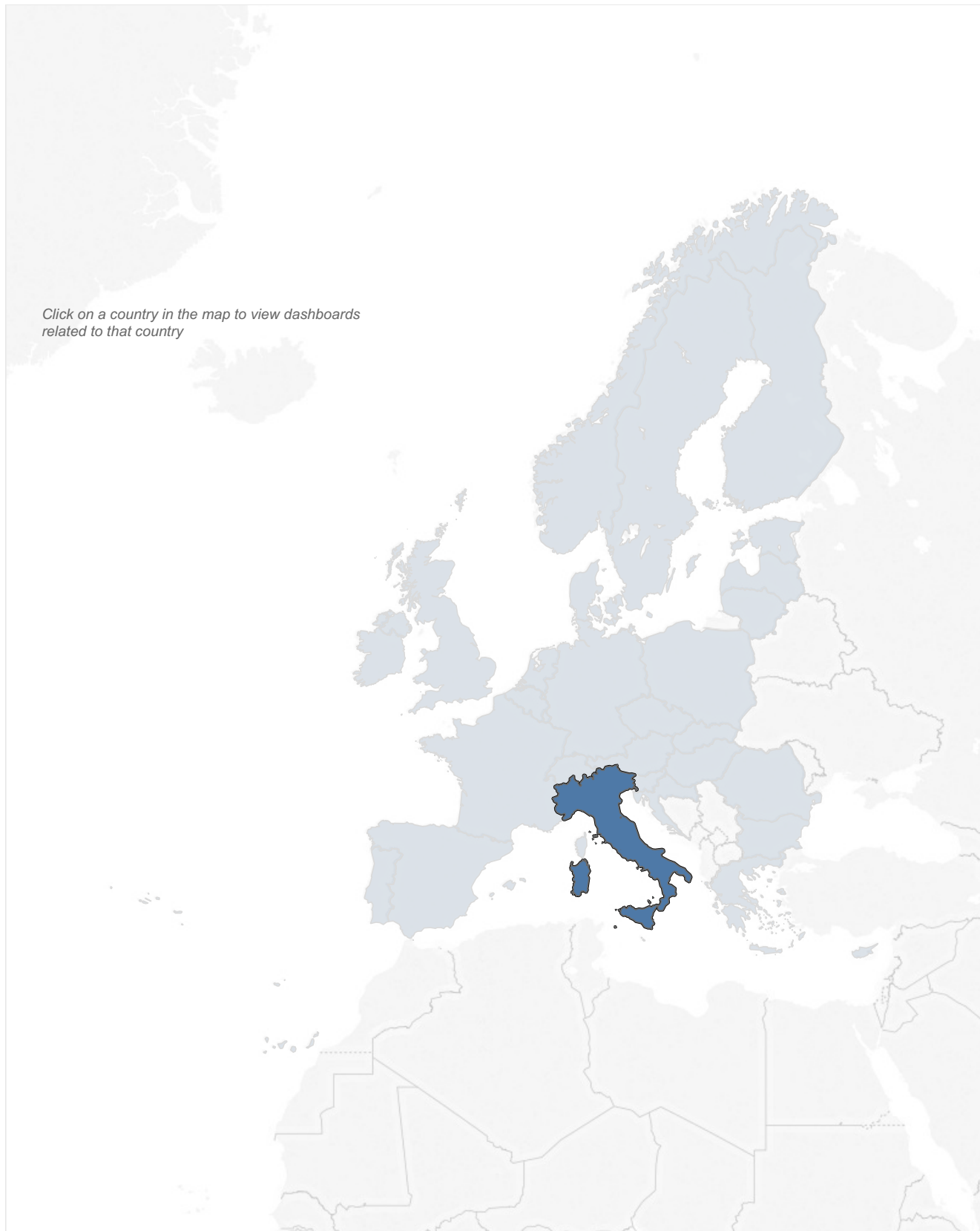


C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



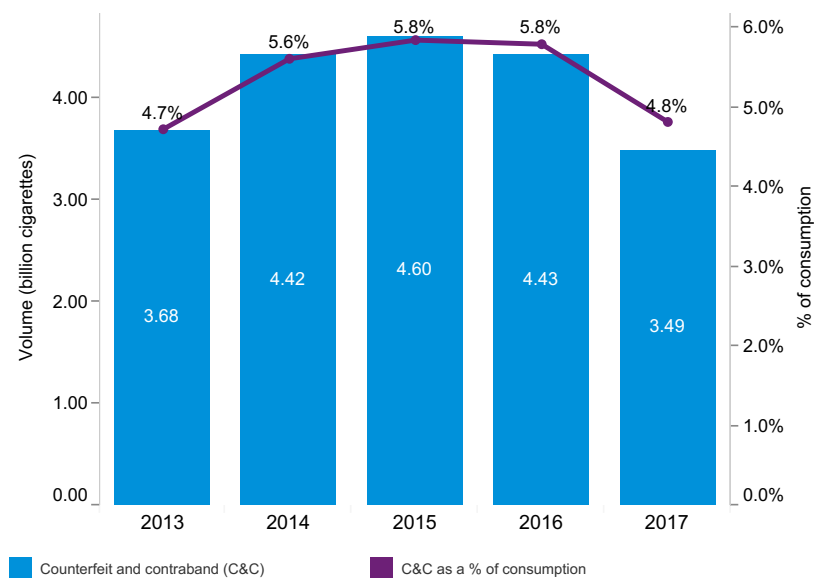
Italy



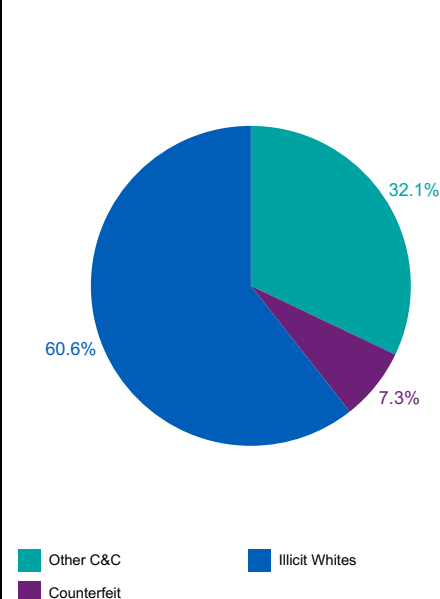
Overview

- C&C in Italy represented 4.8% of total consumption, a decline of 1 percentage point on 2016
- The majority of C&C flows came from Illicit White brands, which accounted for 61% of C&C in 2017
- Naples continued to have the highest levels of illicit consumption throughout Italy, accounting for 39% of non-domestic consumption

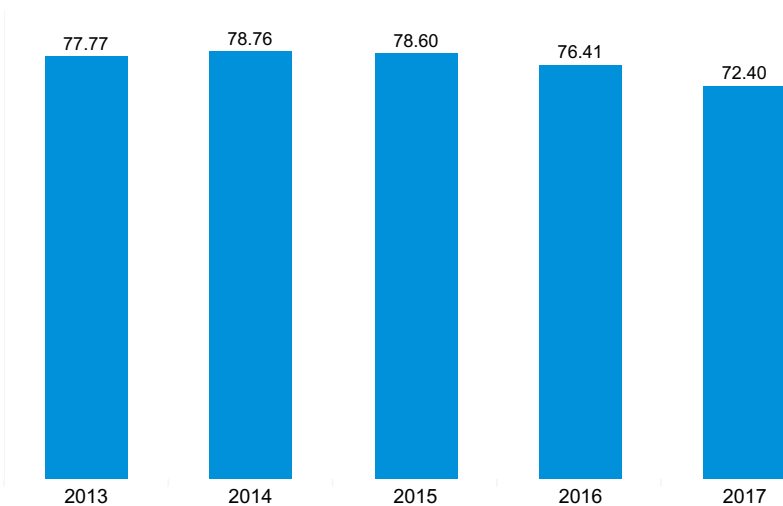
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



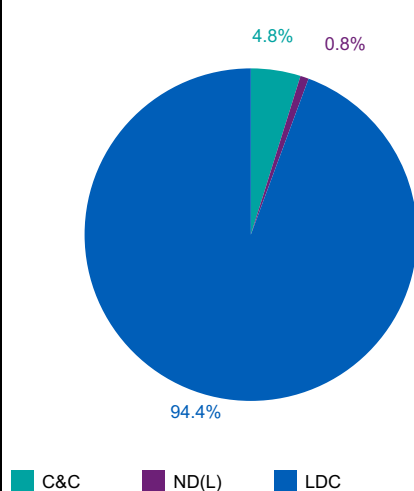
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



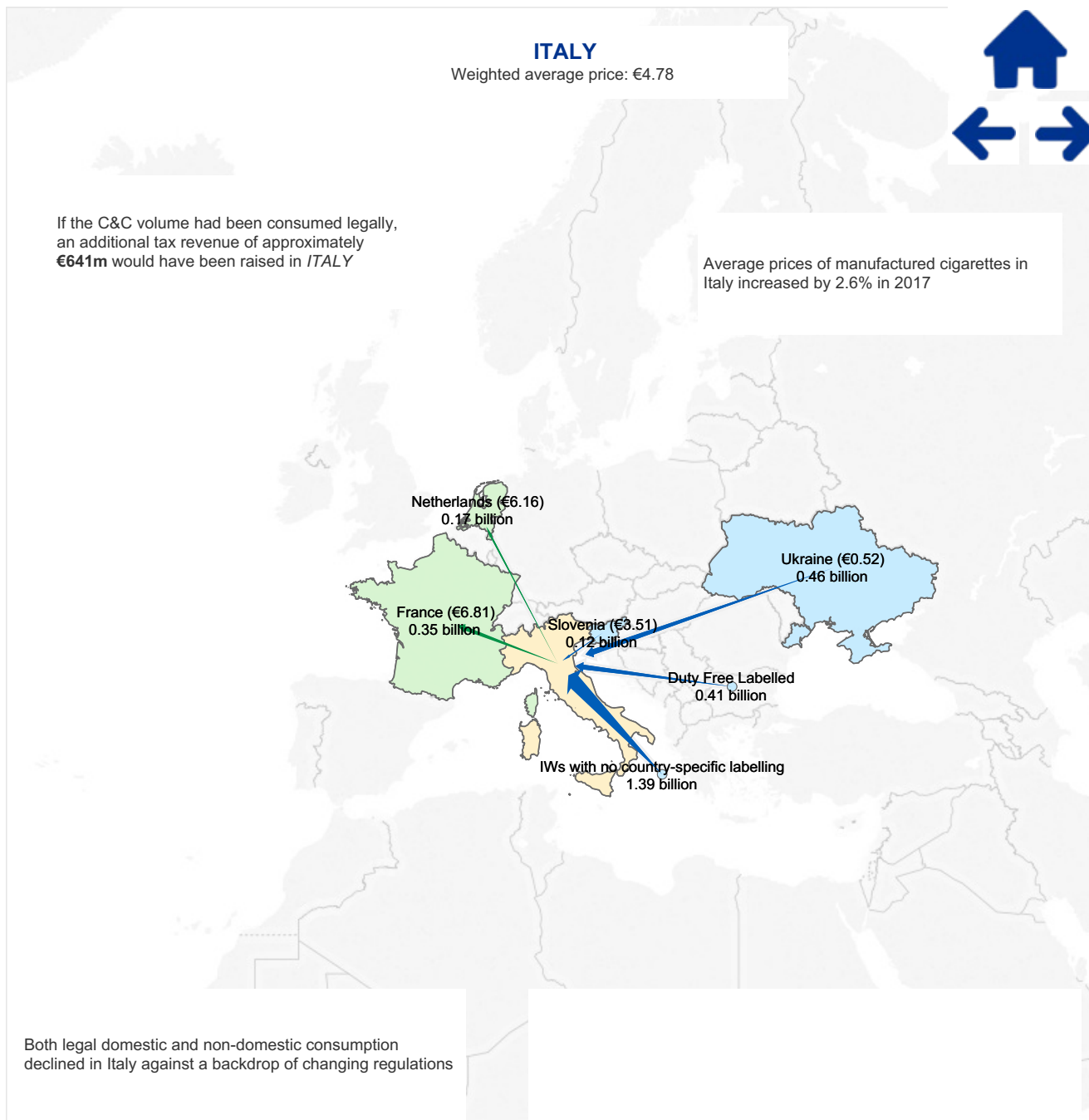
Breakdown of total consumption - 2017 (%)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); Tobacco Commissioner Decree, 2017

Manufactured cigarette consumption, inflows and outflows



TOTAL ITALY CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	74.04	74.44	73.82	72.05	69.33	-4%
Outflows	-0.78	-1.08	-0.98	-0.91	-1.00	10%
Legal domestic consumption (LDC)	73.25	73.36	72.85	71.14	68.33	-4%
Non-domestic legal (ND(L))	0.84	0.99	1.16	0.83	0.59	-30%
Counterfeit and contraband (C&C)	3.68	4.42	4.60	4.43	3.49	-21%
Total non-domestic	4.52	5.41	5.75	5.26	4.08	-23%
Total consumption	77.77	78.76	78.60	76.41	72.40	-5%

- After a period of stable consumption in Italy, both legal domestic and non-domestic consumption declined by 5% in total
- Consumers switching to other tobacco products and non-combustibles accounted for 1.7 billion of the decline

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO ITALY

	2013	2014	2015	2016	2017
IWs with no country-specific labelling	0.86	2.27	1.67	2.47	1.39
Ukraine	0.32	0.12	0.32	0.99	0.46
Duty Free Labelled	0.91	0.86	0.68	0.40	0.41
Counterfeit	0.33	0.31	0.76	0.20	0.18
Slovenia	0.19	0.15	0.21	0.15	0.12
Other	1.91	1.70	2.11	1.05	1.52
Total Inflows	4.52	5.41	5.75	5.26	4.08

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM ITALY

	2013	2014	2015	2016	2017
France	0.39	0.47	0.33	0.40	0.35
Netherlands	0.13	0.13	0.13	0.07	0.17
Switzerland	0.00	0.12	0.18	0.11	0.14
Germany	0.10	0.08	0.10	0.10	0.07
UK	0.03	0.04	0.05	0.05	0.05
Other	0.13	0.24	0.19	0.18	0.21
Total Outflows	0.78	1.08	0.98	0.91	1.00

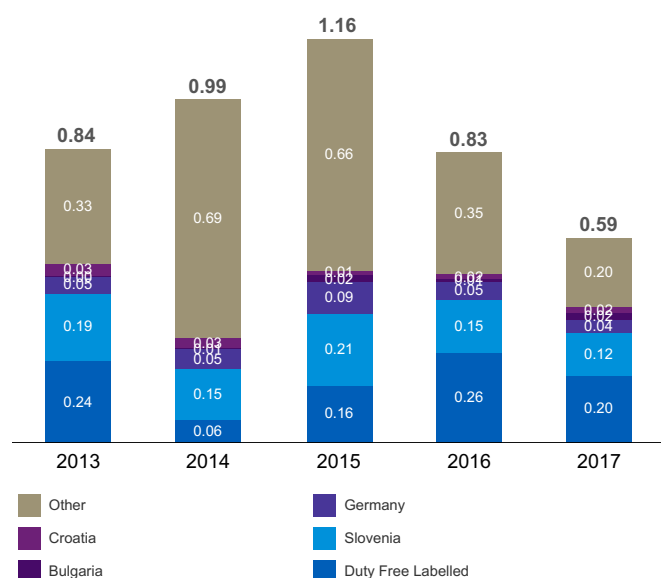
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ND(L) and C&C flows

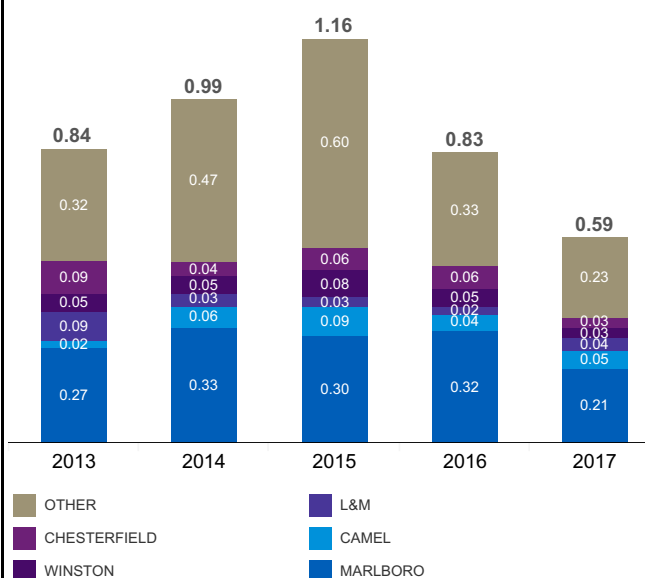


- While C&C has declined by 21%, the sources and brands remain consistent with 2016
- 70% of non-domestic consumption in the 2017 EPS occurred in Campania and Sicily, implying that the majority of C&C was consumed in these two regions
- Flows of Marble (with Ukrainian labelling) remained high, although the volume declined in 2017
- Illicit White brand flows, in particular Marble and Regina declined by 0.07 and 0.49 respectively

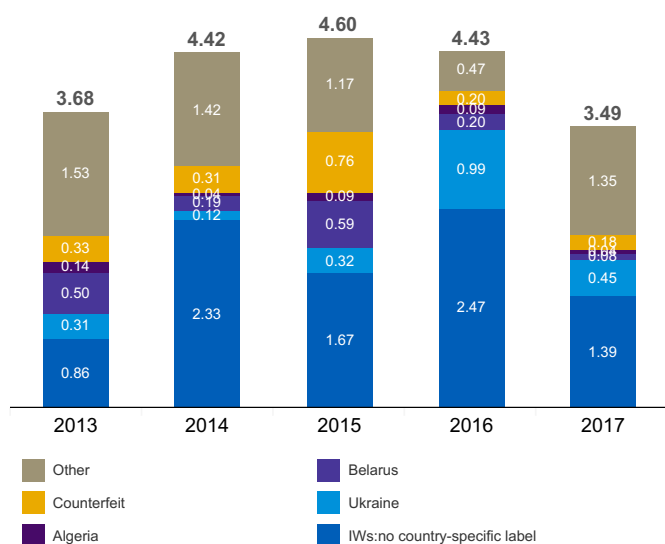
ND(L) by country of origin, 2013-2017 (bn cigarettes)



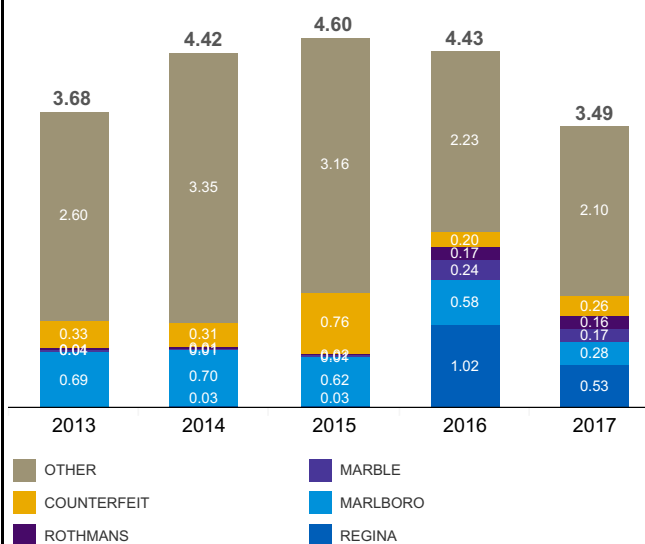
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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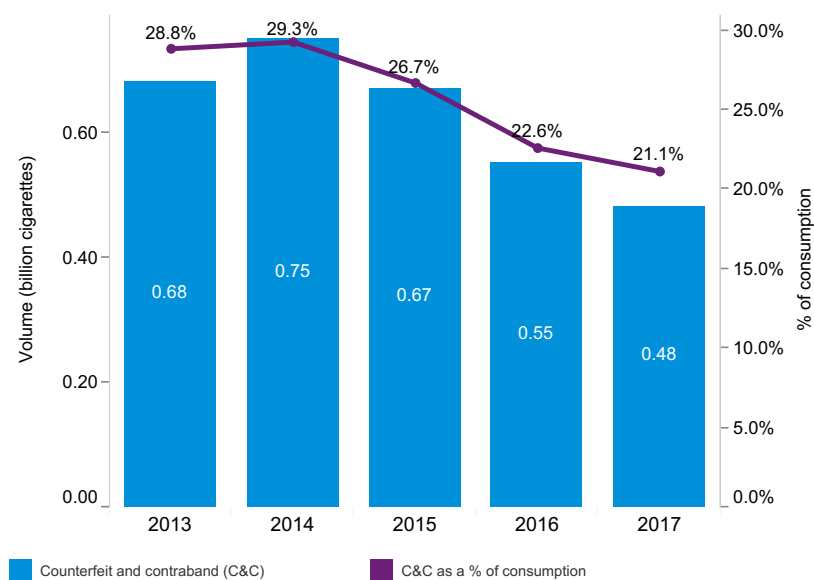
Latvia



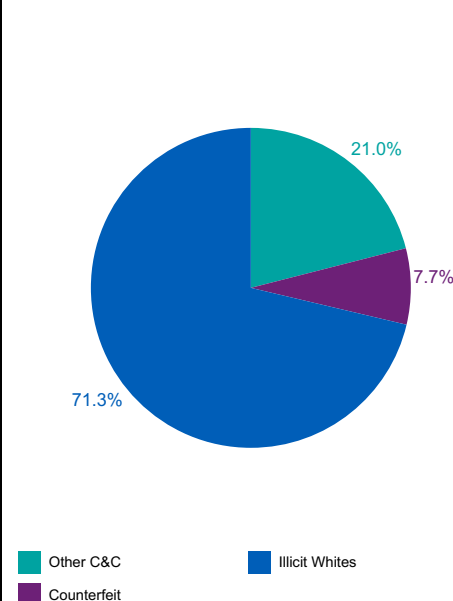
Overview

- C&C consumption in Latvia made up 21.1% of total consumption in 2017, down from 22.6% in 2016
- Despite a decline of 1.5 percentage points, the C&C consumption rate remained one of the highest in the EU
- Belarus continued to be the largest source of C&C and made up 71% of the total C&C volume; but like all C&C flows, volume from Belarus declined in 2017, decreasing by 16% on 2016

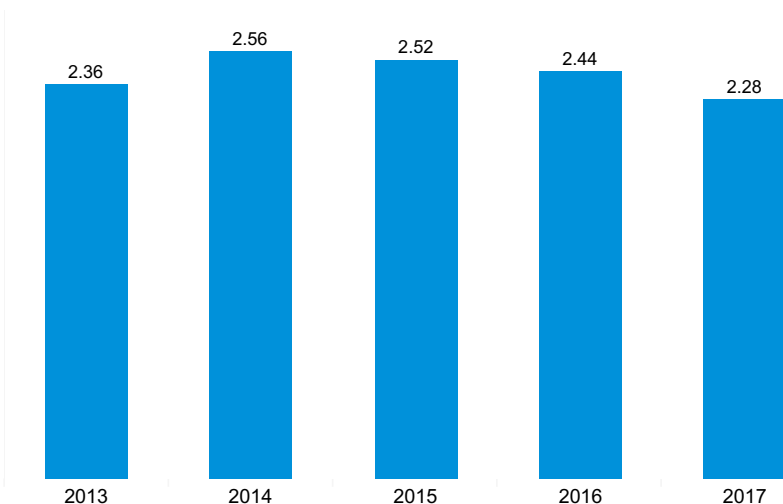
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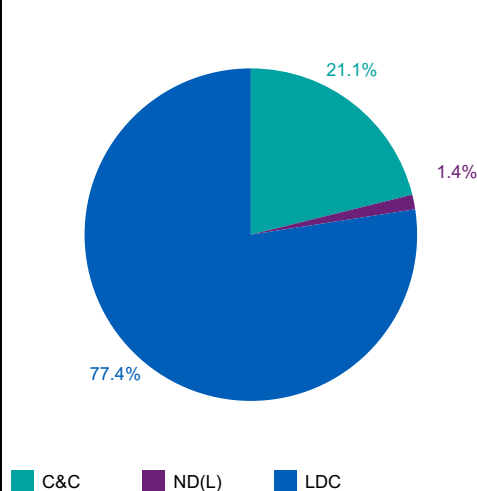
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



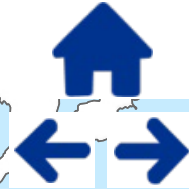
Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

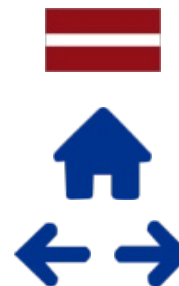
Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL LATVIA CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	1.673	1.860	1.915	1.947	1.886	-3%
Outflows	-0.046	-0.063	-0.092	-0.097	-0.123	28%
Legal domestic consumption (LDC)	1.628	1.797	1.823	1.851	1.763	-5%
Non-domestic legal (ND(L))	0.052	0.014	0.021	0.045	0.033	-27%
Counterfeit and contraband (C&C)	0.681	0.749	0.671	0.552	0.481	-13%
Total non-domestic	0.732	0.764	0.692	0.593	0.514	-13%
Total consumption	2.360	2.560	2.515	2.444	2.276	-7%

- Overall legal domestic sales declined by 3% to 1.89 billion and therefore the majority of the decline in consumption was attributed to reductions in C&C
- The largest inflow continued to be from Belarus, which accounted for 67% of total non-domestic volume in 2017; almost all of the flow was C&C
- The growth in outflows to Estonia and Finland could be attributed to general shopping behaviour, where it is popular to purchase alcohol at border shops at a lower price, alongside cheaper cigarette brands
- NZ and Premier brands made up 55% of non-domestic consumption

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO LATVIA

	2013	2014	2015	2016	2017
Belarus	0.416	0.505	0.467	0.408	0.343
Russia	0.303	0.208	0.121	0.085	0.051
Counterfeit	0.004	0.028	0.064	0.045	0.037
Kyrgyzstan	0.000	0.003	0.012	0.018	0.018
Ukraine	0.001	0.000	0.005	0.010	0.014
Other	0.008	0.019	0.023	0.026	0.051
Total Inflows	0.732	0.764	0.692	0.593	0.514

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM LATVIA

	2013	2014	2015	2016	2017
Estonia	0.004	0.007	0.003	0.015	0.029
Finland	0.002	0.006	0.009	0.004	0.017
Sweden	0.011	0.006	0.007	0.012	0.017
Germany	0.003	0.006	0.016	0.012	0.016
UK	0.008	0.010	0.030	0.022	0.015
Other	0.018	0.029	0.026	0.031	0.029
Total Outflows	0.046	0.063	0.092	0.097	0.123

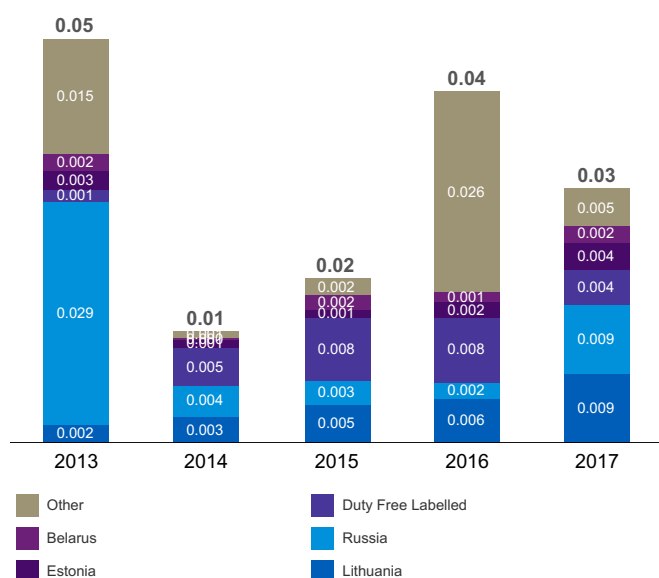
Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Illicit Whites with no country-specific labelling comprise Illicit Whites labelled as "Duty Free" and "Unspecified". Data from previous years reflects the same definition; please refer to the methodology (b) Duty Free and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and Unspecified labelling except the 2013 values (c) Norway was included for the first time in 2014
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

ND(L) and C&C flows

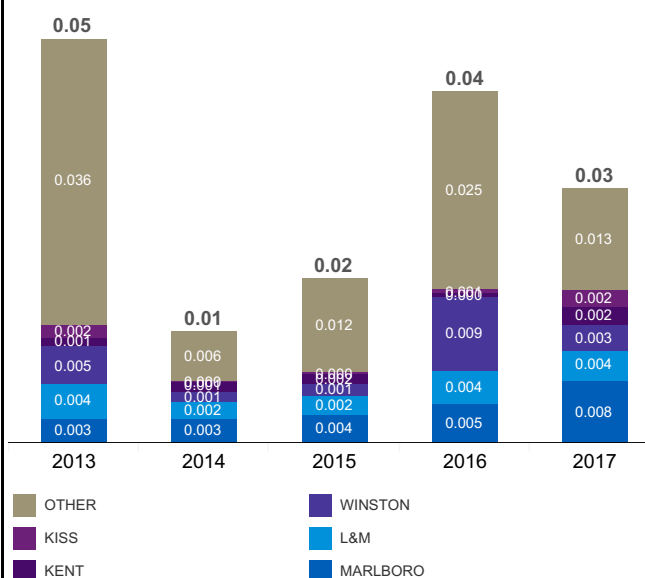
- Non-domestic legal in Latvia was low, reflecting its position as one of the lowest priced markets in the EU
- A large increase in Illicit Whites with no country-specific labelling was identified in 2017, namely from the Grodno Tobacco owned NZ and Premier brands
- Belarussian brands Premier and NZ continued to make up the majority of the overall C&C consumed in Latvia, at 58%



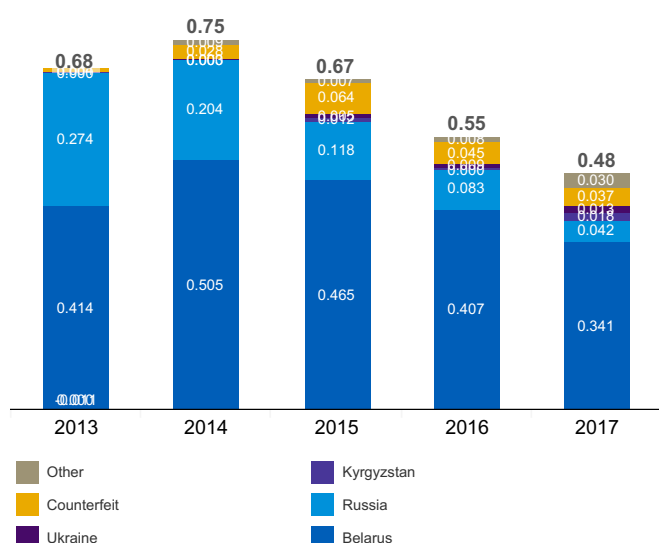
ND(L) by country of origin, 2013-2017 (bn cigarettes)



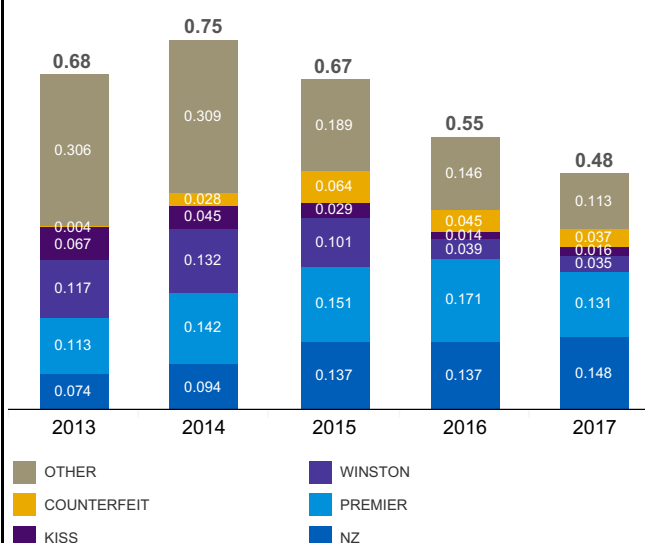
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) KPMG calculates the split between C&C and Non-Domestic Legal by calculating the Non-Domestic Legal volumes and subtracting from the total inflows (b) In years 2014-2017 the Non-Domestic Legal analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) Additional information about the process for identifying Illicit Whites is provided in the appendix
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Countries included in this study



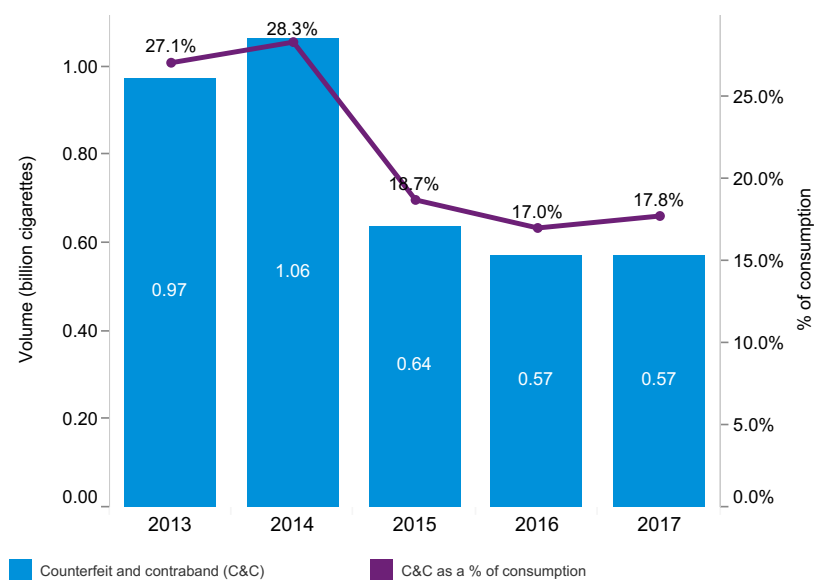
Lithuania



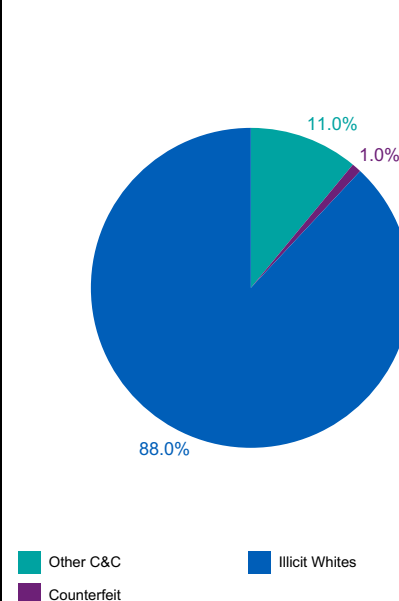
Overview

- C&C remained stable, accounting for 17.8% of total consumption in Lithuania; one of the highest C&C consumption rates in the EU
- Illicit Whites made up 88% of total C&C - the highest in the EU as a proportion of overall consumption
- The majority of Illicit Whites originated from Belarus and are not available in the EU for legal distribution and included brands NZ, Fest and Minsk

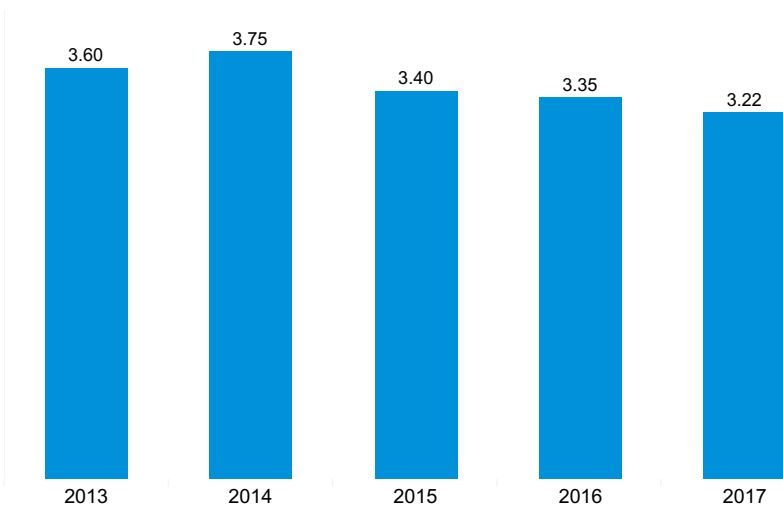
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



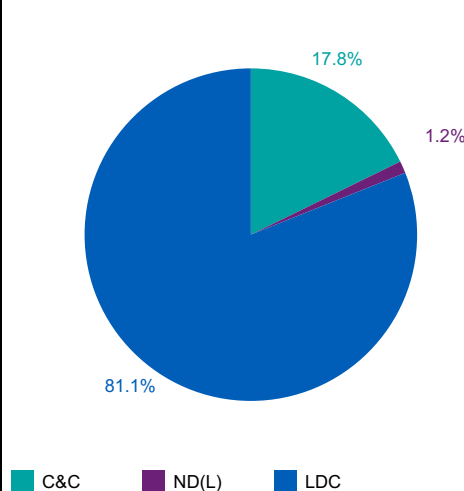
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



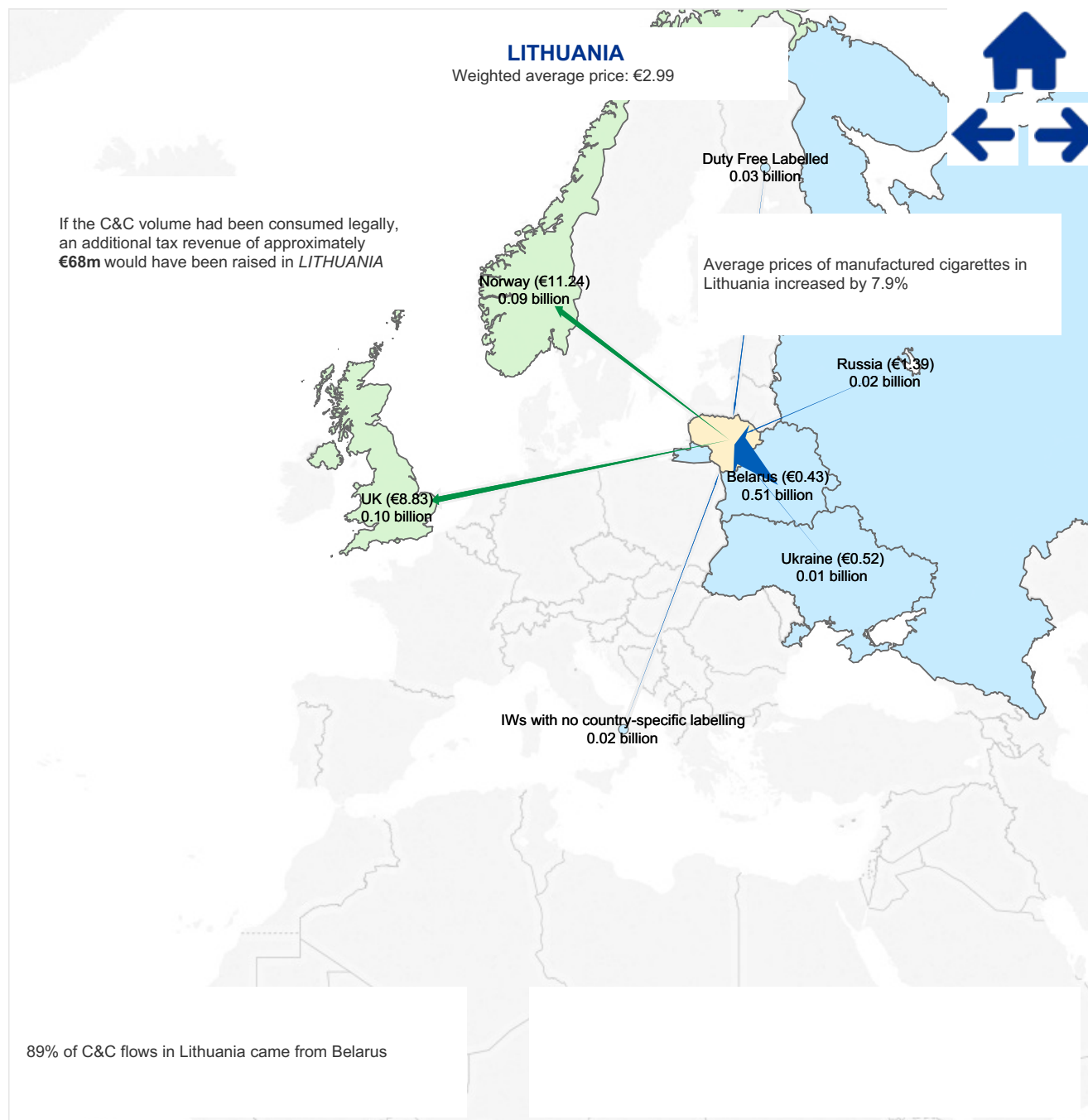
Breakdown of total consumption - 2017 (%)



Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Due to rounding the totals may not add up to 1

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

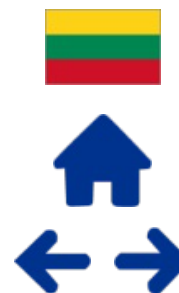
Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL LITHUANIA CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	2.79	2.92	3.17	3.13	2.94	-6%
Outflows	-0.25	-0.26	-0.45	-0.39	-0.33	-15%
Legal domestic consumption (LDC)	2.54	2.66	2.73	2.74	2.61	-5%
Non-domestic legal (ND(L))	0.09	0.02	0.04	0.03	0.04	15%
Counterfeit and contraband (C&C)	0.97	1.06	0.64	0.57	0.57	0%
Total non-domestic	1.06	1.09	0.67	0.60	0.61	1%
Total consumption	3.60	3.75	3.40	3.35	3.22	-4%

- Despite C&C remaining a similar volume to 2016, the share of C&C consumption increased, as total consumption fell by 0.13
- Macro-economic conditions improved, with steadily decreasing unemployment and increasing GDP
- Outflows reflected travel to higher priced countries, predominantly the UK, where tourist numbers to Lithuania from the UK increased by 9% and the price difference was €5.84

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO LITHUANIA

	2013	2014	2015	2016	2017
Belarus	0.81	0.87	0.53	0.49	0.51
Duty Free Labelled	0.08	0.07	0.05	0.04	0.03
IWs with no country-specific labelling	0.02	0.05	0.05	0.01	0.02
Russia	0.12	0.06	0.02	0.04	0.02
Ukraine	0.00	0.00	0.01	0.01	0.01
Other	0.02	0.03	0.02	0.03	0.02
Total Inflows	1.06	1.09	0.67	0.60	0.61

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM LITHUANIA

	2013	2014	2015	2016	2017
UK	0.09	0.09	0.21	0.16	0.10
Norway	0.00	0.02	0.13	0.09	0.09
Germany	0.03	0.05	0.02	0.02	0.02
Ireland	0.05	0.03	0.02	0.03	0.02
Netherlands	0.01	0.01	0.01	0.01	0.02
Other	0.07	0.06	0.05	0.07	0.07
Total Outflows	0.25	0.26	0.45	0.39	0.33

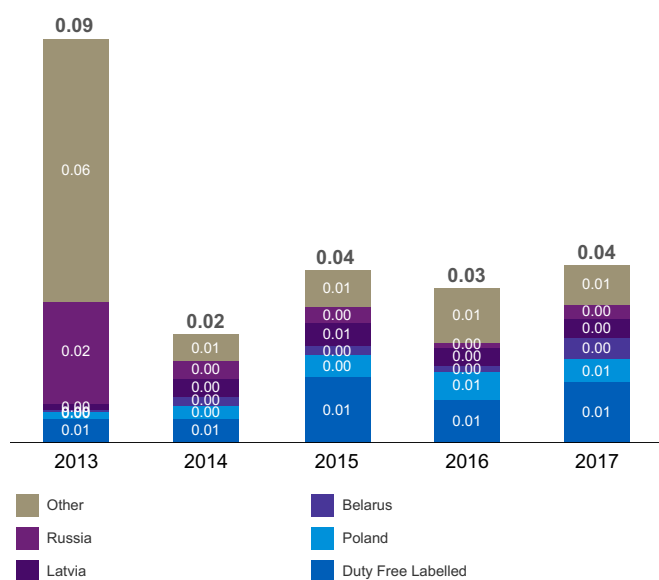
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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); Unemployment Rates, Euromonitor, 2017; GDP Statistics, World Bank, 2017

ND(L) and C&C flows

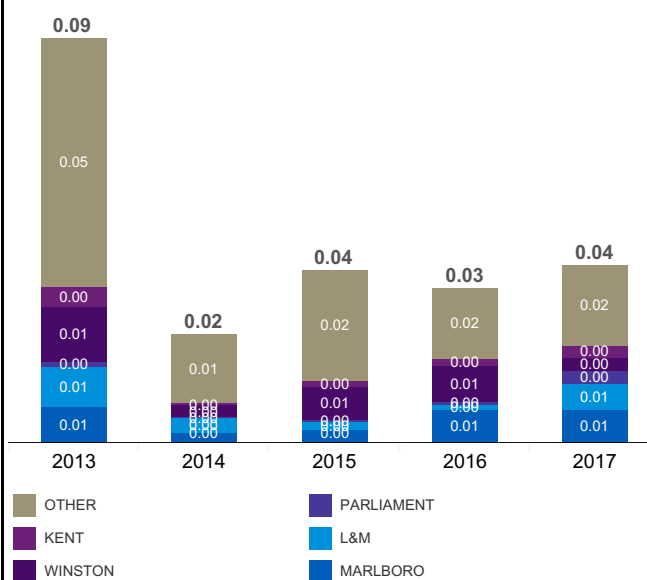
- C&C from Belarus, where prices are on average 7 times cheaper, accounted for 89% of total C&C
- The three largest C&C brands, NZ, Fest and Minsk, are trademark-owned by Grodno Tobacco and are the cheapest brands available in Belarus; all three brands were also identified with unspecified country of origin labelling



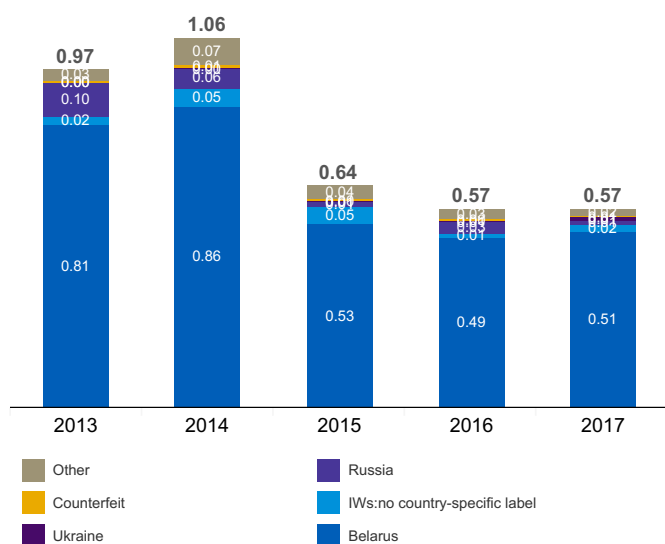
ND(L) by country of origin, 2013-2017 (bn cigarettes)



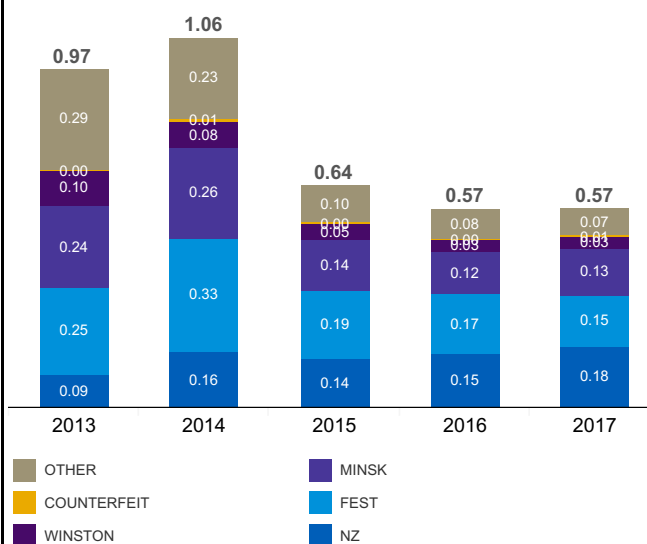
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



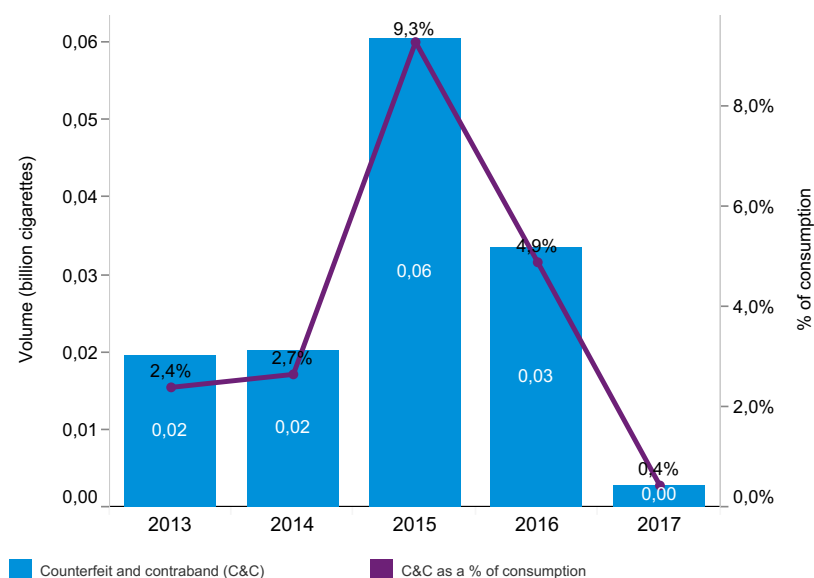
Luxembourg



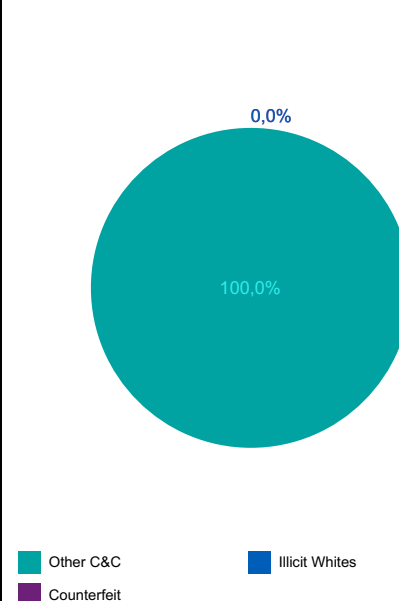
Overview

- C&C declined from 4.9% to 0.4% of total consumption in 2017
- The level of C&C in Luxembourg was the lowest of all countries in the study, reflecting Luxembourg's low prices compared to surrounding countries
- Total consumption decreased by 3.1%, from 0.64 billion to 0.62 billion
- Non-domestic flows were predominantly non-domestic legal from neighbouring countries

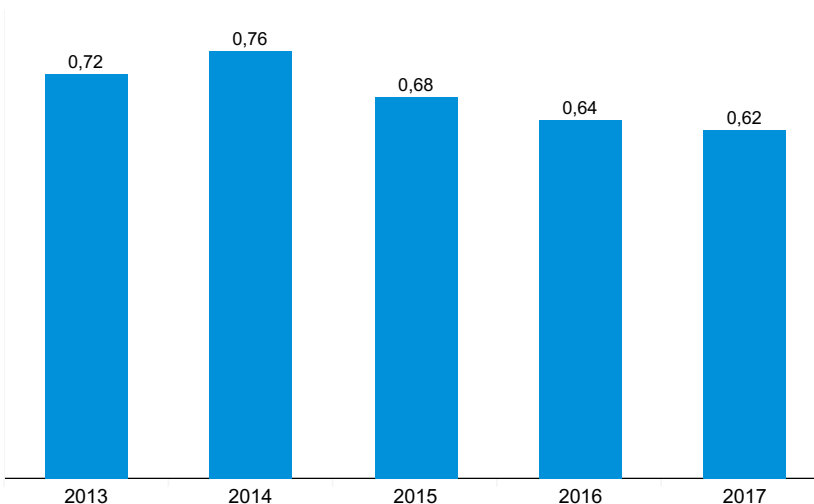
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



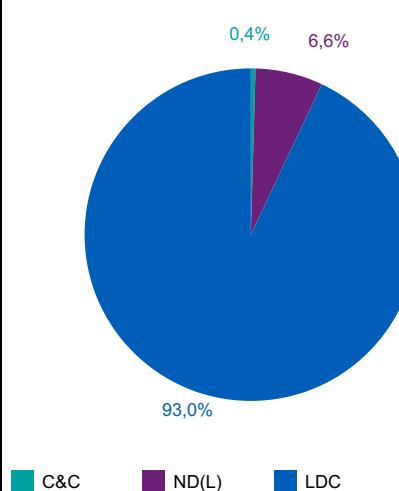
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

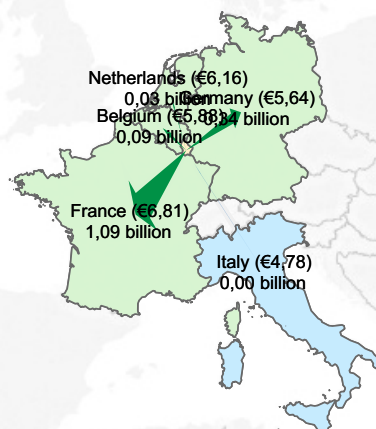
Key inflows and outflows



LUXEMBOURG

Weighted average price: €4,60

Average prices of manufactured cigarettes in Luxembourg increased by 2% in 2017



Flows to France accounted for 47% of total outflows

Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL LUXEMBOURG CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	3,420	3,390	2,840	2,811	2,898	3%
Outflows	-2,770	-2,741	-2,300	-2,277	-2,323	2%
Legal domestic consumption (LDC)	0,660	0,650	0,540	0,534	0,575	8%
Non-domestic legal (ND(L))	0,040	0,090	0,070	0,069	0,041	-41%
Counterfeit and contraband (C&C)	0,020	0,020	0,060	0,034	0,003	-92%
Total non-domestic	0,058	0,106	0,136	0,103	0,043	-58%
Total consumption	0,720	0,760	0,680	0,638	0,619	-3%

- Total non-domestic inflows decreased while most of the inflows from France and Belgium remained unchanged
- Outflows remained stable to neighbouring France and Germany, which reflected the lower prices in Luxembourg as well as travel by those who worked in Luxembourg but lived in France and Belgium

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO LUXEMBOURG

	2013	2014	2015	2016	2017
France	0,014	0,032	0,023	0,015	0,011
Belgium	0,012	0,017	0,020	0,009	0,008
Germany	0,008	0,024	0,006	0,010	0,006
Italy	0,001	0,005	0,000	0,004	0,004
Netherlands	0,005	0,000	0,007	0,005	0,003
Other	0,019	0,028	0,080	0,059	0,012
Total Inflows	0,058	0,106	0,136	0,103	0,043

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM LUXEMBOURG

	2013	2014	2015	2016	2017
France	1,082	1,113	0,926	0,842	1,090
Germany	0,446	0,478	0,315	0,475	0,335
Belgium	0,420	0,247	0,168	0,132	0,093
Netherlands	0,031	0,046	0,038	0,035	0,030
Switzerland	0,000	0,034	0,021	0,016	0,008
Other	0,791	0,822	0,832	0,776	0,766
Total Outflows	2,770	2,741	2,300	2,277	2,323

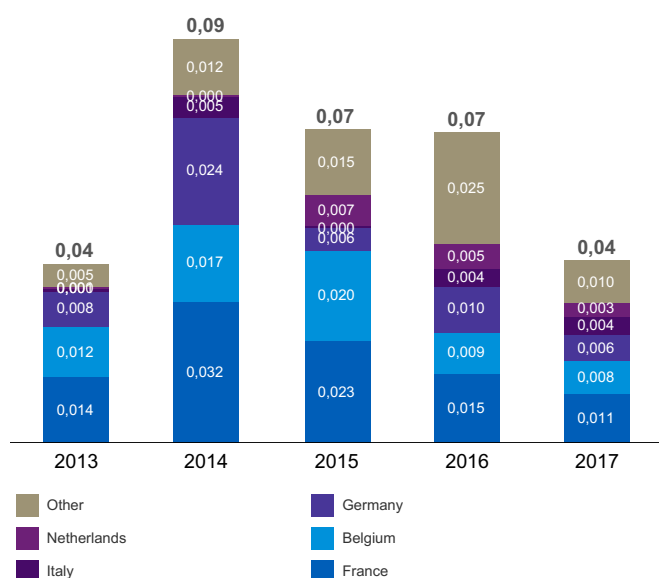
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ND(L) and C&C flows

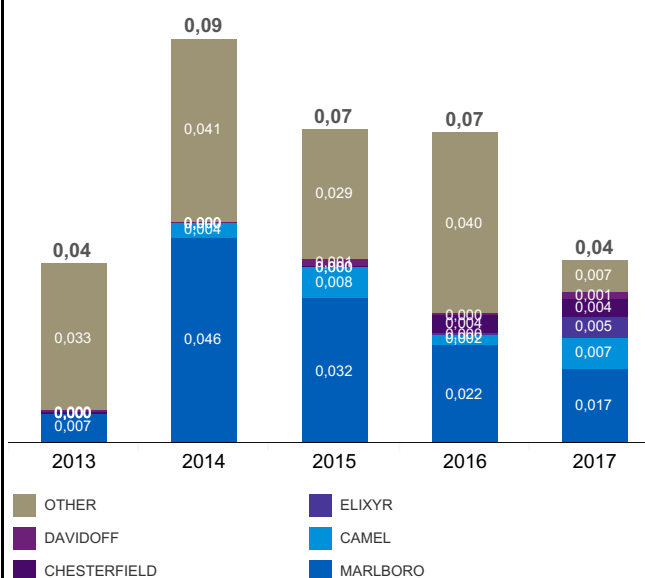
- Non-domestic legal decreased by 41% as fewer non-domestic cigarettes from neighbouring countries were identified in Luxembourg
- Non-domestic legal flows reflected the brands consumed in France and Belgium
- Overall C&C consumption decreased in Luxembourg in 2017, with Kosovo and Algeria remaining the only sources of C&C inflows



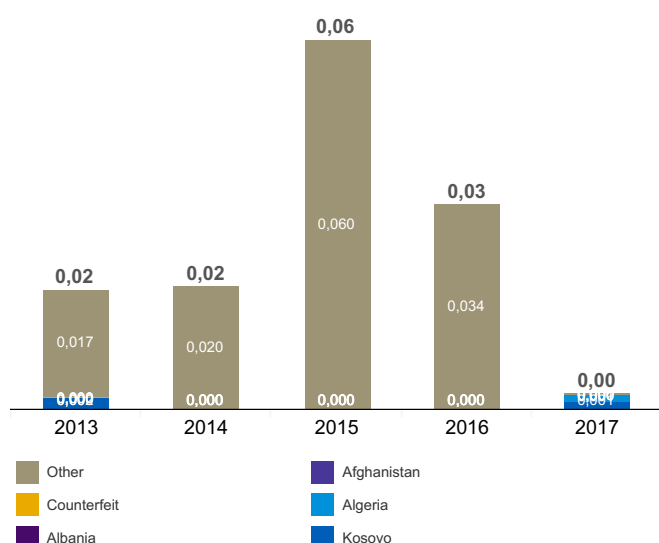
ND(L) by country of origin, 2013-2017 (bn cigarettes)



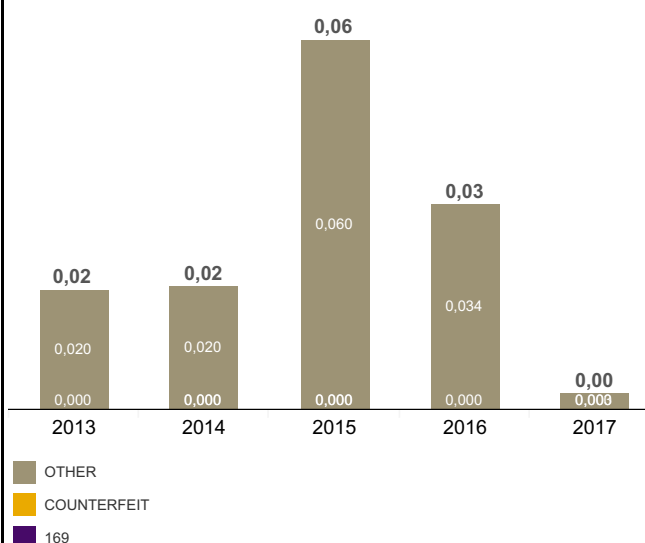
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



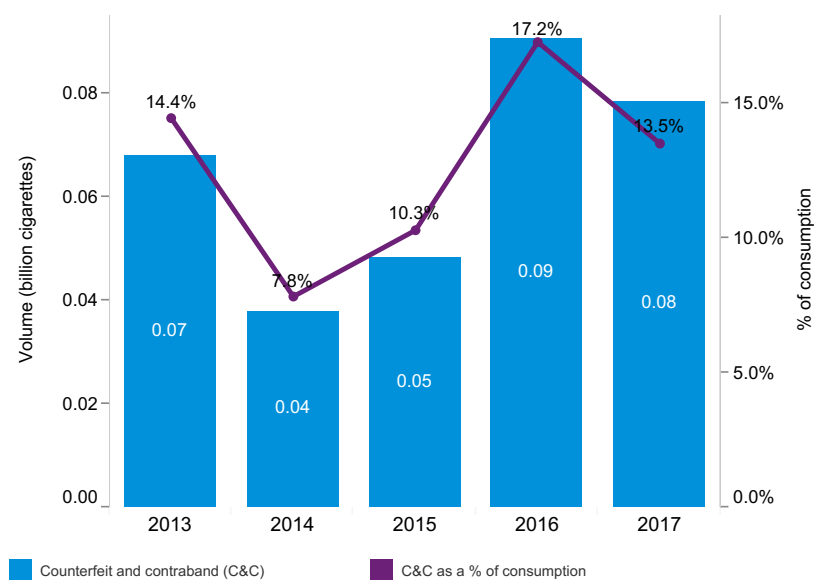
Malta



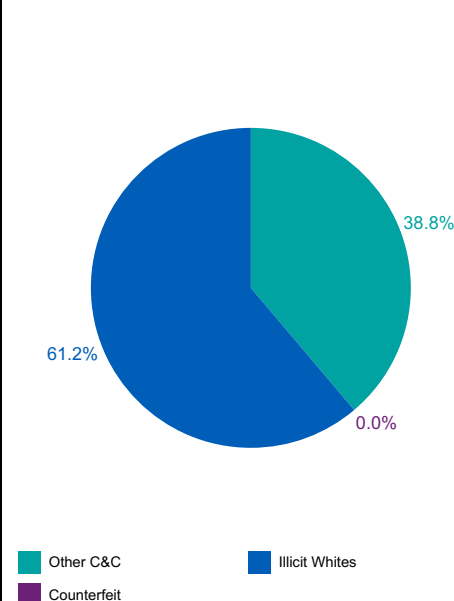
Overview

- Total C&C consumption decreased by 0.01 billion cigarettes in 2017 and now accounts for 13.5% of total consumption
- C&C fell as legal domestic consumption in Malta increased, alongside a decline in unemployment
- Illicit Whites were the main source of C&C consumption, with Business Royals branded cigarettes making up 35% of all C&C

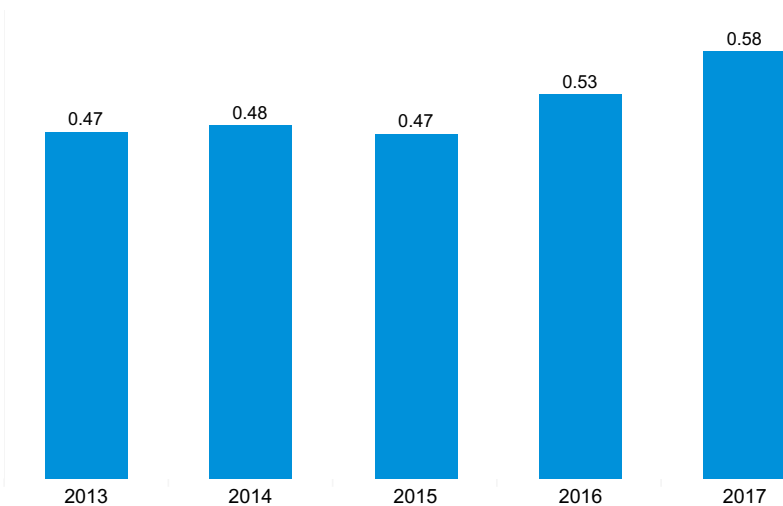
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



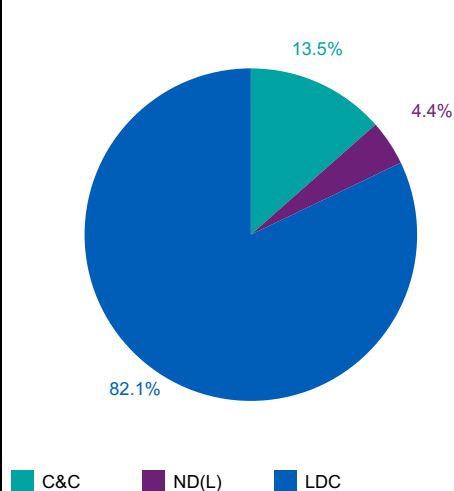
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers; Unemployment Rates, Euromonitor, 2017

Key inflows and outflows

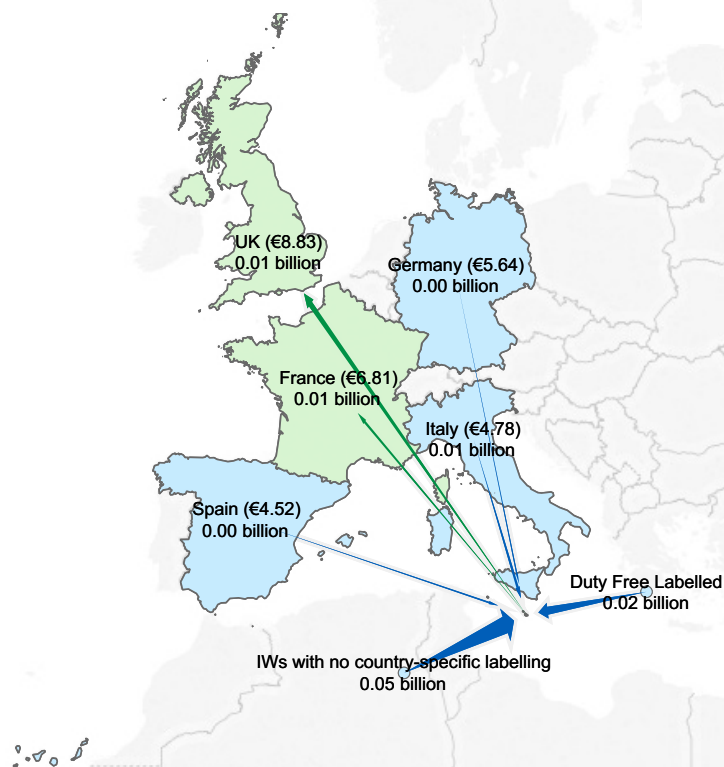


MALTA

Weighted average price: €5.25

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€16m** would have been raised in MALTA

Average prices of manufactured cigarettes in Malta remained constant with 2016 prices



60% of C&C flows in Malta were Illicit White brands with no country-specific labelling

Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:

Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)



Manufactured cigarette consumption, inflows and outflows

TOTAL MALTA CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	0.463	0.474	0.468	0.457	0.512	12%
Outflows	-0.064	-0.039	-0.053	-0.033	-0.033	2%
Legal domestic consumption (LDC)	0.399	0.435	0.415	0.424	0.479	13%
Non-domestic legal (ND(L))	0.005	0.011	0.007	0.010	0.026	148%
Counterfeit and contraband (C&C)	0.068	0.038	0.048	0.091	0.079	-13%
Total non-domestic	0.073	0.048	0.056	0.101	0.104	3%
Total consumption	0.472	0.483	0.471	0.525	0.583	11%

- The largest inflows into Malta were Illicit Whites with no country-specific labelling, which made up 60% of C&C volumes, possibly reflecting Malta's role as a transit port
- Malta remains a high-risk market for illicit trade, with customs officials announcing increased penalties for importing, supplying and consuming contraband as well as increasing border security operations to prevent and deter smuggling activity
- Total outflows remained stable while flows to Malta's largest outflow destination, the UK, increased slightly alongside a 17% increase in travellers and a price difference of €3.58

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO MALTA

	2013	2014	2015	2016	2017
IWs with no country-specific labelling	0.035	0.000	0.028	0.062	0.048
Duty Free Labelled	0.023	0.019	0.010	0.024	0.021
Italy	0.002	0.003	0.002	0.004	0.008
Spain	0.001	0.001	0.000	0.000	0.004
Germany	0.000	0.001	0.001	0.000	0.004
Other	0.011	0.024	0.015	0.010	0.020
Total Inflows	0.073	0.048	0.056	0.101	0.104

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM MALTA

	2013	2014	2015	2016	2017
UK	0.020	0.023	0.020	0.009	0.014
France	0.010	0.003	0.008	0.008	0.006
Netherlands	0.011	0.002	0.004	0.003	0.005
Belgium	0.008	0.002	0.002	0.000	0.003
Germany	0.005	0.001	0.000	0.003	0.002
Other	0.010	0.008	0.020	0.010	0.003
Total Outflows	0.064	0.039	0.053	0.033	0.033

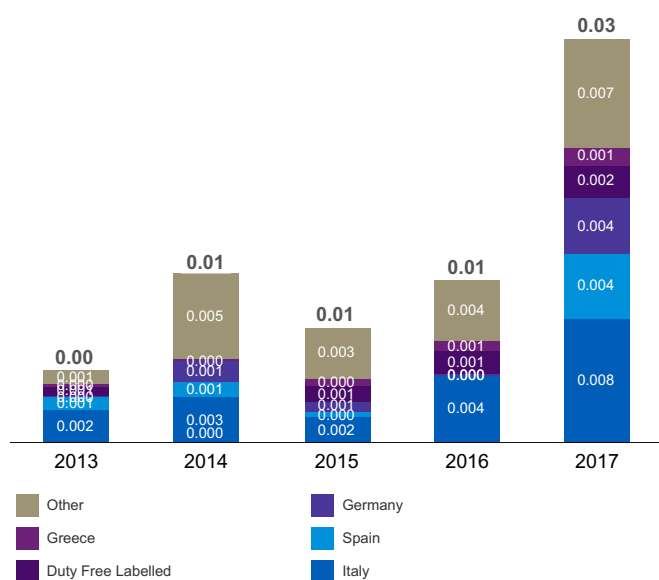
Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Illicit Whites with no country-specific labelling comprise Illicit Whites labelled as "Duty Free" and "Unspecified". Data from previous years reflects the same definition; please refer to the methodology (b) Duty Free and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and Unspecified labelling except the 2013 values (c) Norway was included for the first time in 2014
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); 'Customs impose much harsher penalties on contraband cigarettes', Malta Today, November 2017

ND(L) and C&C flows

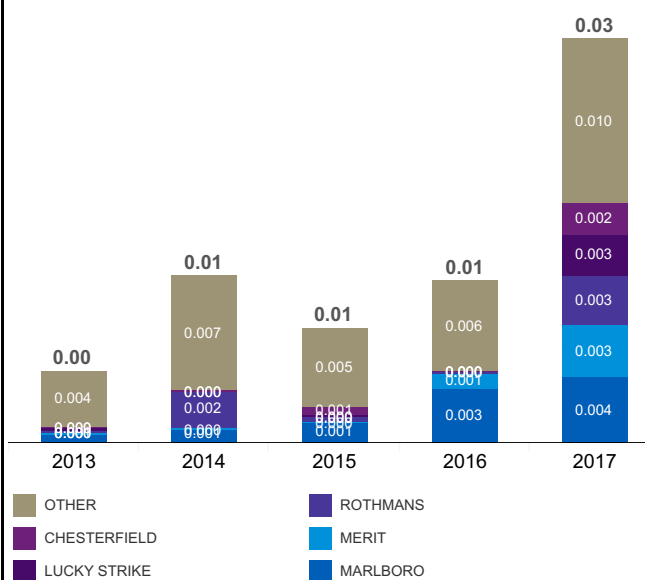


- Total non-domestic legal flows into Malta increased: non-domestic legal flows from Italy, where prices are €0.47 cheaper, doubled in 2017 as did the number of Italian travellers to Malta
- Flows of Illicit Whites brands with no country-specific labelling accounted for 60% of total C&C flows
- Business Royals, an Illicit White brand trademark owned by Independent Tobacco, was the largest illicit brand in the study

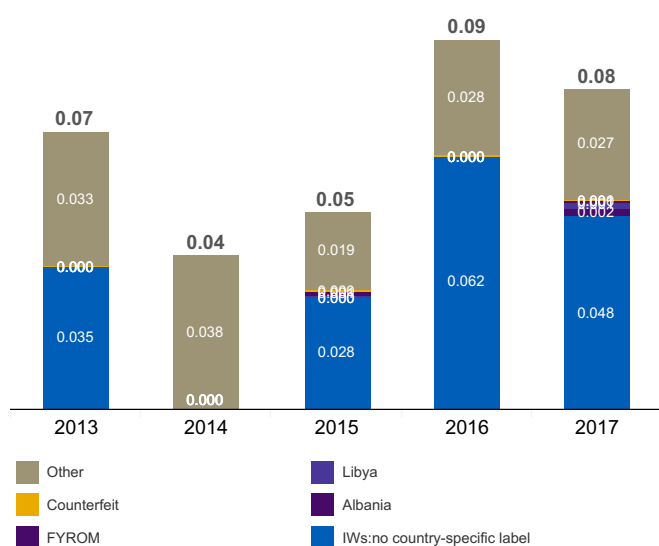
ND(L) by country of origin, 2013-2017 (bn cigarettes)



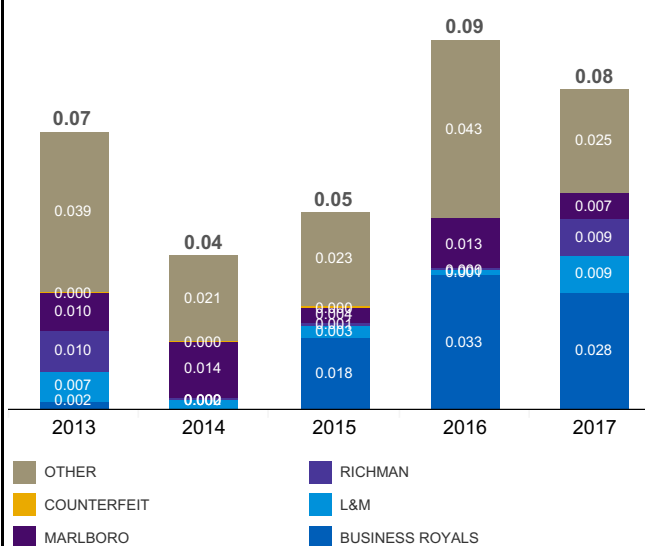
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)

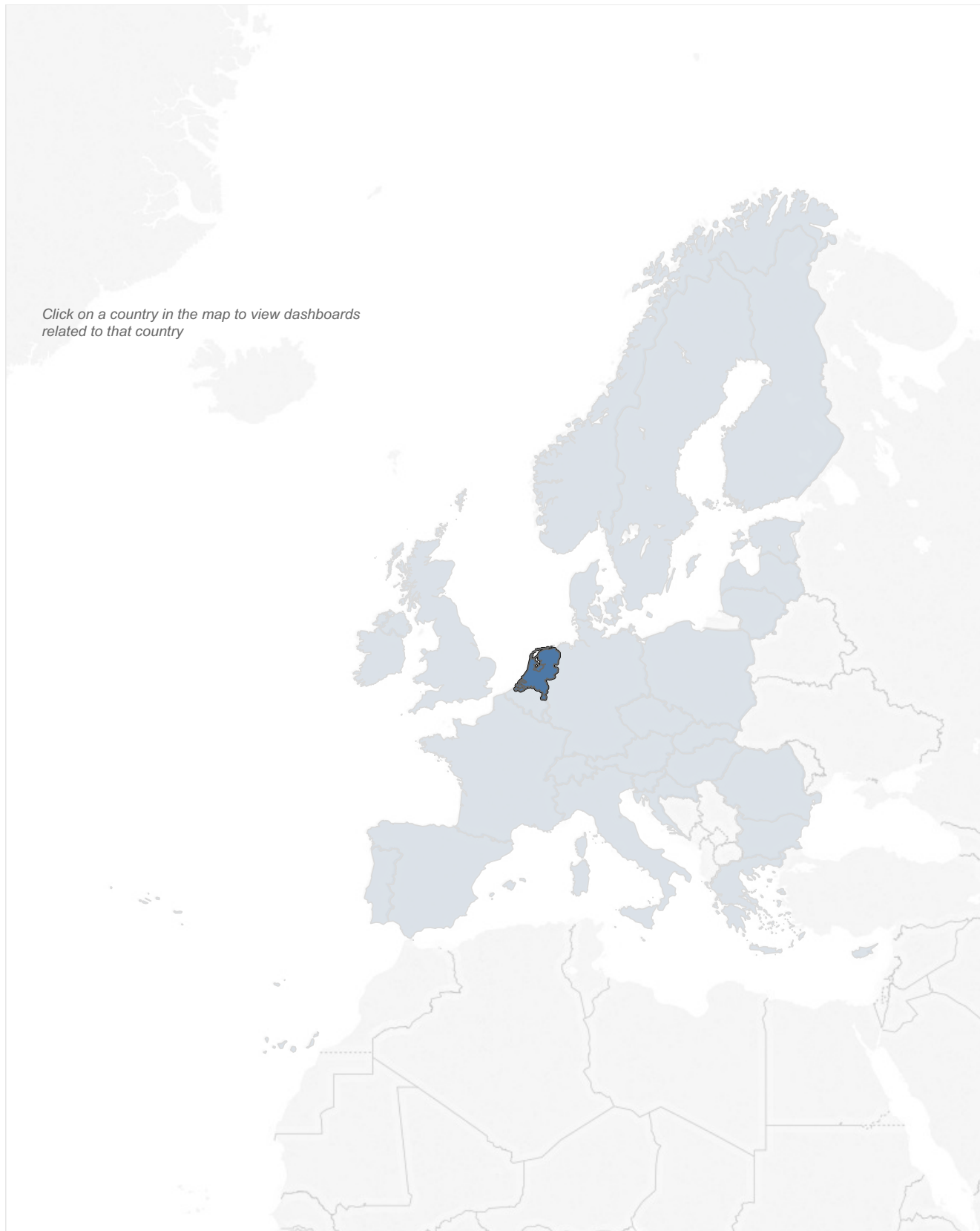


C&C by brand, 2013-2017 (bn cigarettes)



Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) KPMG calculates the split between C&C and Non-Domestic Legal by calculating the Non-Domestic Legal volumes and subtracting from the total inflows (b) In years 2014-2017 the Non-Domestic Legal analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) Additional information about the process for identifying Illicit Whites is provided in the appendix
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Countries included in this study



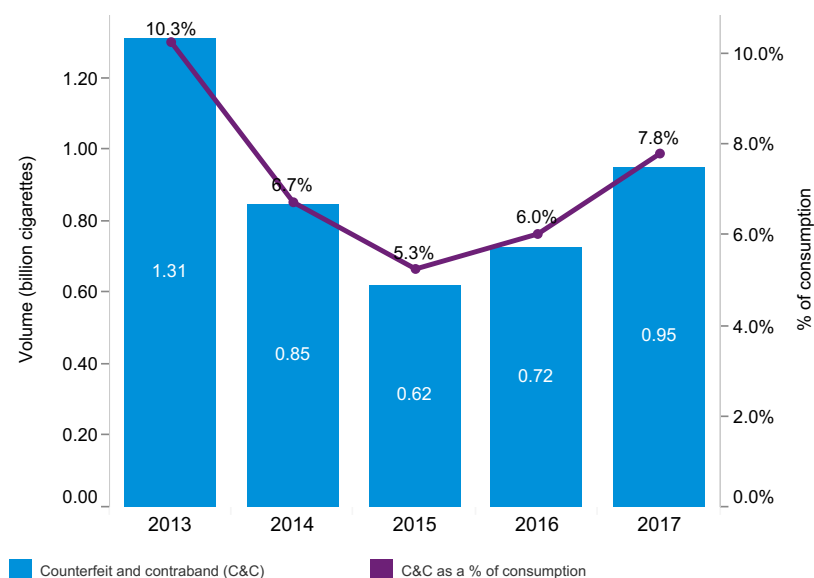
Netherlands



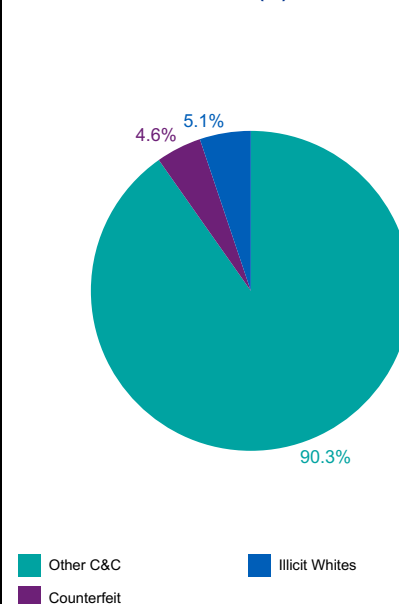
Overview

- The total C&C volume increased by 0.23 billion
- C&C represented 7.8% of total consumption, an increase of 1.8 percentage points
- A large proportion of C&C originated from Eastern European countries with lower prices, such as Russia, Ukraine and Romania
- 46% of non-domestic inflows in 2017 came from the top five sources. The remaining 54% of inflows came from a wide variety of source countries and together contributed to 85% of the non-domestic volume increase on 2016

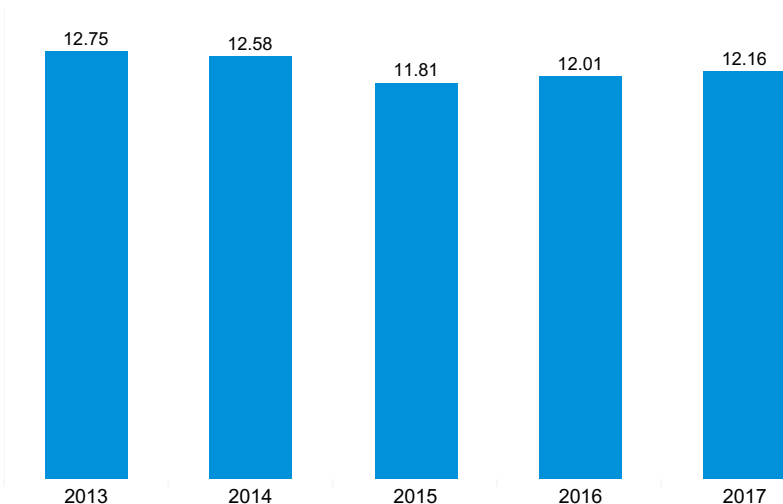
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



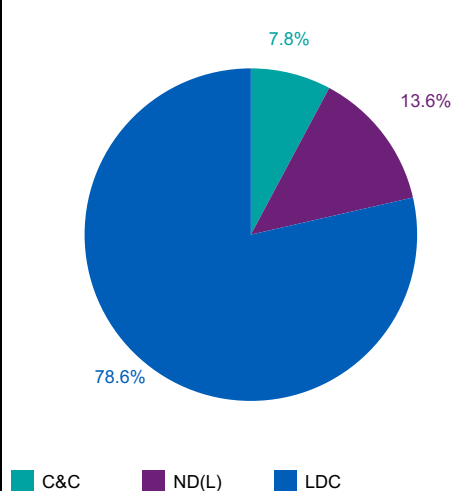
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows

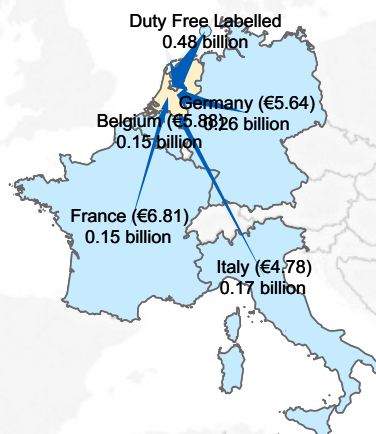


NETHERLANDS

Weighted average price: €6.16

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€223m** would have been raised in **NETHERLANDS**

Average prices of manufactured cigarettes in Netherlands increased by 1.8% in 2017



Highest inflows to the Netherlands were Duty Free labelled which account for 18% of total inflows

Country Colours

- Country of Study
- Source

Flow Colours

- Inflow to Country of Study

Country label format:

Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL NETHERLANDS CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	10.25	10.24	9.97	10.14	9.89	-2%
Outflows	-0.36	-0.32	-0.38	-0.30	-0.33	10%
Legal domestic consumption (LDC)	9.89	9.92	9.59	9.84	9.56	-3%
Non-domestic legal (ND(L))	1.54	1.81	1.60	1.45	1.66	14%
Counterfeit and contraband (C&C)	1.31	0.85	0.62	0.72	0.95	31%
Total non-domestic	2.85	2.66	2.22	2.17	2.61	20%
Total consumption	12.75	12.58	11.81	12.01	12.16	1%

- Non-domestic legal flows increased by 0.21 billion in 2017, supported by an increase in outbound tourism of 5%
 - In particular, Dutch travellers to Italy contributed to this increase, where cigarettes were on average €1.38 (per 20) less than the Netherlands
- Duty Free labelled continued to be the highest inflow into the Netherlands, representing a large amount of non-EU travel, especially by air through Schiphol Airport

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO NETHERLANDS

	2013	2014	2015	2016	2017
Duty Free Labelled	0.55	0.52	0.43	0.43	0.48
Germany	0.33	0.36	0.27	0.20	0.26
Italy	0.13	0.13	0.13	0.07	0.17
France	0.14	0.13	0.10	0.08	0.15
Belgium	0.38	0.28	0.29	0.37	0.15
Other	1.32	1.24	1.00	1.03	1.40
Total Inflows	2.85	2.66	2.22	2.17	2.61

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM NETHERLANDS

	2013	2014	2015	2016	2017
Germany	0.03	0.11	0.08	0.10	0.08
France	0.07	0.05	0.08	0.04	0.05
Ireland	0.01	0.01	0.01	0.02	0.04
UK	0.03	0.02	0.05	0.05	0.04
Belgium	0.17	0.08	0.10	0.06	0.04
Other	0.04	0.05	0.06	0.04	0.09
Total Outflows	0.36	0.32	0.38	0.30	0.33

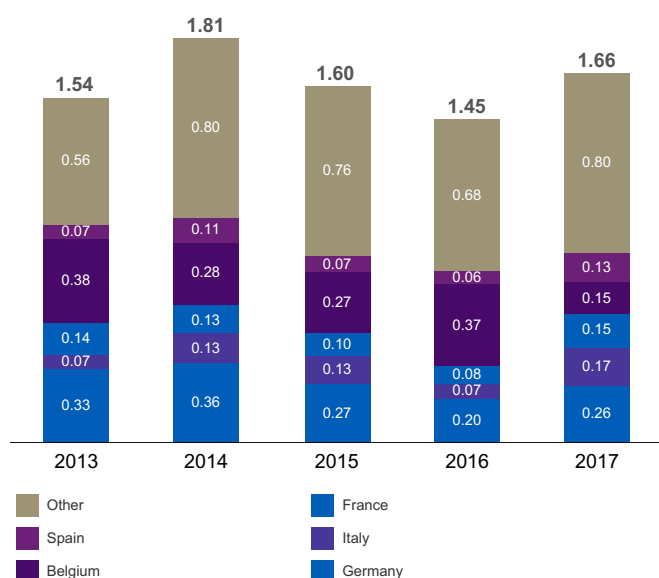
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ND(L) and C&C flows

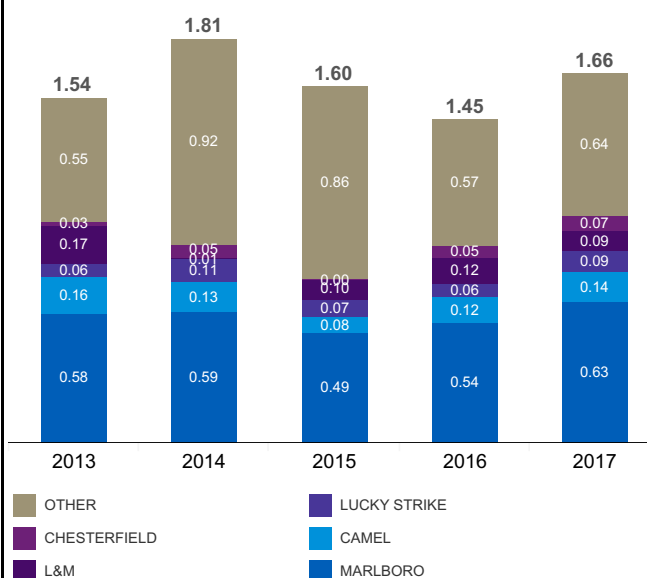
- Germany overtook Belgium as the highest source of non-domestic legal. This appeared to be influenced by Dutch trips to Germany increasing. Also the price rise in Belgium resulted in a smaller price gap between the Netherlands and Belgium
- C&C source countries (such as Russia, Ukraine and Romania) were those with significantly lower prices than the Netherlands where there was limited travel between countries



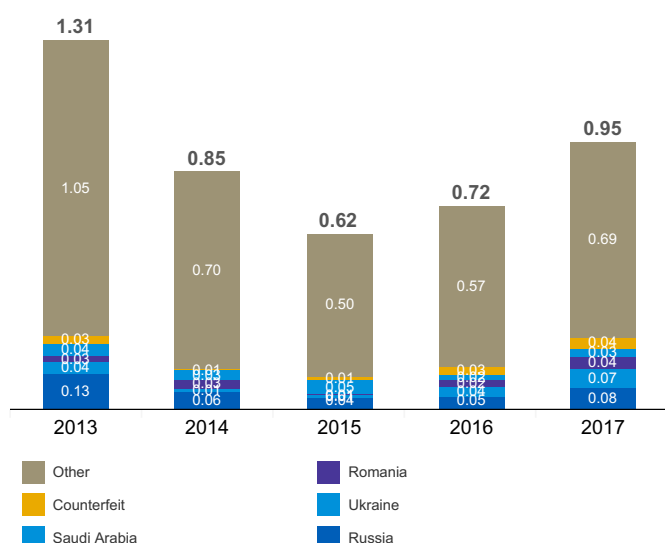
ND(L) by country of origin, 2013-2017 (bn cigarettes)



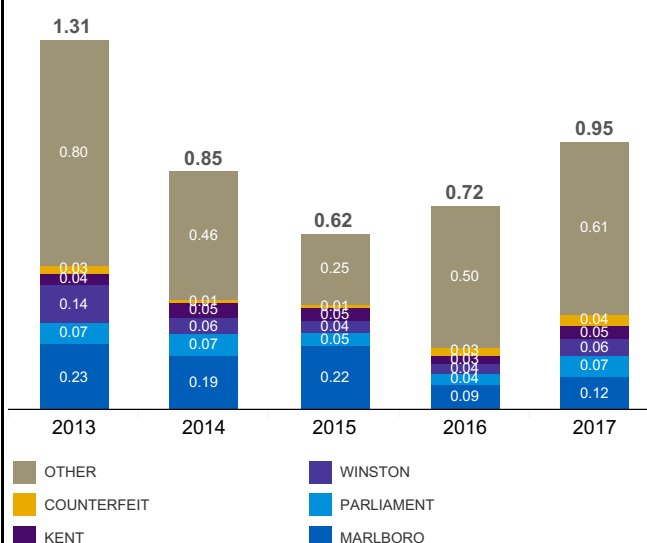
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



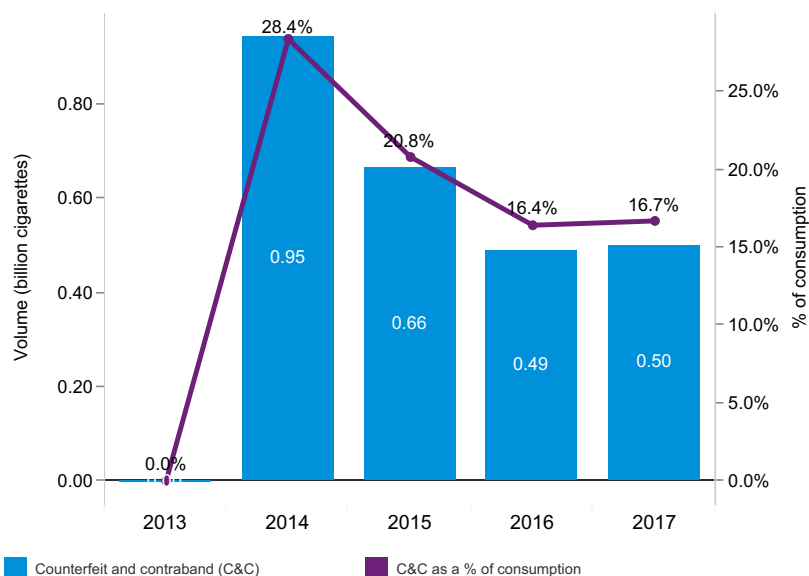
Norway



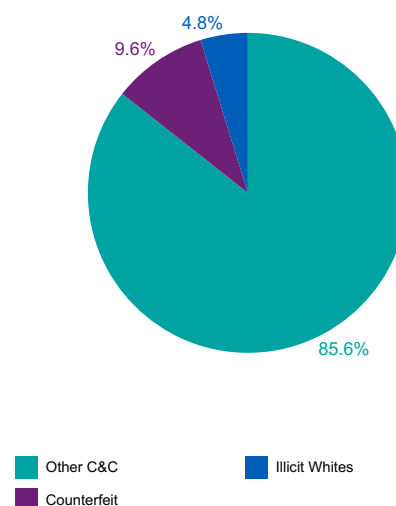
Overview

- C&C in Norway remained stable at 0.5 billion cigarettes, accounting for 16.7% of total consumption, as Norway continued to have the highest retail prices in the study
- Some of the largest C&C flows were from Romania, Lithuania and Poland, where there was no significant travel between these countries to support legal flows of cigarettes
- Most non-domestic consumption was non-domestic legal, which accounted for 62% of total non-domestic flows, the majority of which was Duty Free labelled or from Sweden

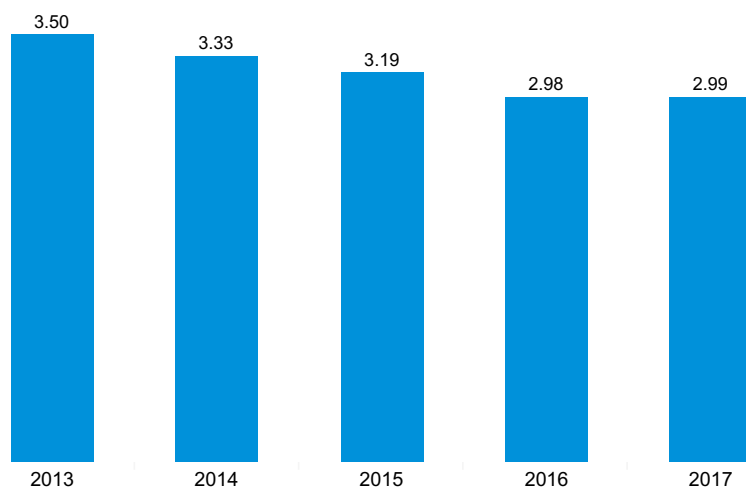
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



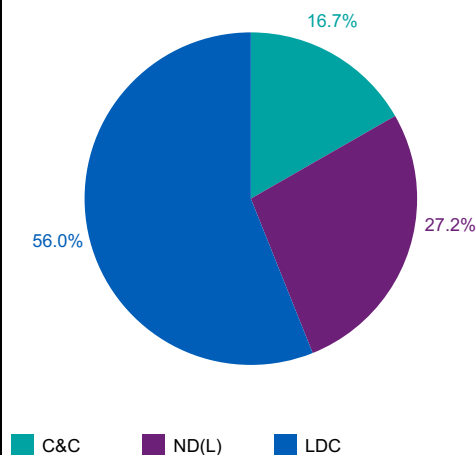
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



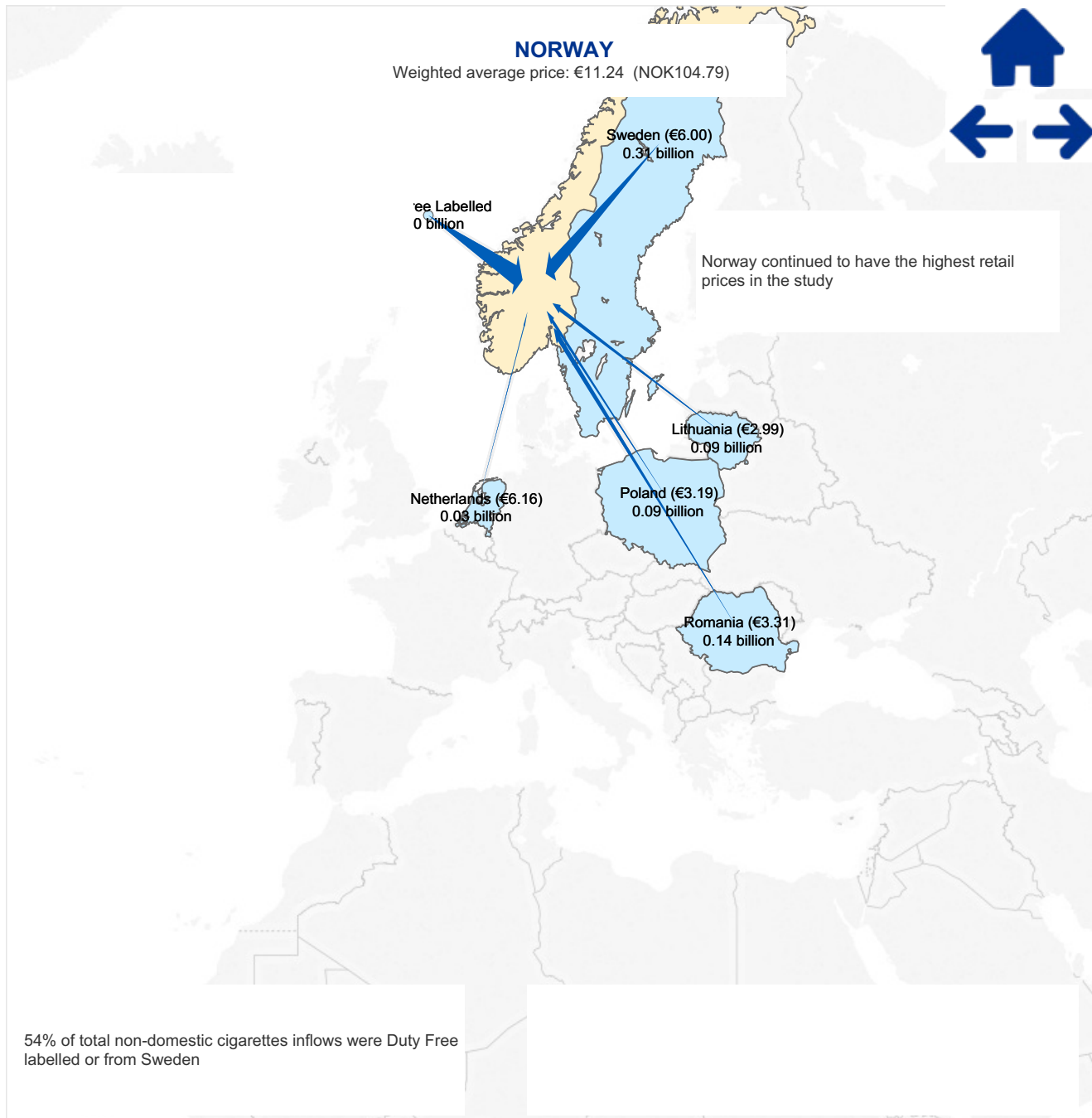
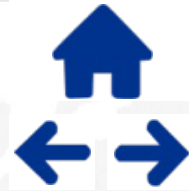
Breakdown of total consumption - 2017 (%)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Source

Flow Colours

- Inflow to Country of Study

Country label format:

Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model; KPMG analysis of WHO National taxes and retail price

Manufactured cigarette consumption, inflows and outflows



TOTAL NORWAY CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	1.83	1.79	1.77	1.72	1.72	0%
Outflows	-0.05	-0.03	-0.05	-0.04	-0.05	28%
Legal domestic consumption (LDC)	1.78	1.76	1.73	1.69	1.67	-1%
Non-domestic legal (ND(L))		0.63	0.80	0.81	0.81	1%
Counterfeit and contraband (C&C)	0.00	0.95	0.66	0.49	0.50	2%
Total non-domestic	1.72	1.57	1.46	1.30	1.31	1%
Total consumption	3.50	3.33	3.19	2.98	2.99	0%

- The highest inflows were from neighbouring Sweden and Duty Free
- Swedish flows were accounted for by a price difference of over €5 (47.4 NOK) and the high number of border crossings
- As Norway is not in the EU, all passengers travelling to Norway from any EU country can purchase 200 Duty Free cigarettes, accounting for the high volume of Duty Free flows in Norway; both flows were predominantly non-domestic legal
- Outflows were minimal owing to the high prices in Norway

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO NORWAY

	2013	2014	2015	2016	2017
Duty Free Labelled	0.50	0.45	0.41	0.40	0.40
Sweden	0.26	0.27	0.37	0.30	0.31
Romania	0.14	0.19	0.06	0.10	0.14
Lithuania	0.00	0.02	0.13	0.09	0.09
Poland	0.40	0.31	0.09	0.07	0.09
Other	0.42	0.34	0.39	0.33	0.28
Total Inflows	1.72	1.57	1.46	1.30	1.31

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM NORWAY

	2013	2014	2015	2016	2017
Sweden	0.00	0.00	0.00	0.01	0.01
Netherlands	0.01	0.02	0.01	0.00	0.01
UK	0.01	0.00	0.01	0.01	0.01
Ireland	0.00	0.00	0.00	0.00	0.00
Denmark	0.01	0.00	0.00	0.00	0.00
Other	0.01	0.01	0.01	0.01	0.01
Total Outflows	0.05	0.03	0.05	0.04	0.05

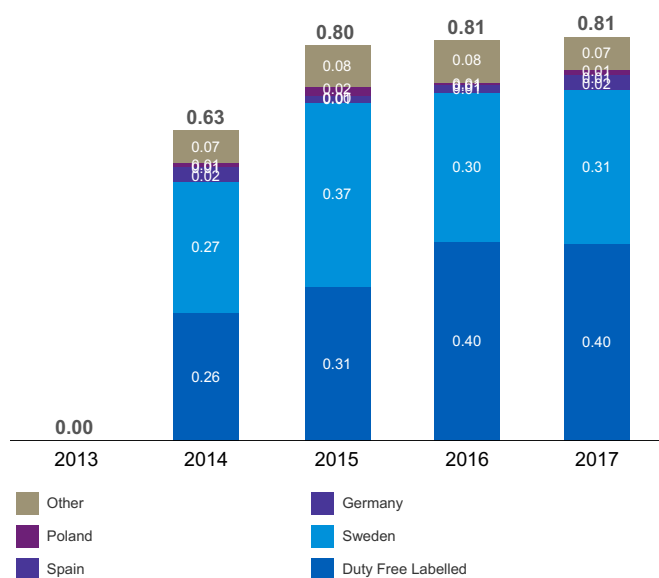
Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Illicit Whites with no country-specific labelling comprise Illicit Whites labelled as "Duty Free" and "Unspecified". Data from previous years reflects the same definition; please refer to the methodology (b) Duty Free and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and Unspecified labelling except the 2013 values (c) Norway was included for the first time in 2014
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; KPMG analysis of WHO National taxes and retail price; 'Smoking and tobacco consumption in Norway', Norwegian Institute of Public Health, 2017

ND(L) and C&C flows

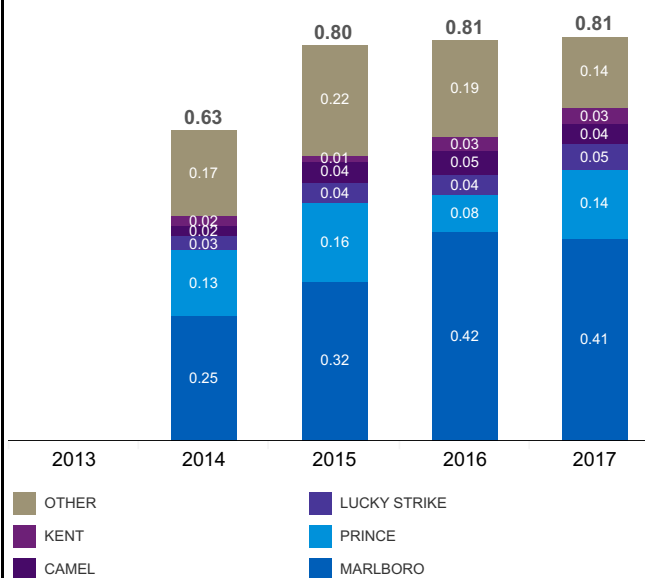
- C&C remained stable at 0.50 billion cigarettes
- C&C came from lower priced Eastern EU countries such as Romania and Lithuania
- Whilst there were travellers and migrant workers from these countries in Norway, the amount of travel between each country was low resulting in a large proportion of the flow being C&C



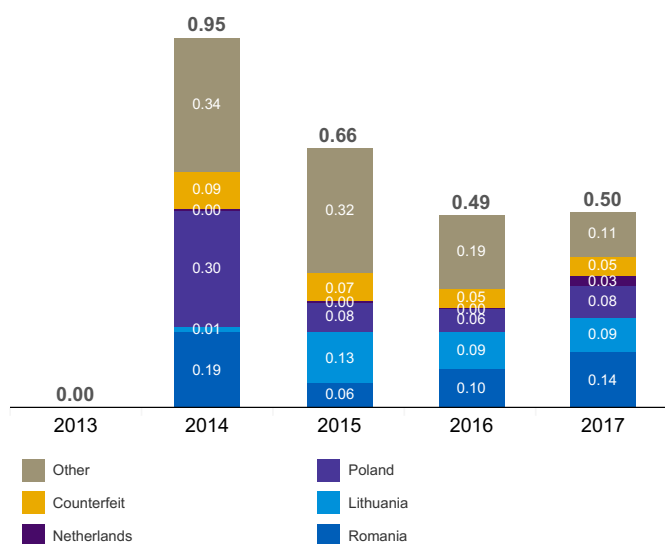
ND(L) by country of origin, 2013-2017 (bn cigarettes)



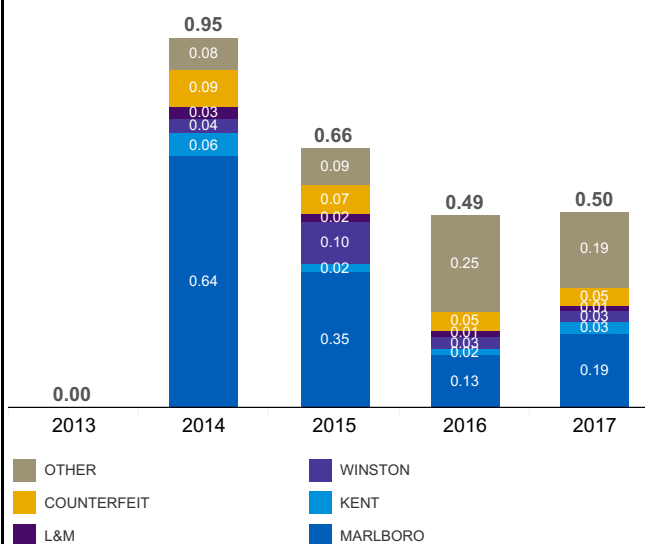
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)

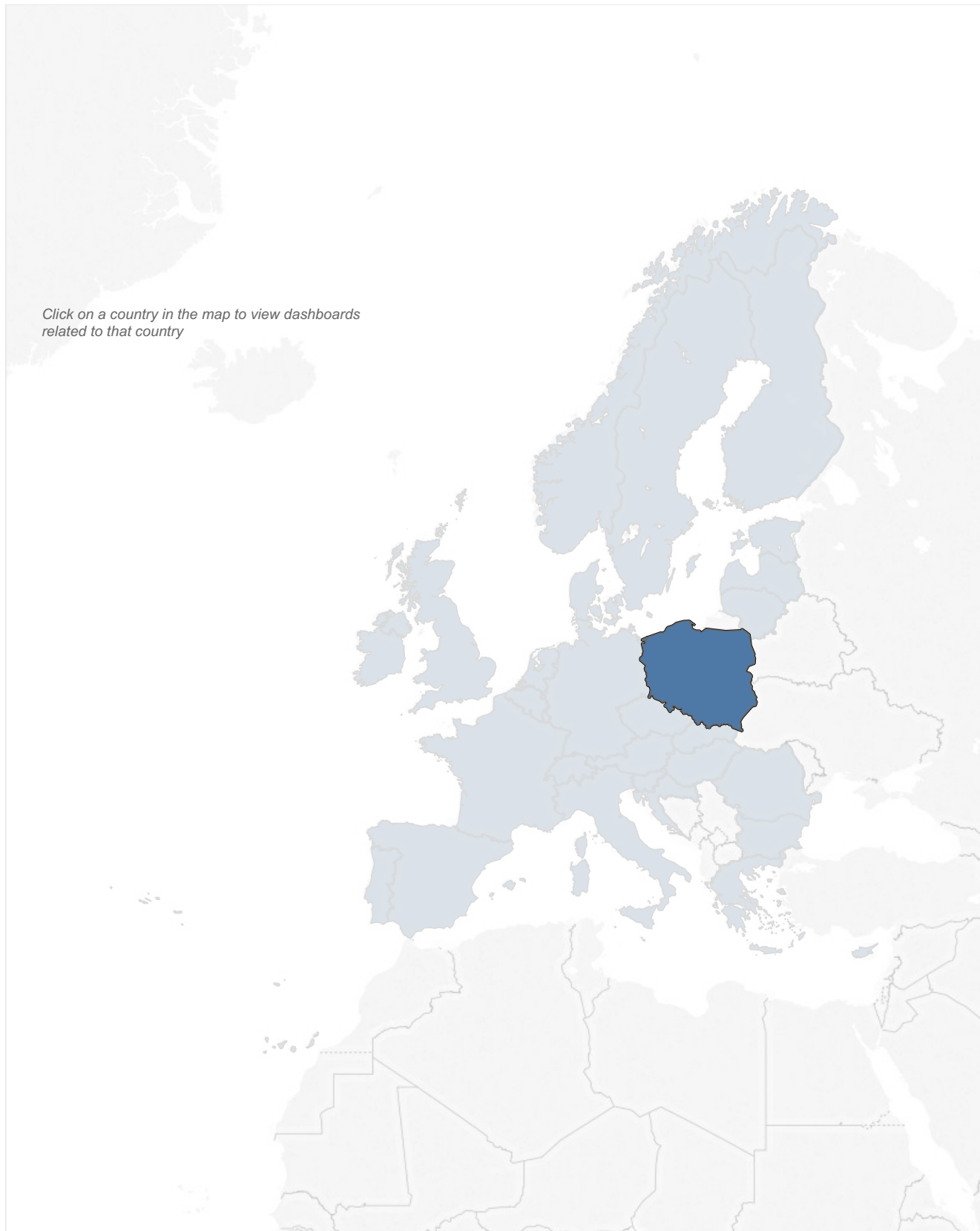


C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



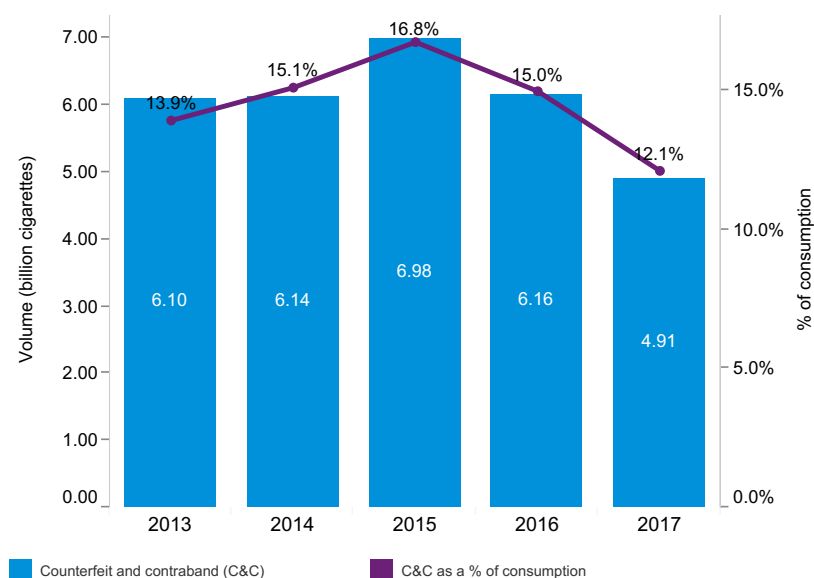
Poland



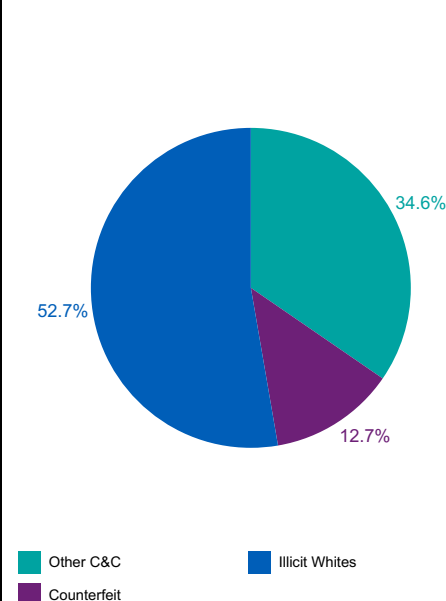
Overview

- The volume of C&C in Poland declined by 20%
- C&C consumption as a proportion of total consumption declined from 15% in 2016 to 12% in 2017
- The greatest volume decline came from Poland's largest sources, neighbouring non-EU countries Ukraine and Belarus, with C&C volume decreasing by 30% and 13% respectively
- The fall in C&C occurred alongside stricter regulation of tobacco supply chains and increased law enforcement activity

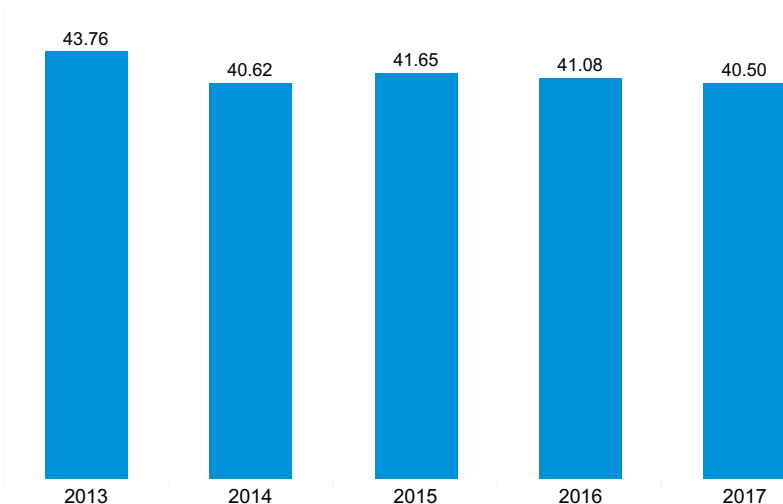
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



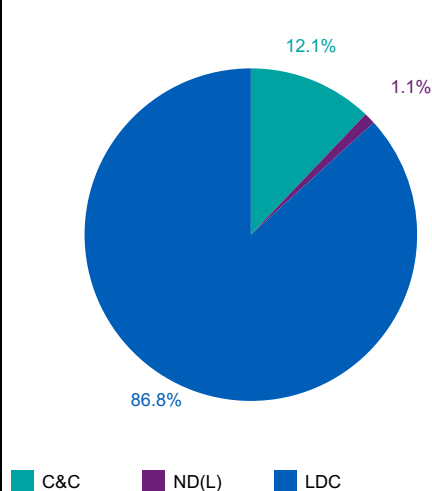
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



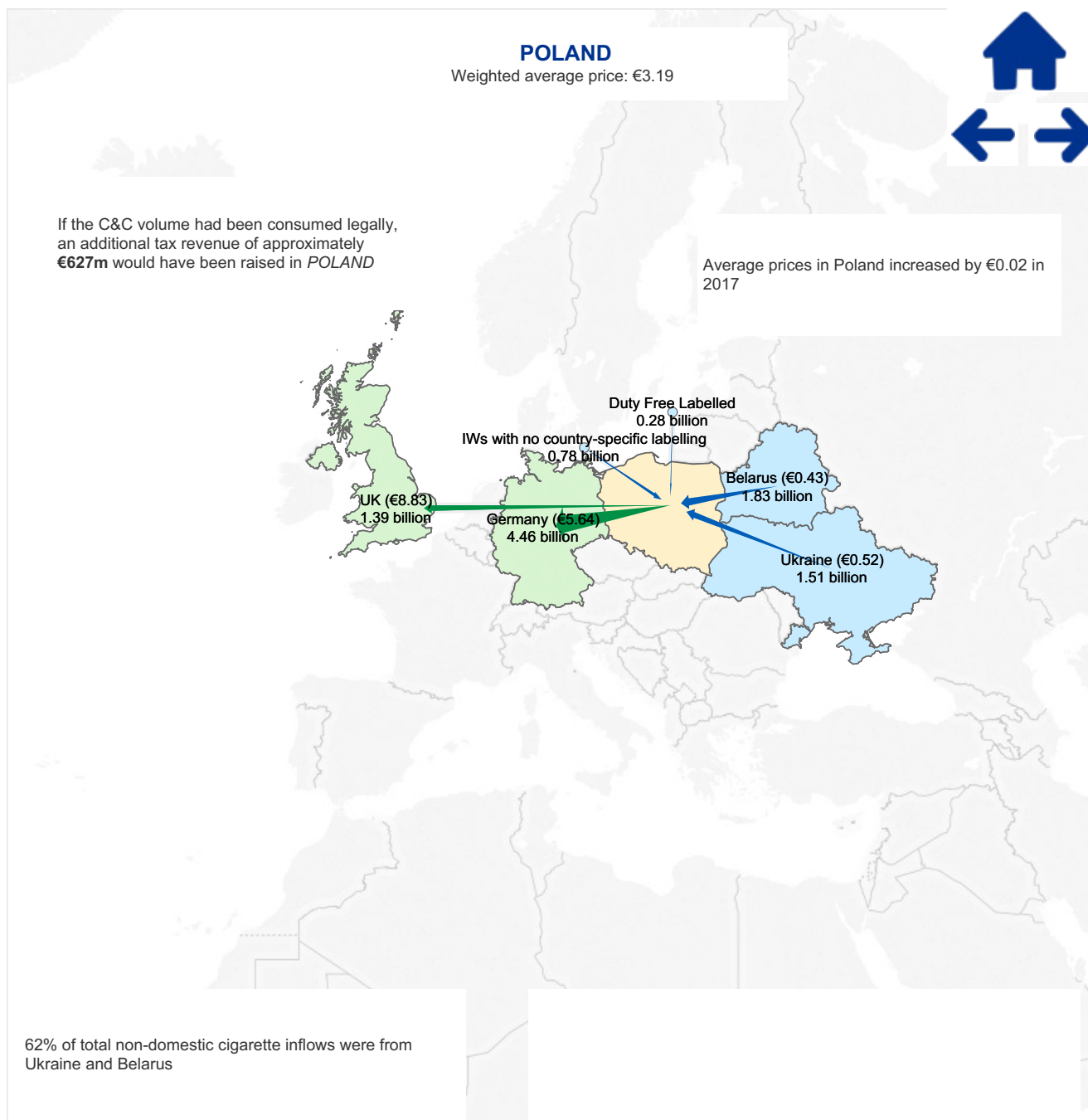
Breakdown of total consumption - 2017 (%)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers; 'SENT' system introduced in Poland', Mainfreight, May 2017; 'Poland smashes international tobacco smuggling gang', Radio Poland, February 2017

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

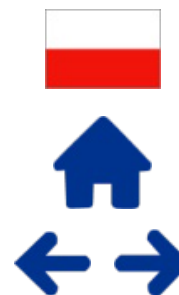
Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL POLAND CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	46.63	42.00	41.20	41.33	41.59	1%
Outflows	-9.39	-7.95	-6.97	-6.78	-6.44	-5%
Legal domestic consumption (LDC)	37.24	34.05	34.23	34.56	35.14	2%
Non-domestic legal (ND(L))	0.43	0.42	0.44	0.37	0.45	20%
Counterfeit and contraband (C&C)	6.10	6.14	6.98	6.16	4.91	-20%
Total non-domestic	6.52	6.56	7.42	6.53	5.35	-18%
Total consumption	43.76	40.62	41.65	41.08	40.50	-1%

- The Government increased law enforcement and made regulatory changes in 2017
- Total non-domestic and C&C flows decreased from both Ukraine and Belarus, although the price gap increased between Poland and these two countries
- Poland was also a large outflow market to neighbouring Germany and the UK where a large number of Polish people live and work, however, total volumes of outflows to the UK decreased by 8.3% and outflows to Germany declined by 2.6%

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO POLAND

	2013	2014	2015	2016	2017
Belarus	2.97	3.15	2.68	2.09	1.83
Ukraine	0.30	0.14	1.34	2.10	1.51
IWs with no country-specific labelling	1.04	1.25	1.46	0.94	0.78
Counterfeit	1.14	0.95	0.85	0.85	0.62
Duty Free Labelled	0.22	0.26	0.35	0.23	0.28
Other	0.85	0.82	0.74	0.32	0.32
Total Inflows	6.52	6.56	7.42	6.53	5.35

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM POLAND

	2013	2014	2015	2016	2017
Germany	7.54	5.67	4.79	4.57	4.46
UK	0.89	1.23	1.38	1.51	1.39
France	0.32	0.24	0.19	0.14	0.10
Ireland	0.16	0.11	0.12	0.11	0.10
Norway	0.00	0.31	0.09	0.07	0.09
Other	0.47	0.40	0.39	0.37	0.31
Total Outflows	9.39	7.95	6.97	6.78	6.44

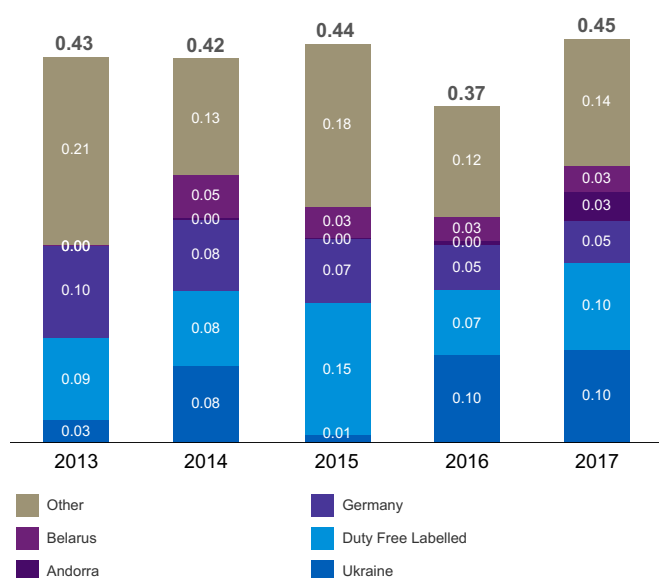
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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

ND(L) and C&C flows

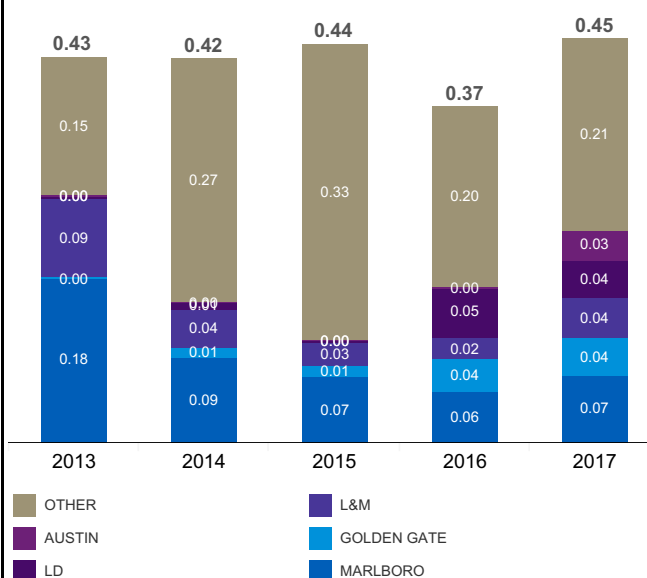
- Over half of the C&C in Poland came from Illicit Whites. Many of these had Belarusian labelling and were branded NZ, Minsk and Fest, all trademark owned by Grodno Tobacco; these three brands made up 25% of all C&C volume
- A third of non-domestic legal came from neighbouring Ukraine and Germany. Despite the introduction of visa free access to Schengen countries in May 2017, following the introduction of Ukrainian biometric Passports, traveller numbers from the Ukraine did not increase, and non-domestic legal remained stable



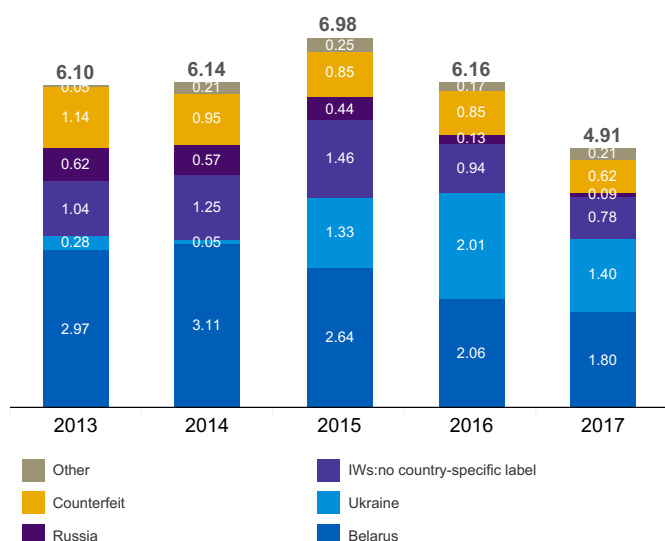
ND(L) by country of origin, 2013-2017 (bn cigarettes)



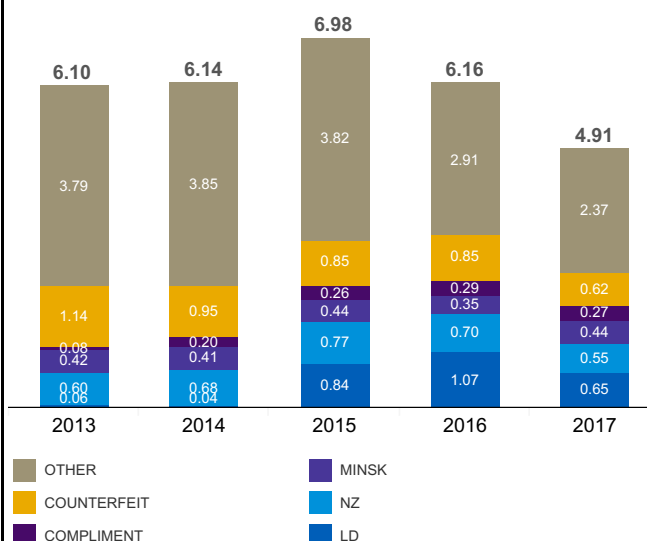
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



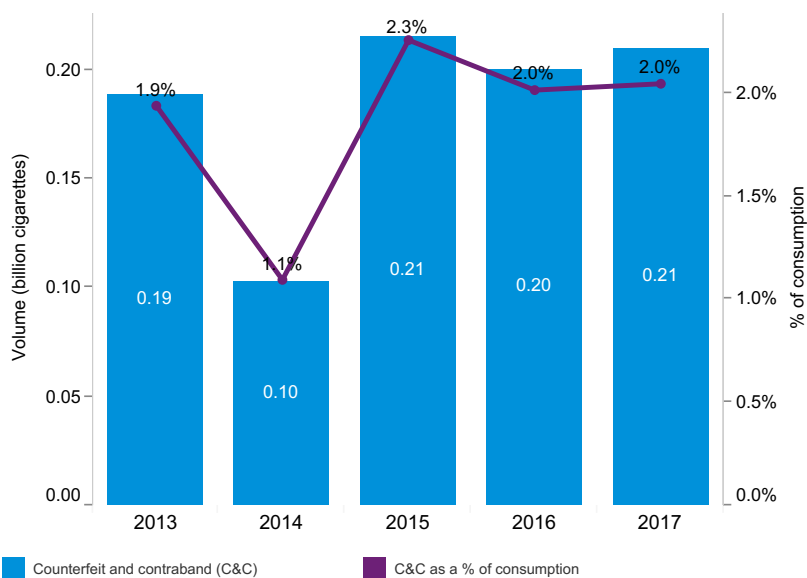
Portugal



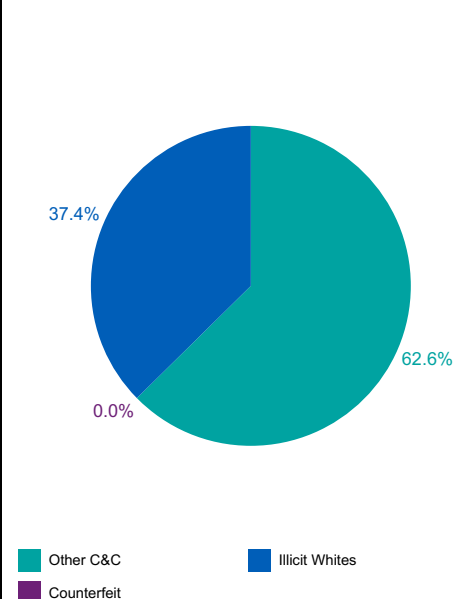
Overview

- Illicit cigarette consumption increased from 2% in 2016 to 2.3% in 2017 but remained one of the lowest in the EU
- Illicit whites with no country specific labelling was the largest source of illicit cigarettes and formed 48.1% of total C&C
- Manufactured cigarette consumption increased from 9.9 billion in 2016 to 10.3 billion in 2017 driven by increases in both legal domestic consumption and C&C

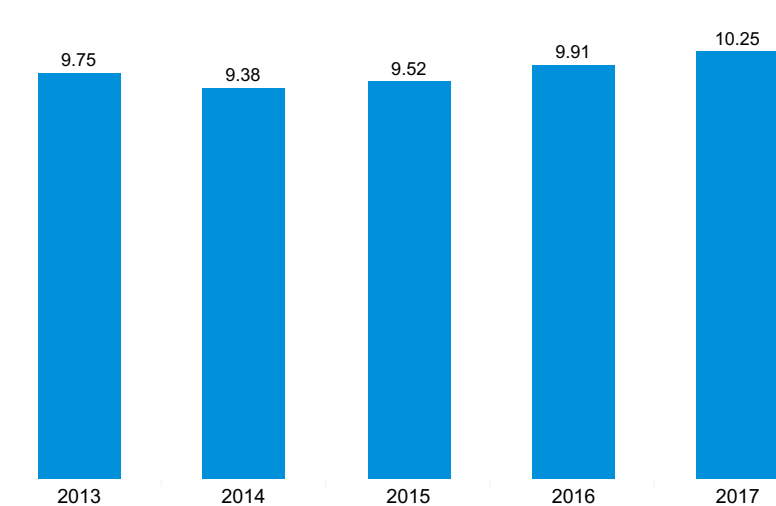
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



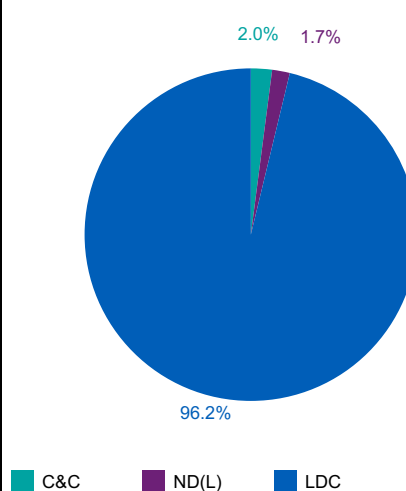
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



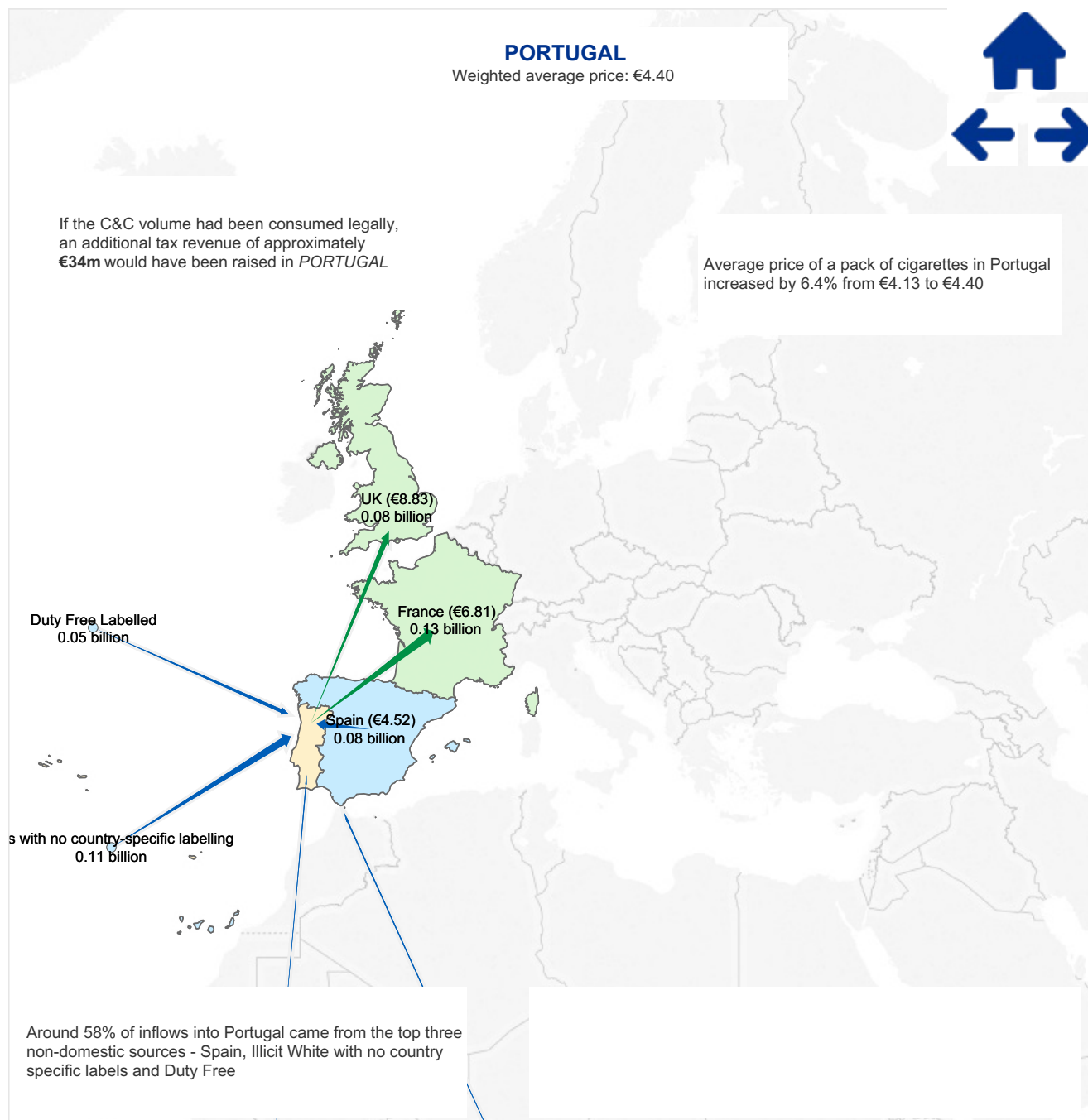
Breakdown of total consumption - 2017 (%)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL PORTUGAL CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	10.04	9.56	9.77	10.06	10.23	2%
Outflows	-0.52	-0.41	-0.60	-0.49	-0.37	-25%
Legal domestic consumption (LDC)	9.52	9.15	9.18	9.57	9.86	3%
Non-domestic legal (ND(L))	0.03	0.13	0.13	0.14	0.18	25%
Counterfeit and contraband (C&C)	0.19	0.10	0.21	0.20	0.21	5%
Total non-domestic	0.22	0.23	0.34	0.34	0.39	13%
Total consumption	9.75	9.38	9.52	9.91	10.25	3%

- Spain continued to be one of the largest sources of non-domestic inflows (0.08 billion) and outflows (0.05 billion), reflective of the number of border crossings made between these countries
- Outflows from Portugal to France declined by 0.15 billion, as fewer Portuguese-labelled cigarettes were identified in France. Portugal is a popular holiday destination for France, which accounts for the large flow

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO PORTUGAL

	2013	2014	2015	2016	2017
IWs with no country-specific labelling	0.01	0.04	0.07	0.05	0.11
Spain	0.00	0.04	0.03	0.06	0.08
Duty Free Labelled	0.07	0.04	0.05	0.05	0.05
Angola	0.01	0.00	0.07	0.04	0.02
Guinea	0.01	0.01	0.00	0.00	0.02
Other	0.12	0.11	0.12	0.14	0.10
Total Inflows	0.22	0.23	0.34	0.34	0.39

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM PORTUGAL

	2013	2014	2015	2016	2017
France	0.30	0.21	0.34	0.28	0.13
UK	0.07	0.06	0.07	0.07	0.08
Spain	0.03	0.02	0.03	0.03	0.05
Ireland	0.02	0.02	0.02	0.02	0.03
Netherlands	0.03	0.04	0.03	0.02	0.02
Other	0.07	0.06	0.11	0.07	0.06
Total Outflows	0.52	0.41	0.60	0.49	0.37

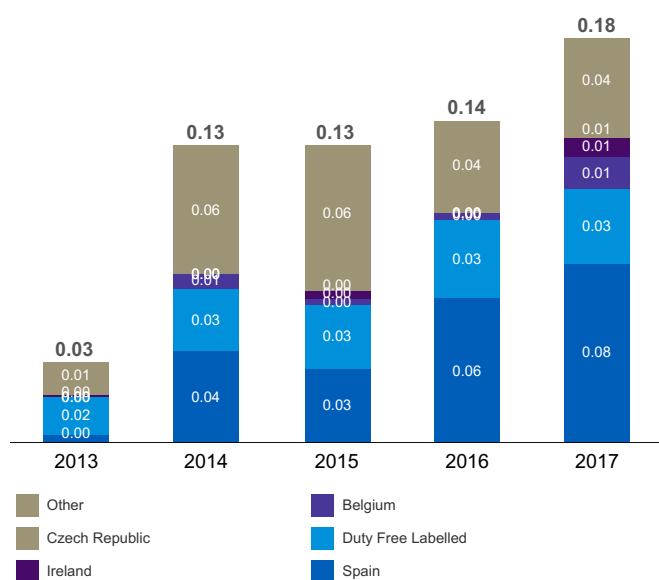
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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

ND(L) and C&C flows

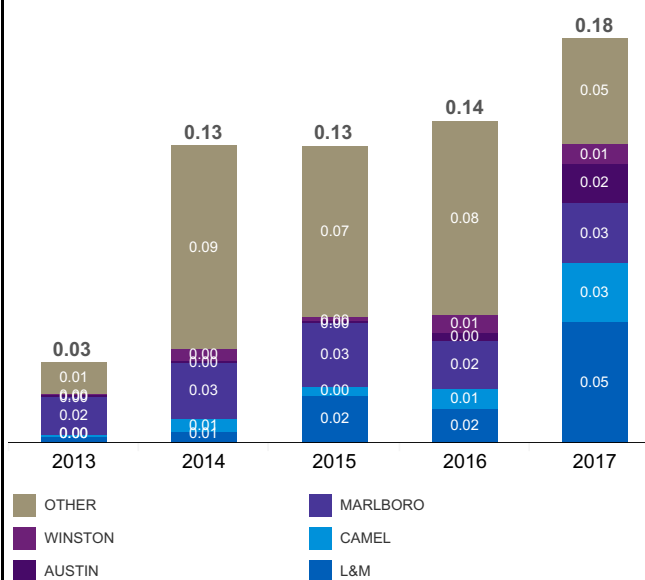
- Non-domestic legal was mainly supported by traveller flows from countries where Portugal is a popular holiday destination, including Spain, Belgium and France
- Illicit Whites accounted for 48.1% of all C&C



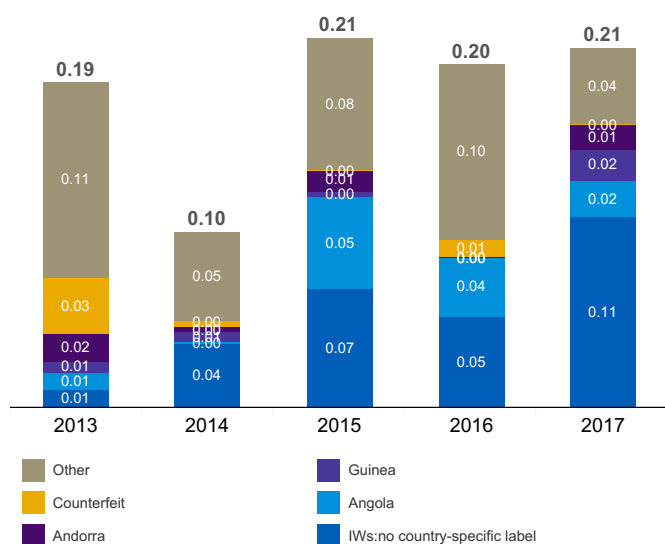
ND(L) by country of origin, 2013-2017 (bn cigarettes)



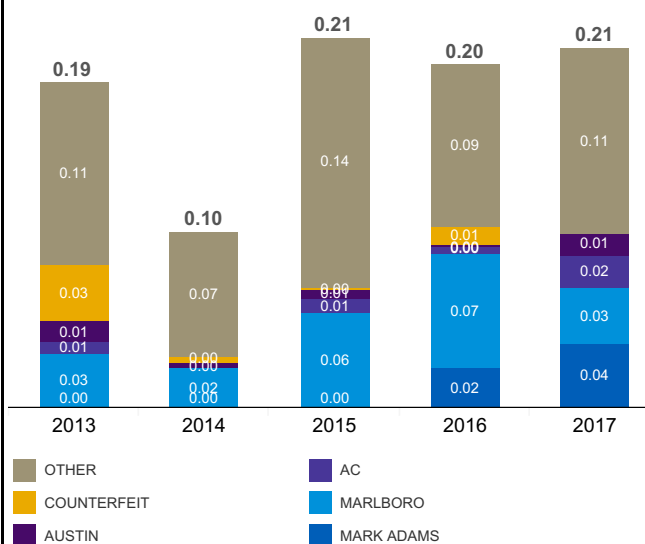
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



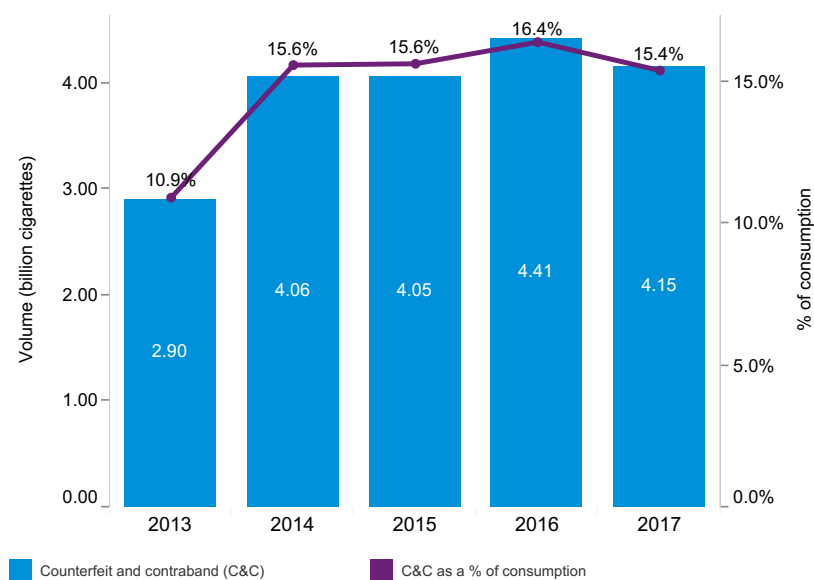
Romania



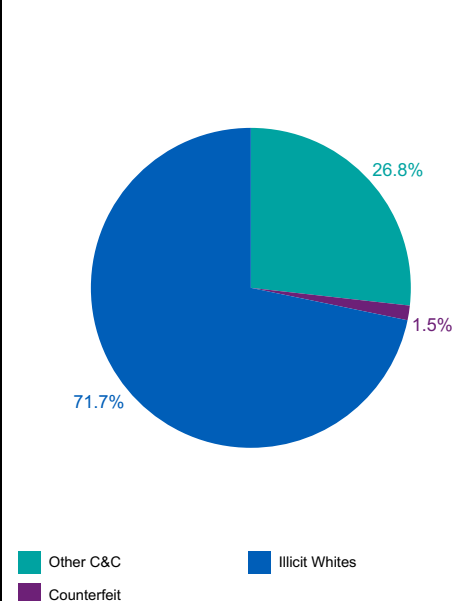
Overview

- Romanian C&C remained at over 15% of overall consumption
- There was a volume decline of C&C from 4.41 billion cigarettes to 4.15 billion, alongside increased law enforcement activities
- Illicit Whites with no country specific labelling remained the largest source of C&C, along with flows from lower-priced neighbours Moldova and Ukraine

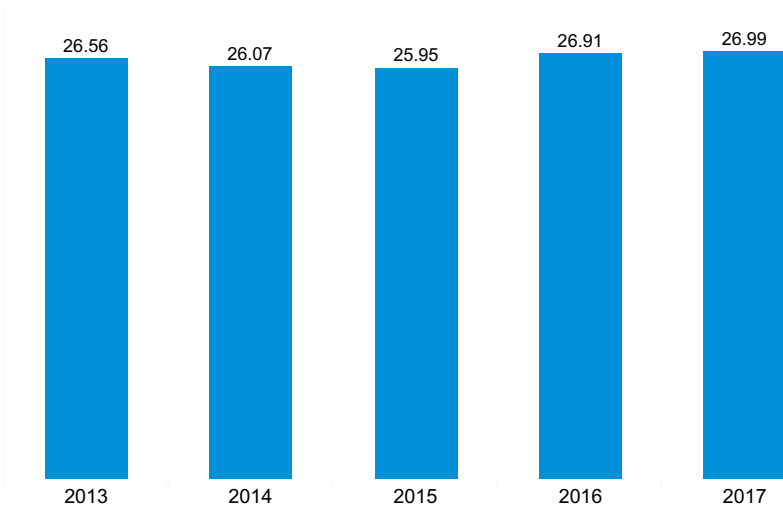
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



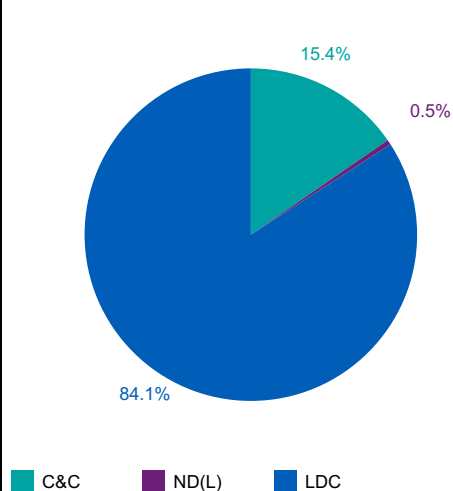
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows

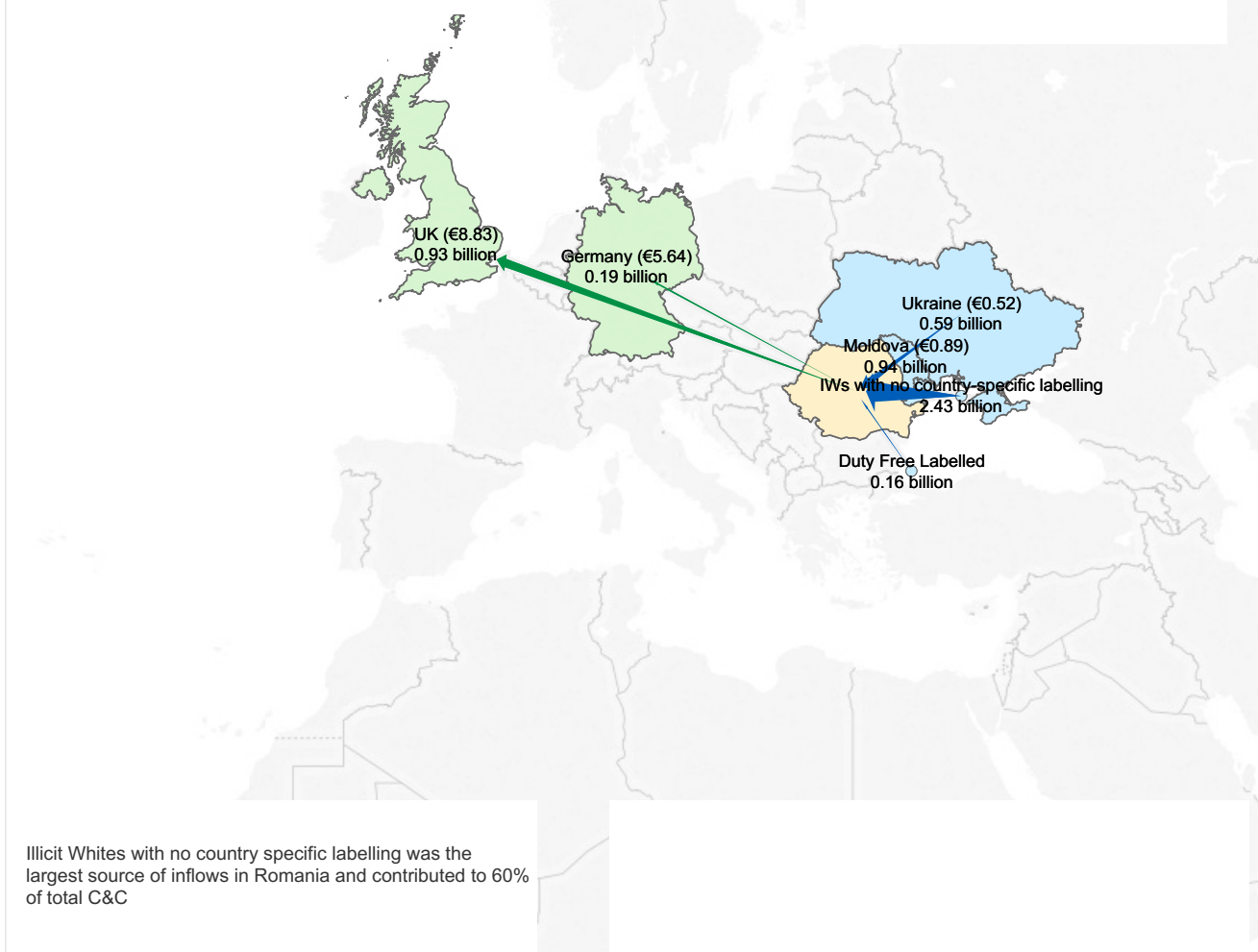


ROMANIA

Weighted average price: €3.31 (LEI15.11)

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€508m (LEI2,316m)** would have been raised in ROMANIA

Average price of a pack of cigarettes in Romania increased by 1.7% from €3.26 to €3.31



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL ROMANIA CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	24.49	23.37	23.80	24.13	24.51	2%
Outflows	-1.21	-1.45	-2.00	-1.73	-1.80	4%
Legal domestic consumption (LDC)	23.28	21.92	21.80	22.40	22.71	1%
Non-domestic legal (ND(L))	0.38	0.09	0.10	0.11	0.13	21%
Counterfeit and contraband (C&C)	2.90	4.06	4.05	4.41	4.15	-6%
Total non-domestic	3.27	4.15	4.15	4.51	4.28	-5%
Total consumption	26.56	26.07	25.95	26.91	26.99	0%

- Total consumption remained stable as volume declines in C&C were replaced by increases in legal domestic sales
- Decline in C&C was accompanied by seizures of approximately 149 million illicit cigarettes in 2017
- The neighbouring lower-priced countries of Ukraine and Moldova, where cigarettes on average cost less than €1, were the largest identifiable source countries
- Outflows were mainly to the more expensive Western European markets, in particular to UK where over 80,000 Romanians settled in 2017

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO ROMANIA

	2013	2014	2015	2016	2017
IWs with no country-specific labelling	0.41	1.48	2.26	2.66	2.43
Moldova	0.76	0.77	0.72	0.64	0.94
Ukraine	0.07	0.02	0.25	0.85	0.59
Duty Free Labelled	0.76	0.63	0.15	0.09	0.16
Counterfeit	0.47	0.88	0.00	0.00	0.06
Other	0.80	0.37	0.77	0.27	0.10
Total Inflows	3.27	4.15	4.15	4.51	4.28

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM ROMANIA

	2013	2014	2015	2016	2017
UK	0.05	0.17	0.71	0.67	0.93
Germany	0.14	0.14	0.13	0.15	0.19
France	0.66	0.57	0.72	0.49	0.17
Norway	0.00	0.19	0.06	0.10	0.14
Ireland	0.09	0.06	0.08	0.08	0.10
Other	0.27	0.31	0.30	0.23	0.27
Total Outflows	1.21	1.45	2.00	1.73	1.80

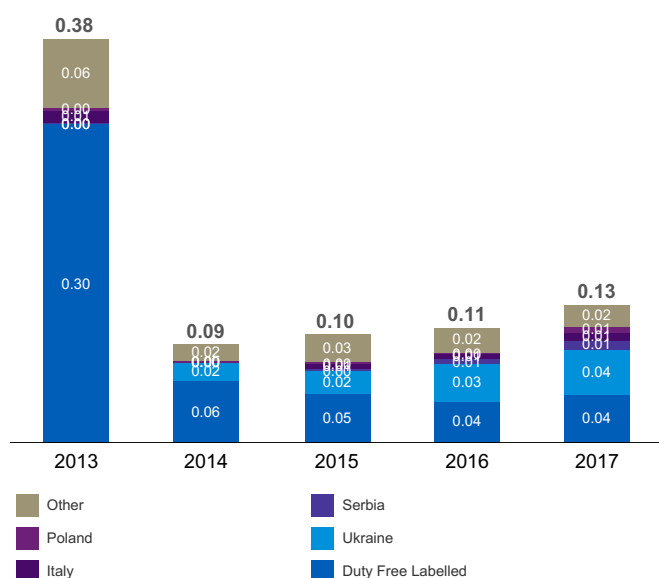
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ND(L) and C&C flows

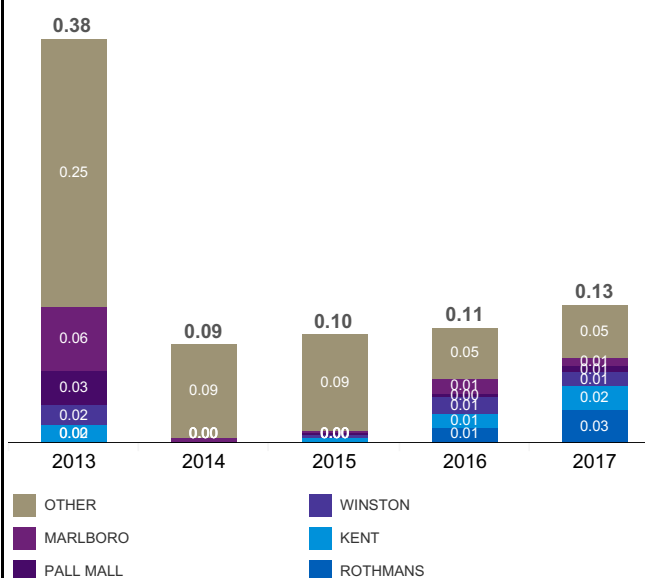


- Over 60% of C&C came from Illicit Whites with no country specific labelling
- Marble and Ashima remained the largest Illicit White brands. These brands have limited legal distribution in Romania and are therefore sold illegally avoiding tax payments
- The total volume of illicit cigarettes from Ukraine and Moldova remained at 1.5 billion; however, a significant decrease in C&C from Ukraine was accompanied by an equivalent increase from Moldova
- Given the number of travellers who cross the border from Ukraine and Moldova and the limit of two packs of cigarettes per traveller, the volume identified from these countries was higher than could be accounted for by travellers bringing the legal limit, resulting in a high proportion of C&C

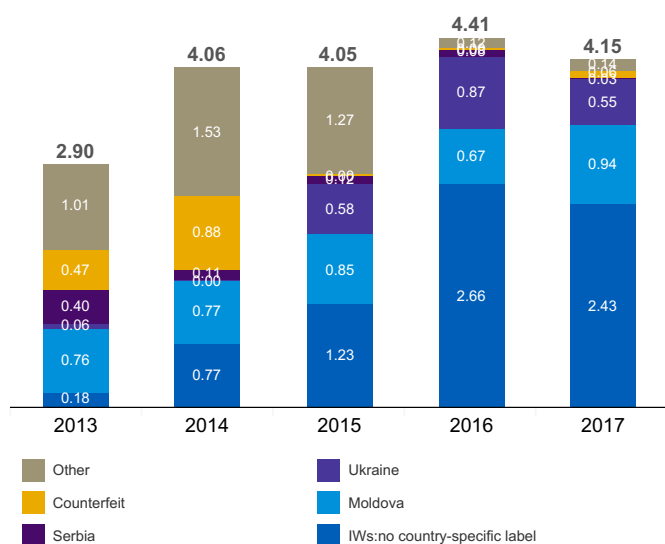
ND(L) by country of origin, 2013-2017 (bn cigarettes)



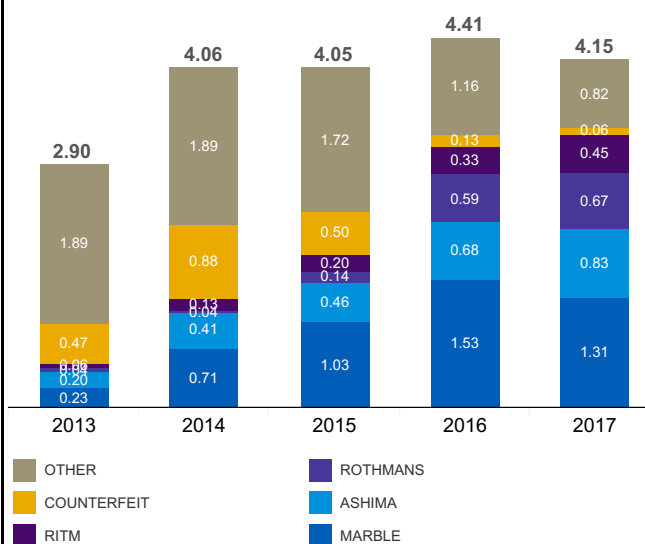
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



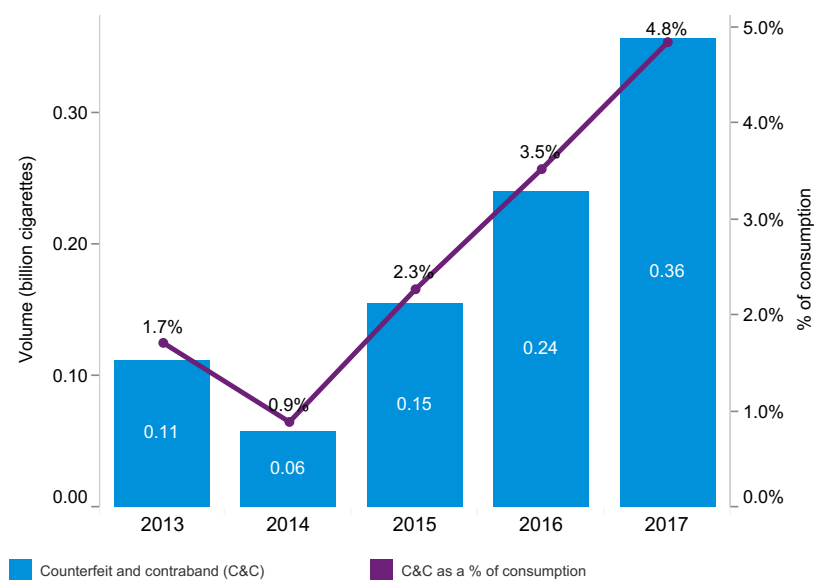
Slovakia



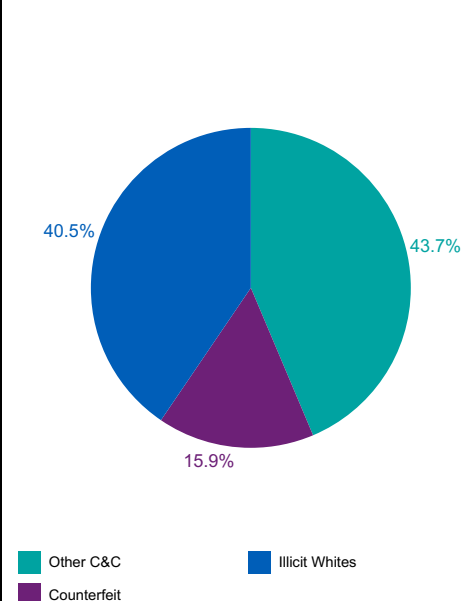
Overview

- C&C rose to 4.8% as a proportion of total consumption in Slovakia in 2017
- C&C volumes increased by 0.12 billion sticks in 2017, with increases in Illicit Whites with no country-specific labelling and Ukraine flows, making up 58% of the total increase

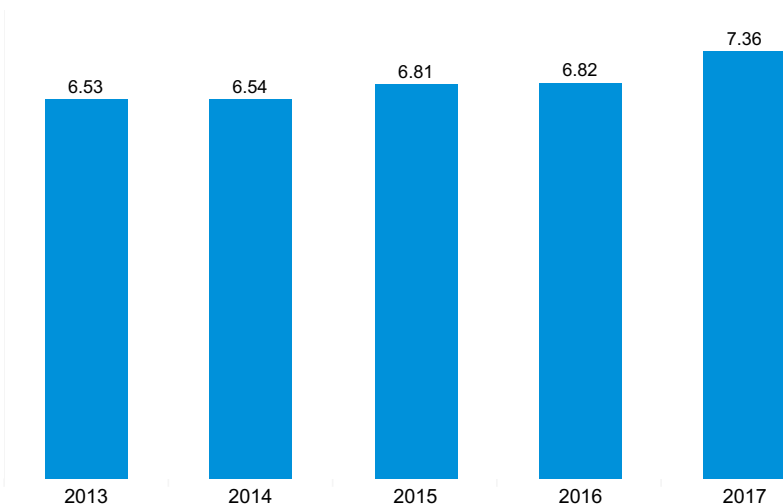
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



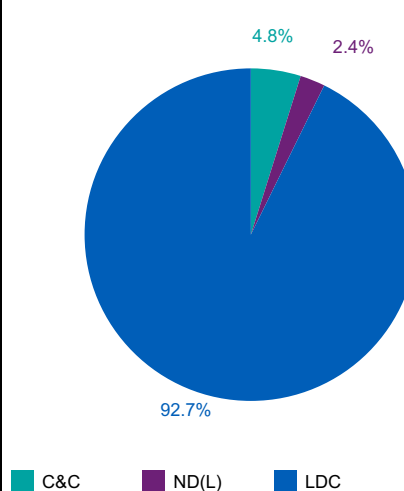
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



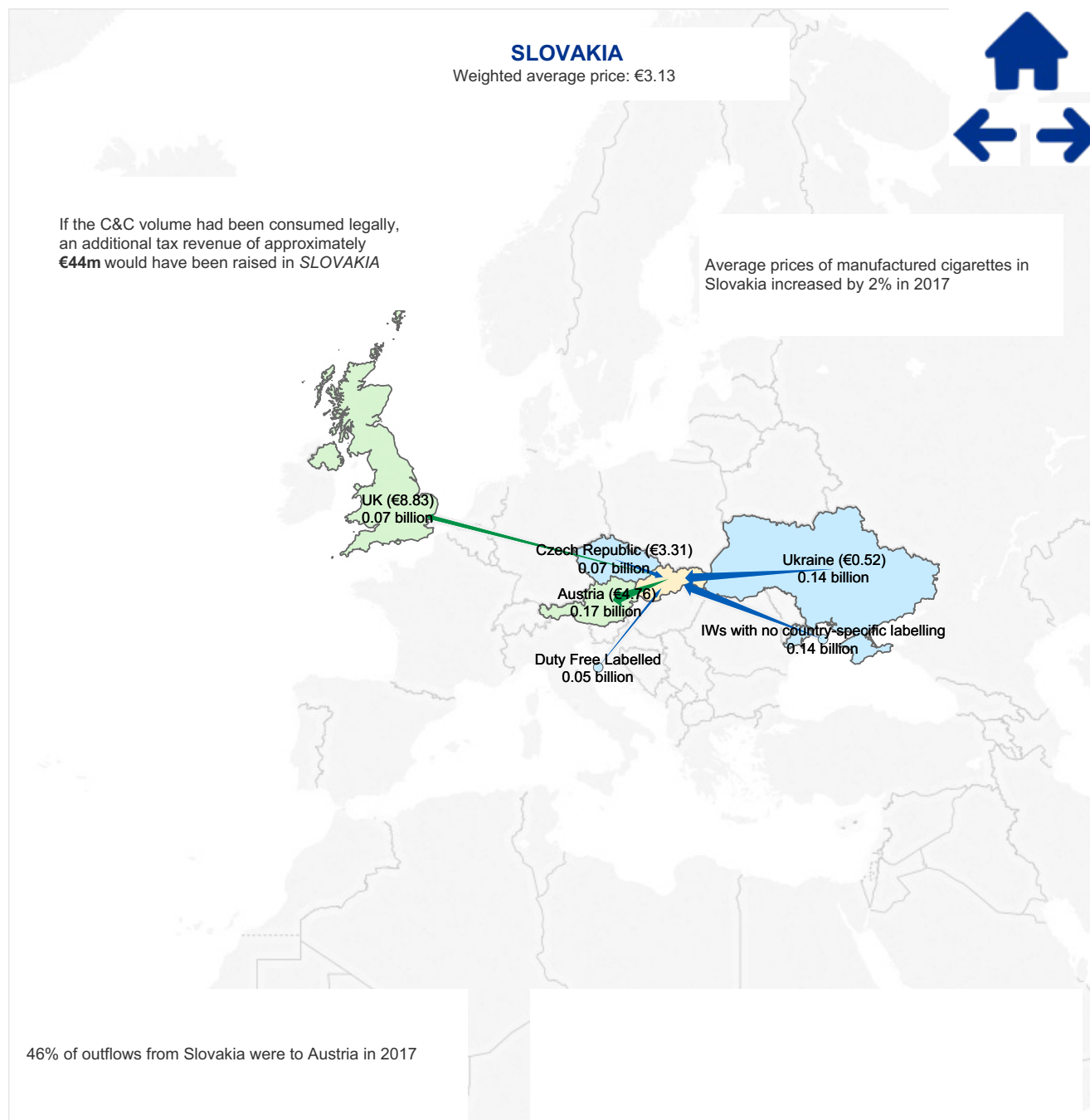
Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL SLOVAKIA CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	6.64	6.63	6.82	6.84	7.20	5%
Outflows	-0.29	-0.18	-0.29	-0.37	-0.37	1%
Legal domestic consumption (LDC)	6.35	6.45	6.53	6.47	6.83	5%
Non-domestic legal (ND(L))	0.07	0.03	0.12	0.10	0.18	73%
Counterfeit and contraband (C&C)	0.11	0.06	0.15	0.24	0.36	49%
Total non-domestic	0.18	0.08	0.28	0.34	0.53	56%
Total consumption	6.53	6.54	6.81	6.82	7.36	8%

- Outflows to Austria increased by 0.04 billion, with average price differences reaching almost €1.63
- Consistent improvement in the economy and a declining rate of unemployment may have led to consumers switching from fine cut to cigarettes

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO SLOVAKIA

	2013	2014	2015	2016	2017
Ukraine	0.02	0.00	0.06	0.11	0.14
IWs with no country-specific labelling	0.09	0.03	0.07	0.09	0.14
Czech Republic	0.02	0.01	0.04	0.03	0.07
Counterfeit	0.01	0.01	0.05	0.04	0.06
Duty Free Labelled	0.00	0.00	0.02	0.03	0.05
Other	0.04	0.03	0.04	0.06	0.09
Total Inflows	0.18	0.08	0.28	0.34	0.53

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM SLOVAKIA

	2013	2014	2015	2016	2017
Austria	0.04	0.06	0.09	0.13	0.17
UK	0.02	0.01	0.03	0.09	0.07
Germany	0.09	0.05	0.05	0.05	0.06
Czech Republic	0.02	0.02	0.03	0.03	0.02
Netherlands	0.00	0.01	0.01	0.01	0.02
Other	0.11	0.03	0.08	0.06	0.05
Total Outflows	0.29	0.18	0.29	0.37	0.37

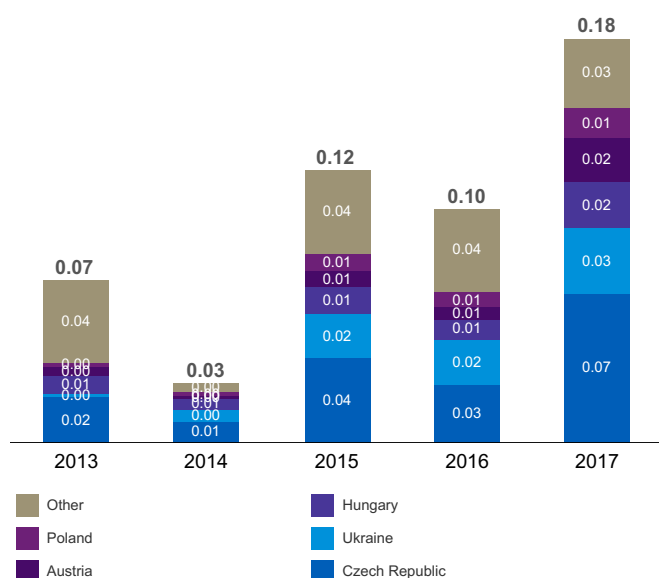
Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Illicit Whites with no country-specific labelling comprise Illicit Whites labelled as "Duty Free" and "Unspecified". Data from previous years reflects the same definition; please refer to the methodology (b) Duty Free and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and Unspecified labelling except the 2013 values (c) Norway was included for the first time in 2014
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); Tobacco in Slovakia, Euromonitor, July 2017; Unemployment Rates, Euromonitor, 2017

ND(L) and C&C flows

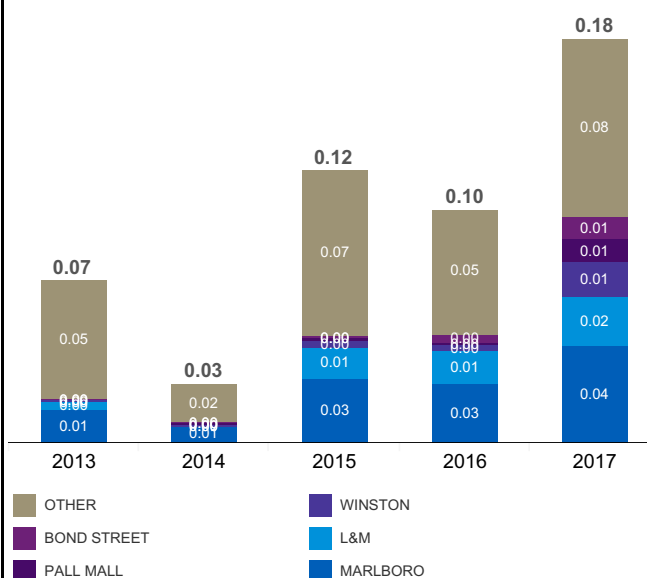
- Illicit Whites with no country specific labelling accounted for 39% of C&C
- Jin Ling, trademark-owned by Baltic Tobacco, accounted for 33% of the total C&C in Slovakia in 2017
- Counterfeit volumes increased by 50%, but remained stable in proportion of total C&C in 2017



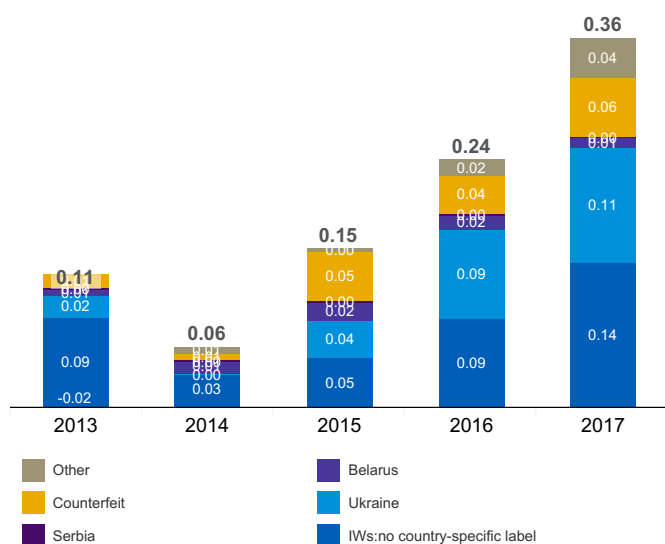
ND(L) by country of origin, 2013-2017 (bn cigarettes)



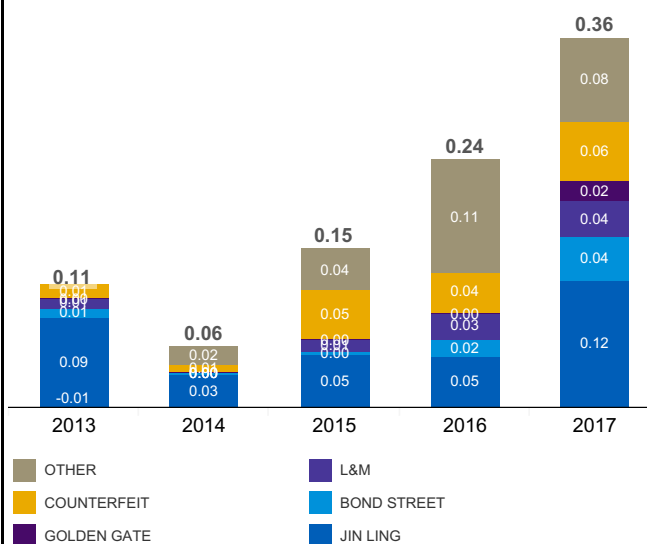
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



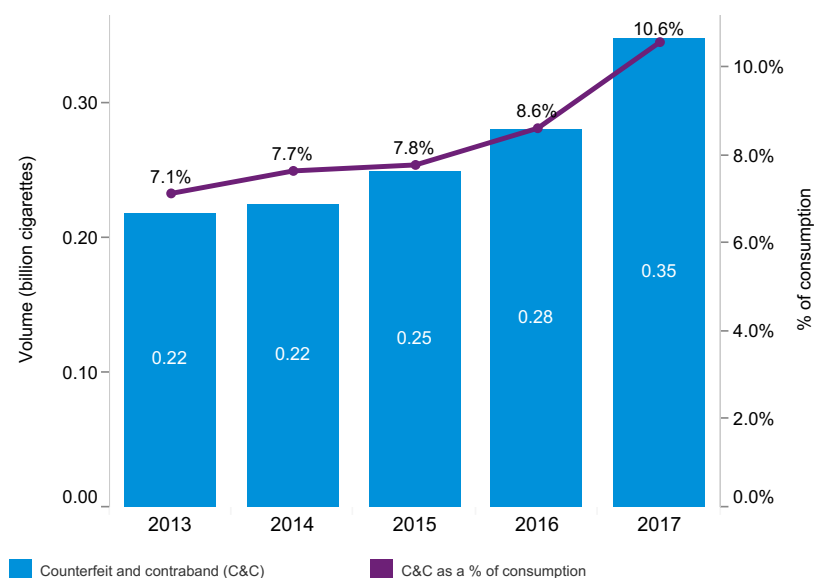
Slovenia



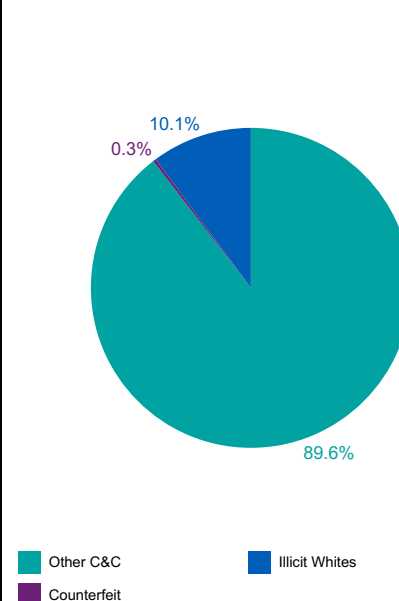
Overview

- C&C as a proportion of total consumption increased to 10.6% in 2017 from 8.6% in 2016
- Bosnia and Herzegovina accounted for 51% of C&C inflows to Slovenia
- Bosnia and Herzegovina is a non-EU country with large volumes of travel to and from Slovenia. There was also a large price difference between these two countries

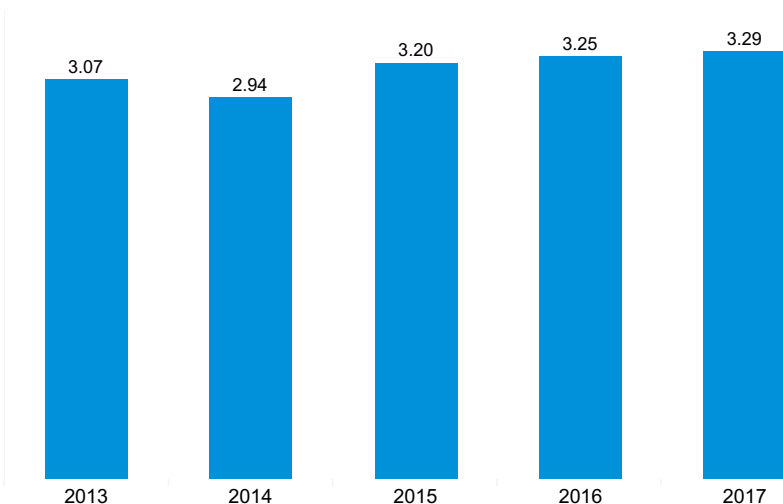
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



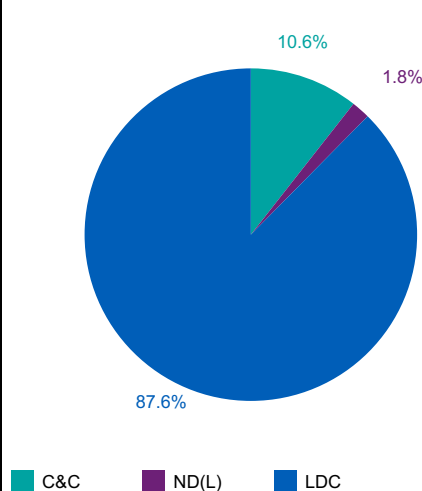
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



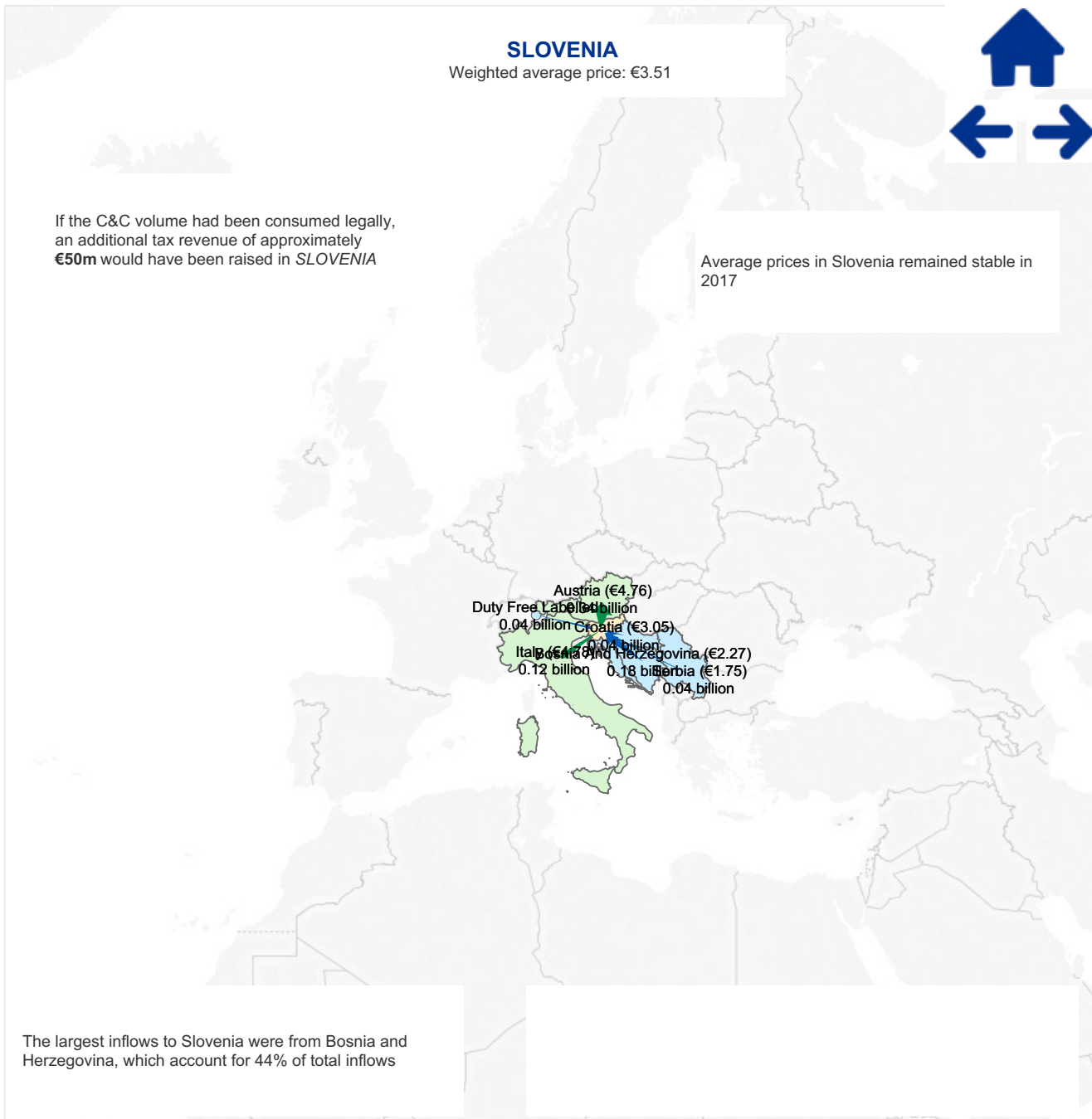
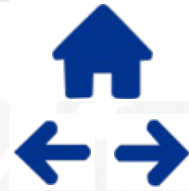
Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL SLOVENIA CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	3.856	3.690	3.673	3.549	3.477	-2%
Outflows	-1.082	-1.028	-0.796	-0.674	-0.595	-12%
Legal domestic consumption (LDC)	2.774	2.665	2.876	2.875	2.882	0%
Non-domestic legal (ND(L))	0.076	0.051	0.070	0.099	0.060	-40%
Counterfeit and contraband (C&C)	0.219	0.225	0.249	0.281	0.348	24%
Total non-domestic	0.298	0.276	0.319	0.379	0.407	7%
Total consumption	3.072	2.938	3.195	3.255	3.289	1%

- Whilst legal domestic sales fell by 0.07 billion, there was an increase in non-domestic volumes resulting in stable total consumption
- Inflows increased as a result of growth in flows from Bosnia and Herzegovina by 0.02 billion
- Outflows declined by 12%, largely due to a decrease in flows to neighbouring higher-priced countries such as Austria and Italy

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO SLOVENIA

	2013	2014	2015	2016	2017
Bosnia And Herzegovina	0.132	0.136	0.137	0.158	0.179
FYROM	0.008	0.011	0.029	0.031	0.043
Duty Free Labelled	0.018	0.015	0.035	0.010	0.042
Serbia	0.033	0.030	0.025	0.035	0.039
Croatia	0.030	0.024	0.038	0.026	0.036
Other	0.078	0.060	0.055	0.120	0.068
Total Inflows	0.298	0.276	0.319	0.379	0.407

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM SLOVENIA

	2013	2014	2015	2016	2017
Austria	0.677	0.742	0.418	0.368	0.337
Italy	0.191	0.148	0.211	0.152	0.121
Germany	0.175	0.102	0.104	0.091	0.081
Switzerland	0.000	0.003	0.006	0.015	0.015
Netherlands	0.011	0.010	0.004	0.005	0.010
Other	0.028	0.023	0.053	0.041	0.031
Total Outflows	1.082	1.028	0.796	0.674	0.595

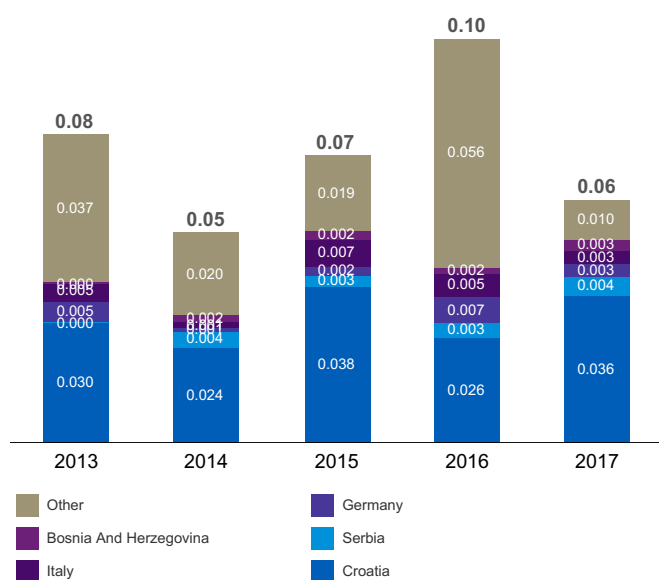
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ND(L) and C&C flows

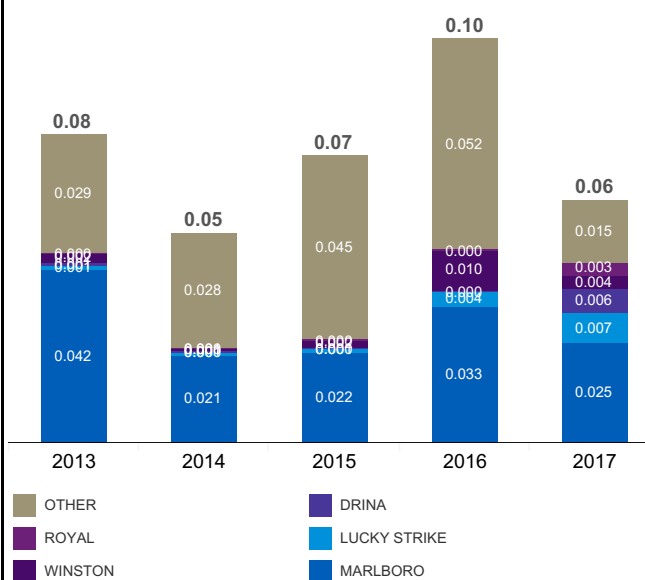


- Most non-domestic legal flows were from surrounding countries reflecting travel to and from Croatia, where cigarettes were 15% cheaper than Slovenia
- Of the non-domestic inflows from Bosnia and Herzegovina 1.7% was attributable to non-domestic legal, based on the number of travellers and the legal allowance of 200 cigarettes per traveller

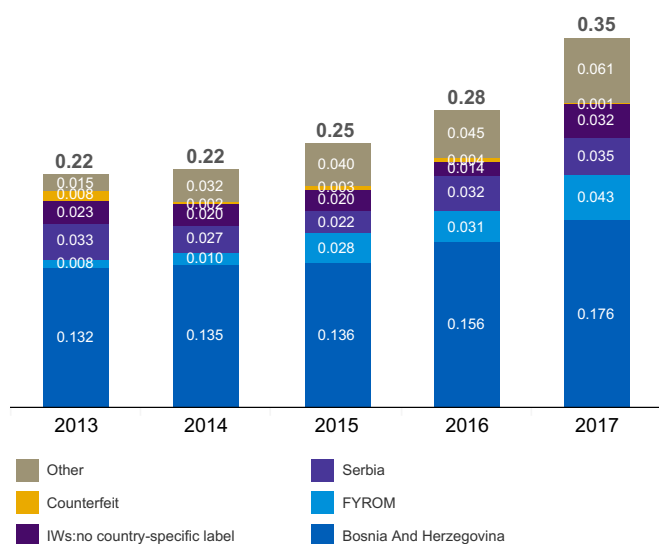
ND(L) by country of origin, 2013-2017 (bn cigarettes)



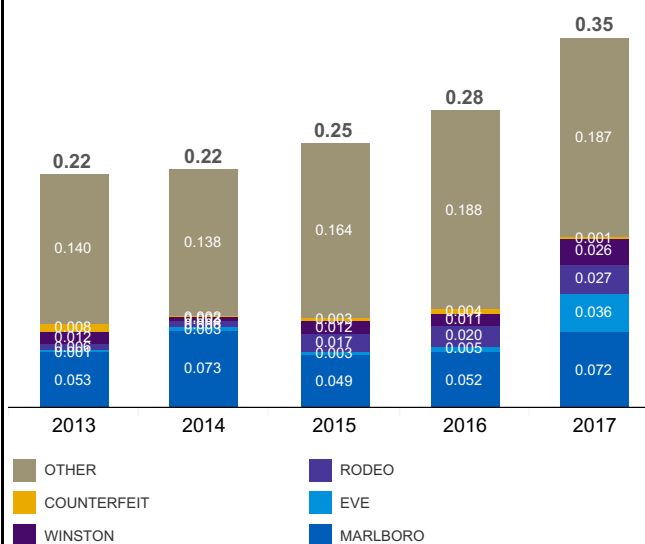
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



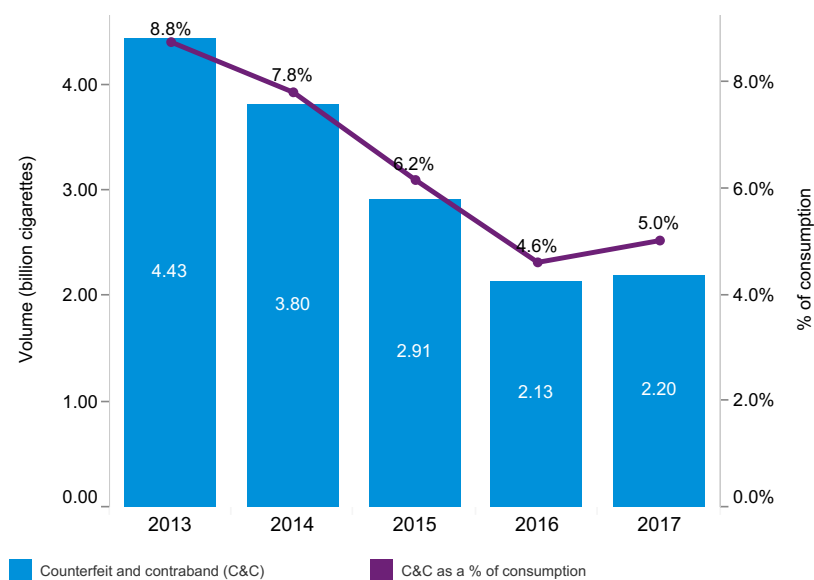
Spain



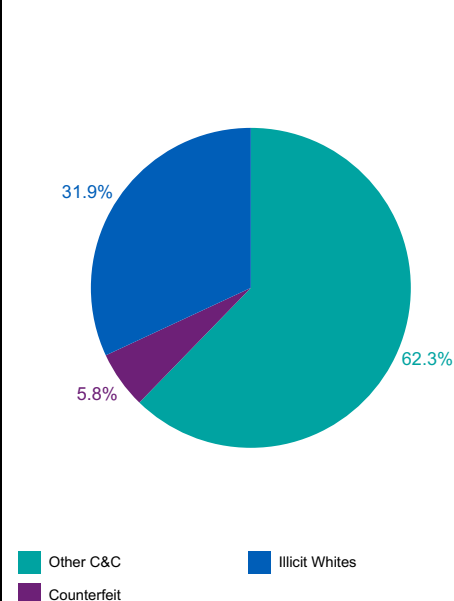
Overview

- Despite an increase in C&C volume, total consumption declined as a result of lower legal domestic sales and higher outflows
- C&C consumption grew in Spain for the first time since 2013, rising from 4.6% to 5.0% of total consumption
- The overall increase in C&C corresponded with an increase in C&C from Gibraltar and flows of Illicit Whites with no country specific labelling

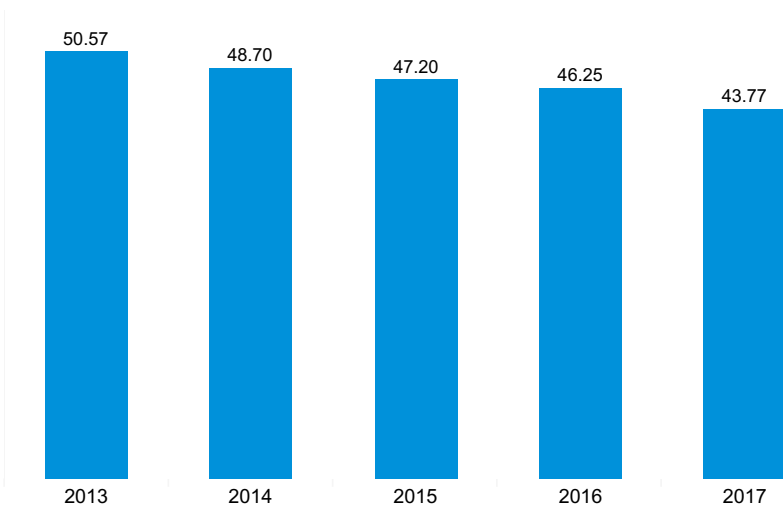
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



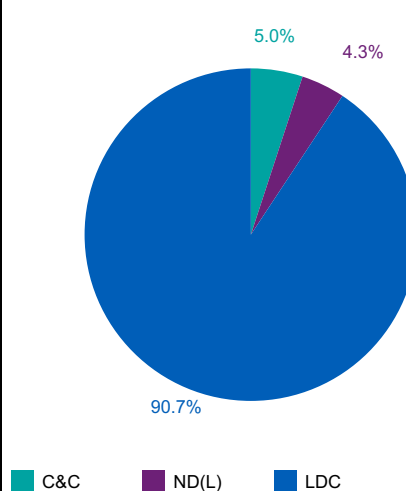
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



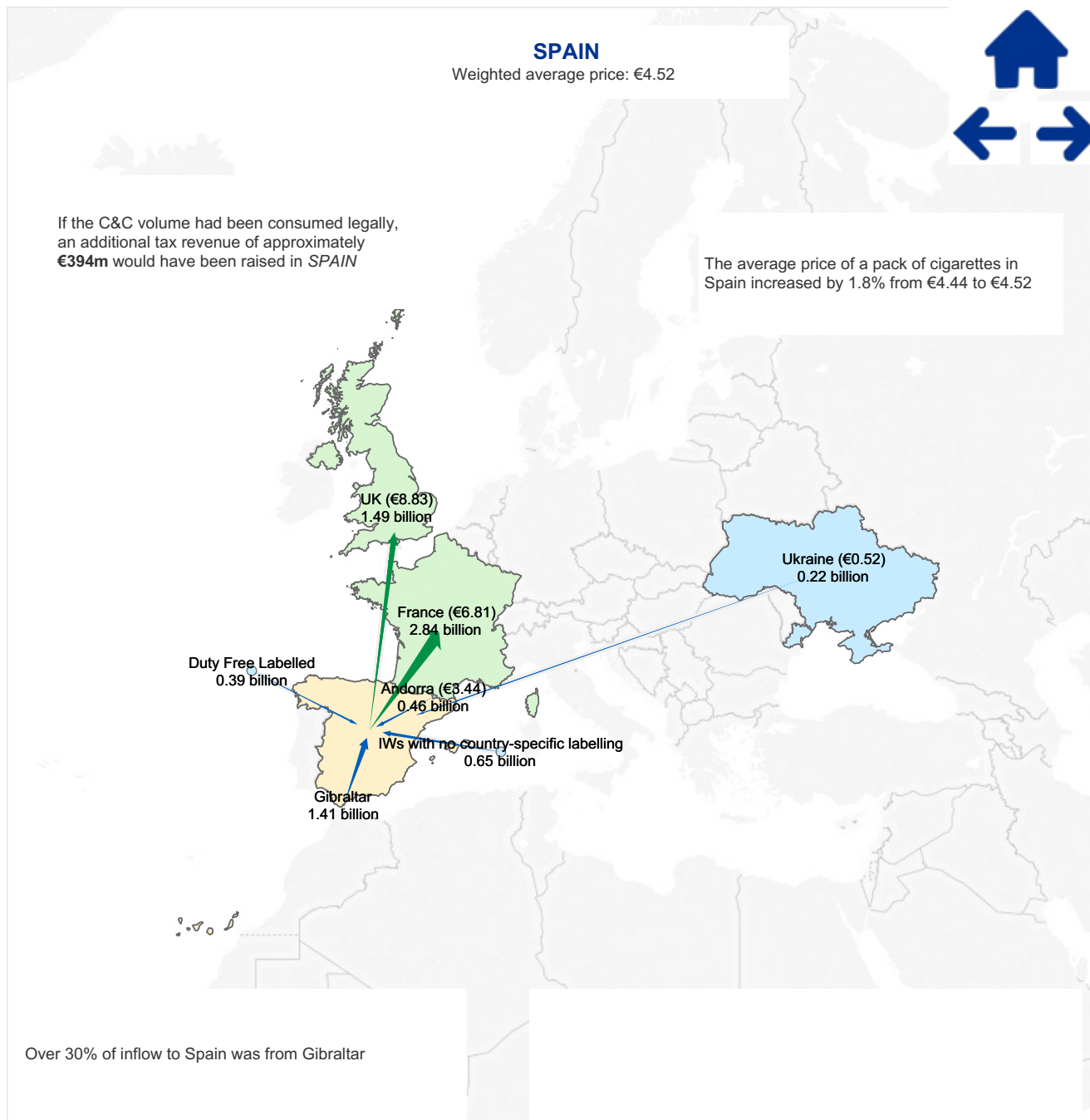
Breakdown of total consumption - 2017 (%)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL SPAIN CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	47.71	46.99	46.50	46.47	44.75	-4%
Outflows	-2.85	-3.95	-4.11	-4.24	-5.04	19%
Legal domestic consumption (LDC)	44.86	43.04	42.39	42.23	39.71	-6%
Non-domestic legal (ND(L))	1.29	1.85	1.91	1.89	1.86	-1%
Counterfeit and contraband (C&C)	4.43	3.80	2.91	2.13	2.20	3%
Total non-domestic	5.71	5.65	4.82	4.02	4.06	1%
Total consumption	50.57	48.70	47.20	46.25	43.77	-5%

- Inflows from Gibraltar increased by 0.6 billion
- Outflows from Spain reflect the high volumes of travellers from Northern European countries where cigarettes are more expensive, especially France and the UK
- Prices in Spain increased by 1.8%, alongside a fall in unemployment rates

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO SPAIN

	2013	2014	2015	2016	2017
Gibraltar	0.37	1.27	0.89	0.85	1.41
IWs with no country-specific labelling	1.06	1.36	0.82	0.58	0.65
Andorra	0.69	0.58	0.70	0.55	0.46
Duty Free Labelled	1.31	1.09	0.82	0.62	0.39
Ukraine	0.03	0.05	0.14	0.19	0.22
Other	2.25	1.31	1.45	1.24	0.93
Total Inflows	5.71	5.65	4.82	4.02	4.06

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM SPAIN

	2013	2014	2015	2016	2017
France	1.84	2.70	2.70	2.63	2.84
UK	0.50	0.72	0.91	1.08	1.49
Germany	0.19	0.13	0.15	0.11	0.18
Netherlands	0.07	0.11	0.07	0.06	0.13
Ireland	0.07	0.08	0.05	0.10	0.12
Other	0.18	0.21	0.23	0.26	0.26
Total Outflows	2.85	3.95	4.11	4.24	5.04

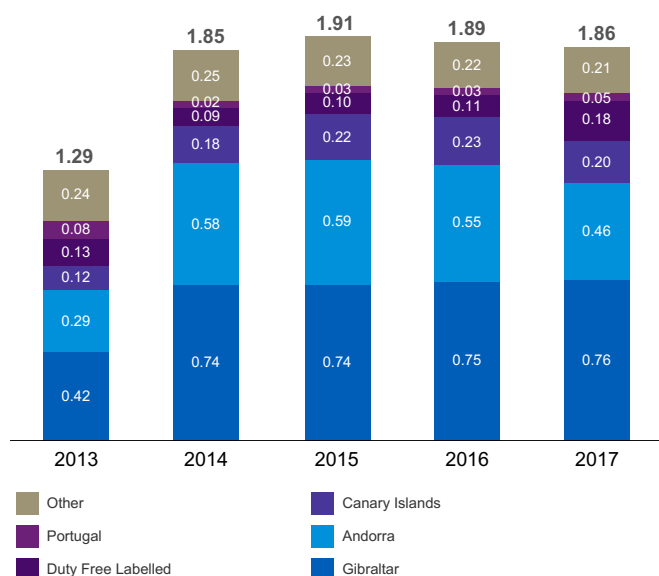
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ND(L) and C&C flows

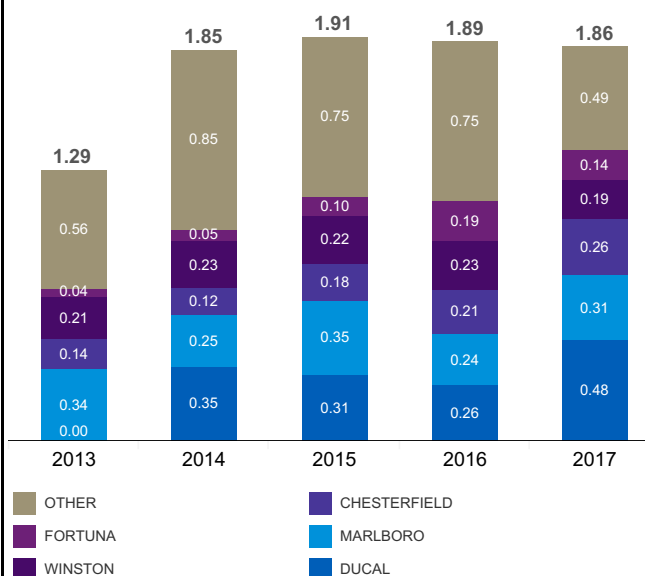


- While non-domestic legal remained stable at 1.9 billion, C&C increased by 3%, reaching 2.2 billion cigarettes
- Traveller numbers between Spain and Gibraltar remained similar to the previous year, however the overall flows from Gibraltar increased, resulting in additional C&C
- Flows from Gibraltar included the largest C&C brand in Spain, Ducal, widely available in Gibraltar but with limited legal distribution in Spain

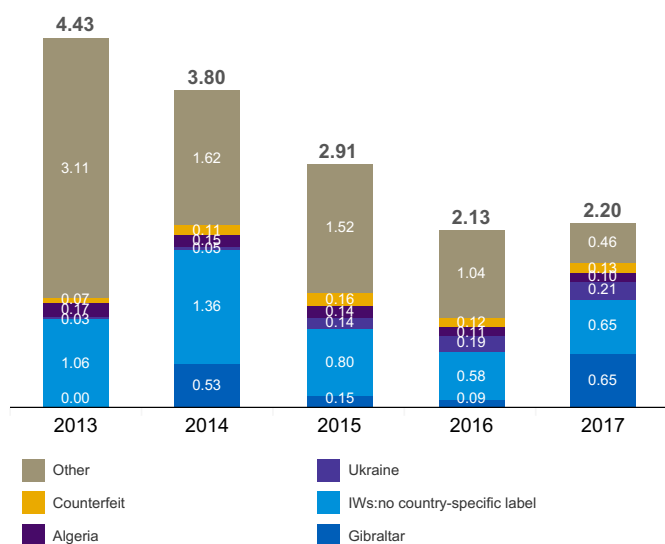
ND(L) by country of origin, 2013-2017 (bn cigarettes)



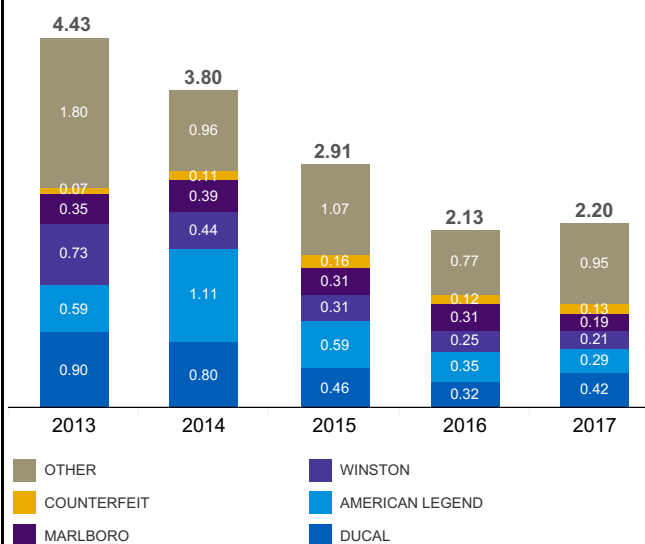
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)

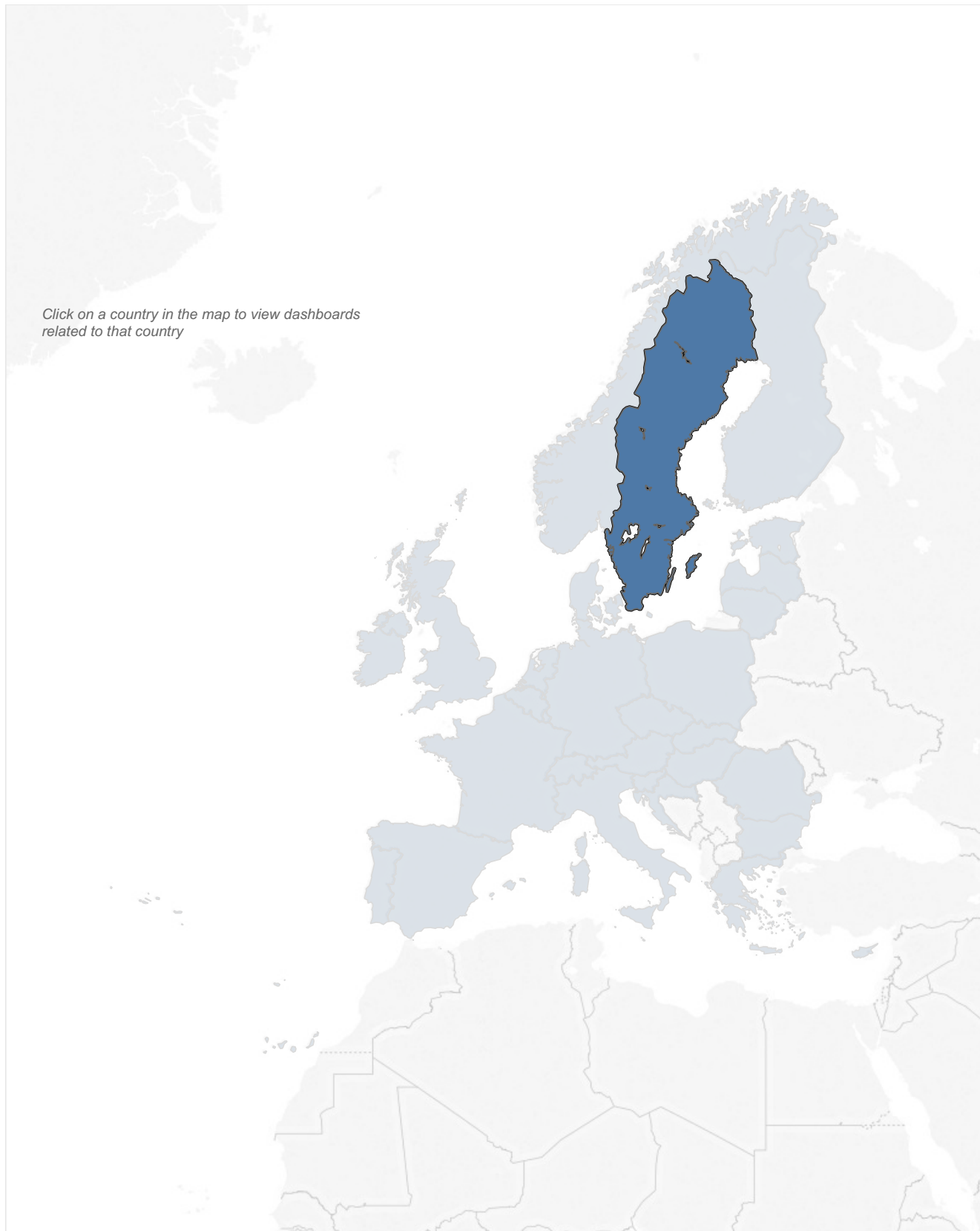


C&C by brand, 2013-2017 (bn cigarettes)



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Countries included in this study



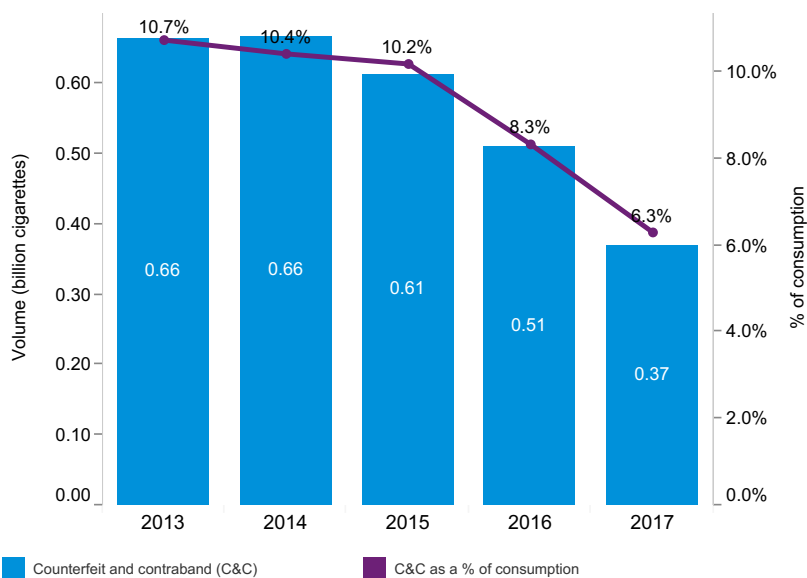
Sweden



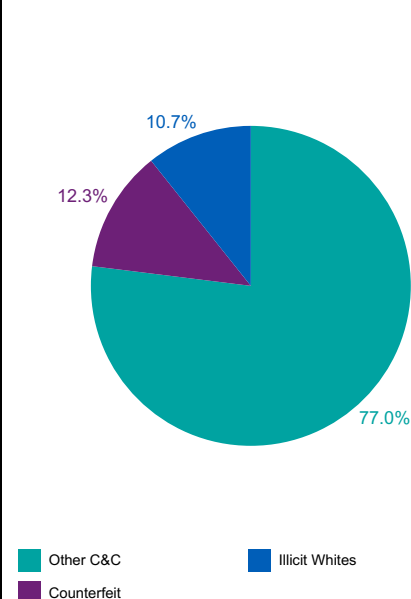
Overview

- C&C continued to decline, accounting for 6.3% of total consumption in 2017 down from 8.3% in 2016
- The majority of C&C inflows continued to come from the Ukraine, Illicit Whites with no country specific labelling and Romania
- Total consumption also declined to 5.88 billion cigarettes from 6.10 billion in 2016

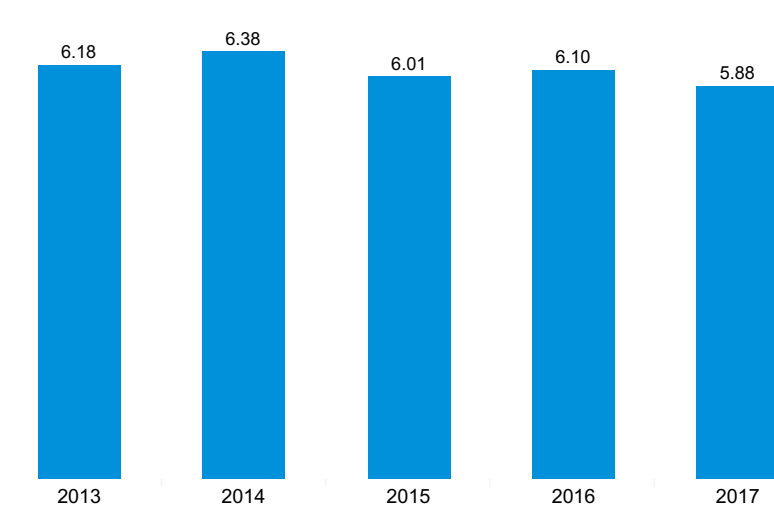
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



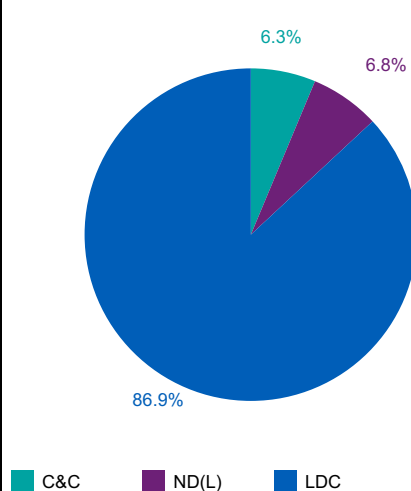
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



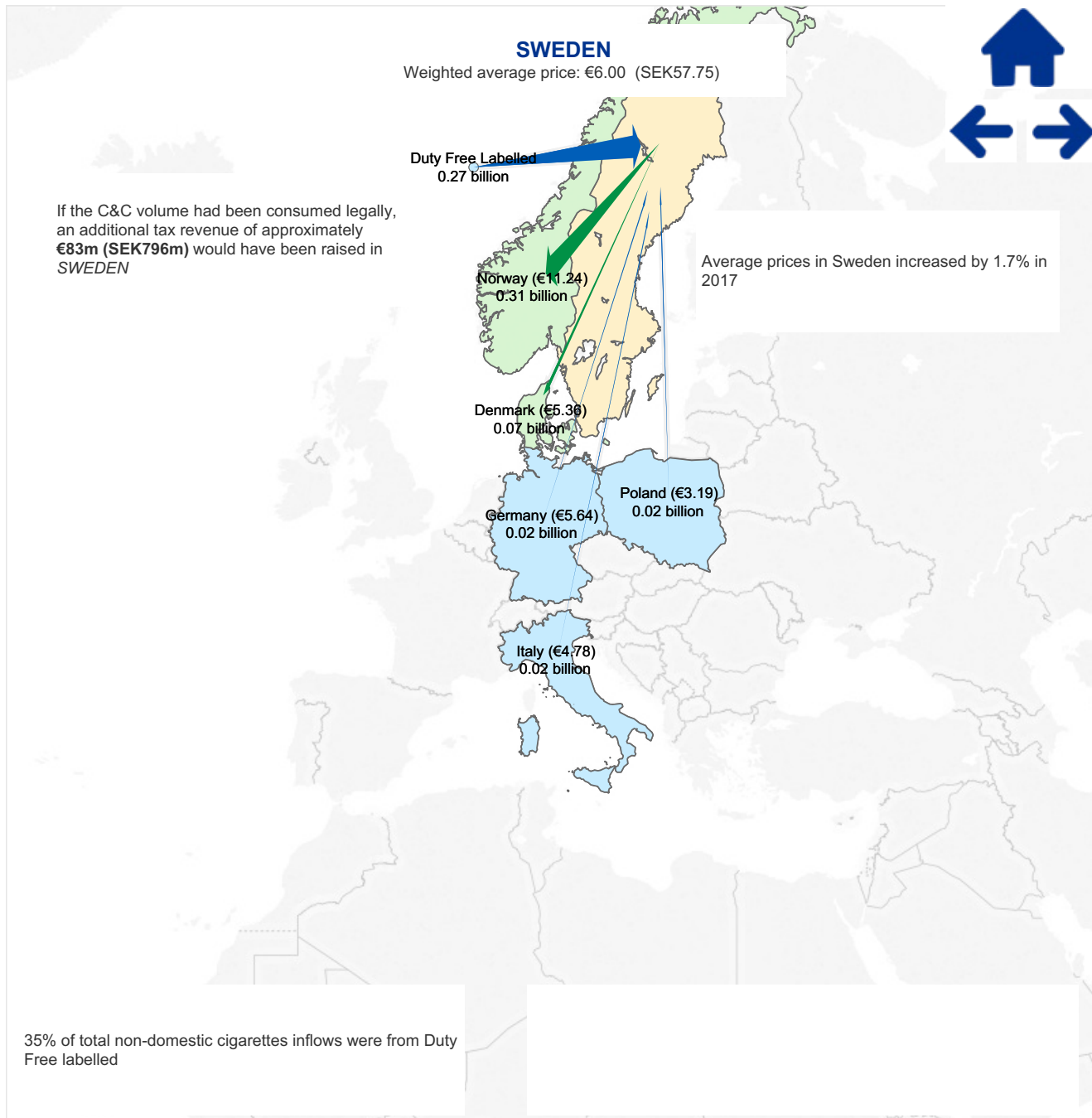
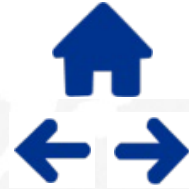
Breakdown of total consumption - 2017 (%)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

Manufactured cigarette consumption, inflows and outflows



TOTAL SWEDEN CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	5.87	5.94	5.66	5.72	5.58	-3%
Outflows	-0.51	-0.39	-0.54	-0.40	-0.47	17%
Legal domestic consumption (LDC)	5.36	5.56	5.12	5.32	5.11	-4%
Non-domestic legal (ND(L))	0.16	0.16	0.28	0.27	0.40	45%
Counterfeit and contraband (C&C)	0.66	0.66	0.61	0.51	0.37	-27%
Total non-domestic	0.83	0.82	0.90	0.78	0.77	-2%
Total consumption	6.18	6.38	6.01	6.10	5.88	-4%

- A large proportion of inflows were labelled Duty Free; it is possible to purchase Duty Free when travelling by boat between Sweden and Finland and stopping at the Åland Islands
- Outflows were mainly to Norway, reflecting the high volume of travel between each country and price differences of over €5 (47.4 SEK)

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO SWEDEN

	2013	2014	2015	2016	2017
Duty Free Labelled	0.26	0.27	0.24	0.30	0.27
Counterfeit	0.03	0.09	0.06	0.06	0.05
Germany	0.01	0.00	0.02	0.03	0.02
Italy	0.00	0.00	0.01	0.01	0.02
Poland	0.12	0.08	0.09	0.04	0.02
Other	0.40	0.38	0.48	0.35	0.39
Total Inflows	0.83	0.82	0.90	0.78	0.77

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM SWEDEN

	2013	2014	2015	2016	2017
Norway	0.00	0.27	0.37	0.30	0.31
Denmark	0.04	0.03	0.05	0.04	0.07
Netherlands	0.02	0.02	0.01	0.01	0.03
Finland	0.01	0.00	0.02	0.01	0.02
Germany	0.05	0.02	0.02	0.02	0.01
Other	0.40	0.05	0.07	0.03	0.03
Total Outflows	0.51	0.39	0.54	0.40	0.47

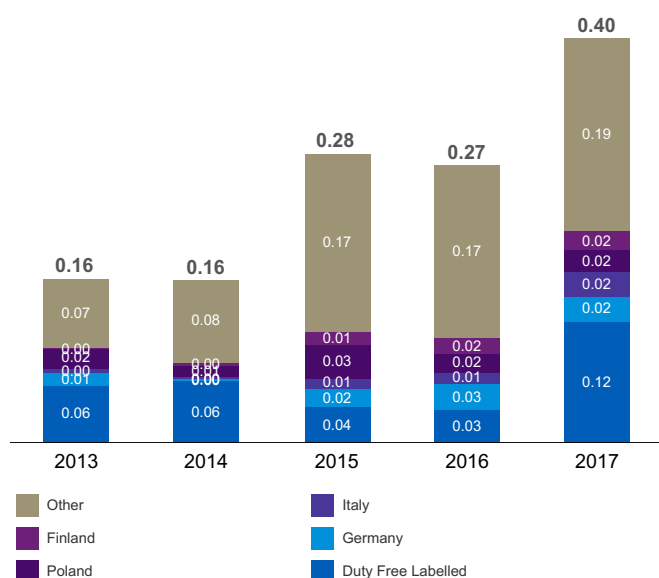
Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) Illicit Whites with no country-specific labelling comprise Illicit Whites labelled as "Duty Free" and "Unspecified". Data from previous years reflects the same definition; please refer to the methodology (b) Duty Free and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and Unspecified labelling except the 2013 values (c) Norway was included for the first time in 2014
Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)

ND(L) and C&C flows

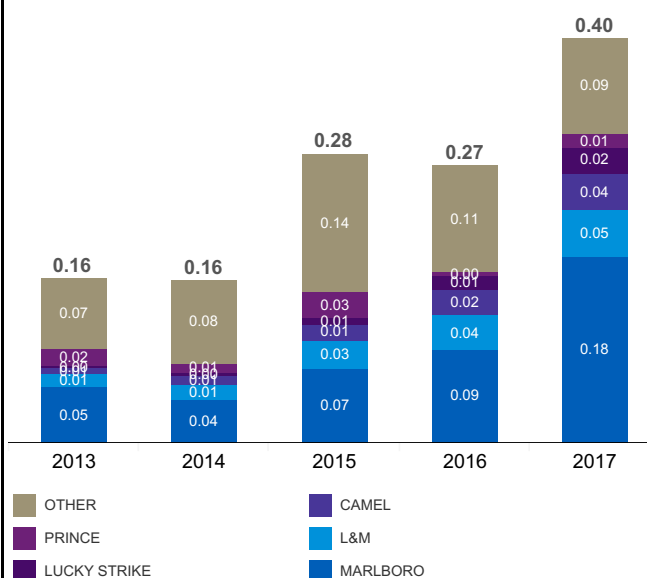
- Non-domestic legal volume increased by 45% in 2017 reflecting increased travel to EU countries
- Overall C&C decreased, however, flows from lower priced countries such as Ukraine, Romania and Latvia increased



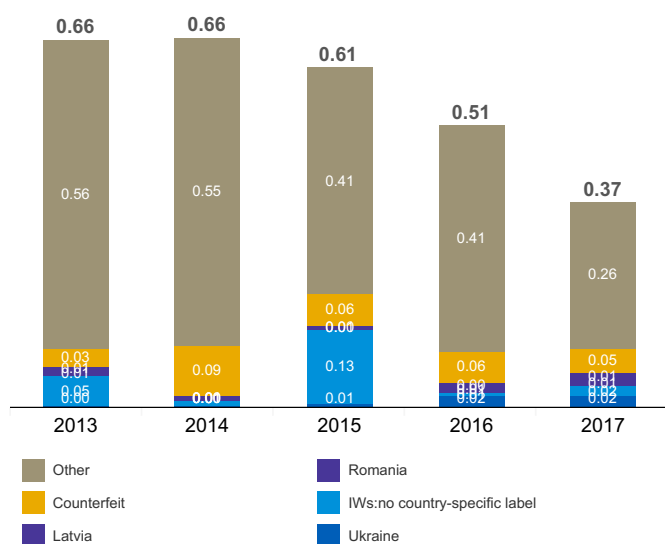
ND(L) by country of origin, 2013-2017 (bn cigarettes)



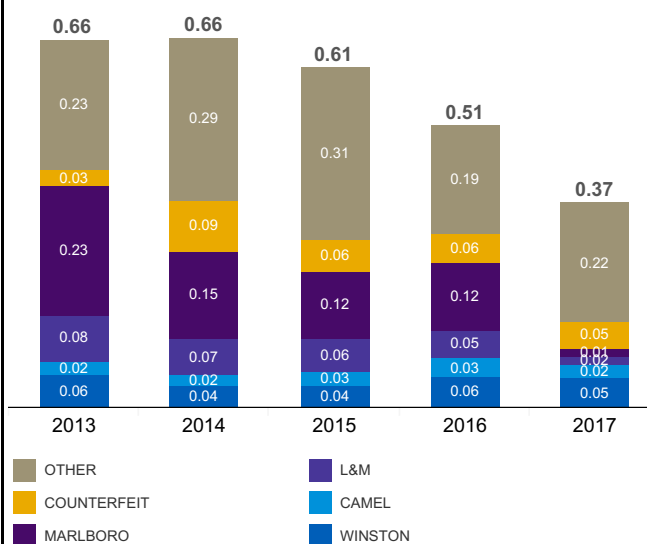
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook

Countries included in this study



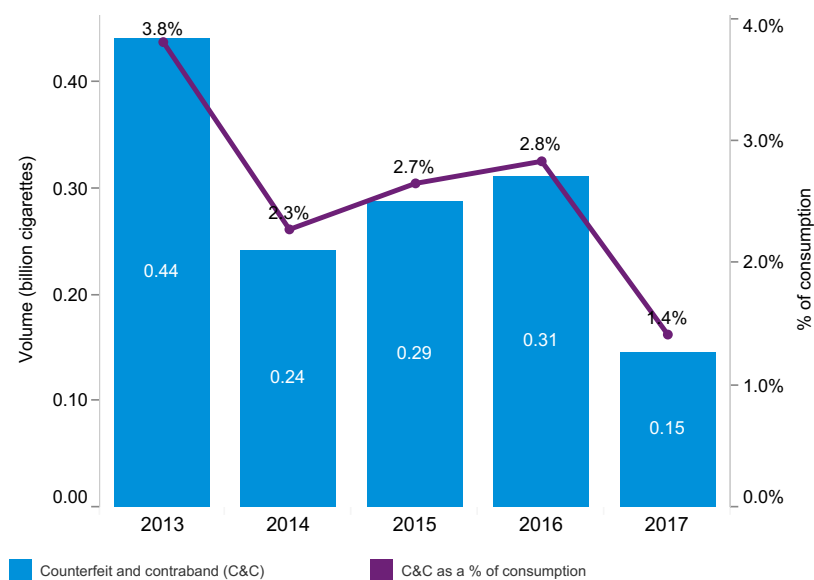
Switzerland



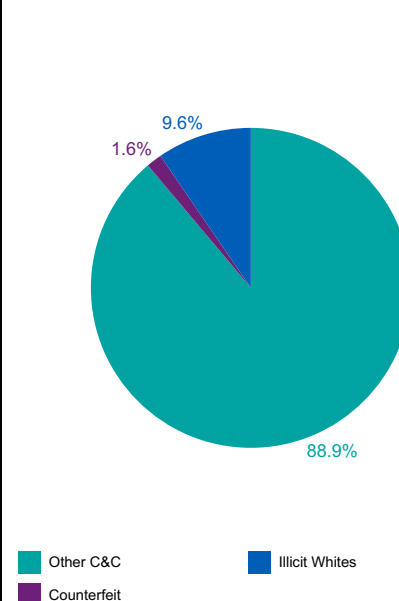
Overview

- C&C consumption decreased to 0.15 billion cigarettes, accounting for 1.4% of total consumption
- The decline has resulted in Switzerland having some of the lowest levels of C&C consumption in the study
- Most non-domestic consumption was made up of non-domestic legal from neighbouring countries including Germany and Italy

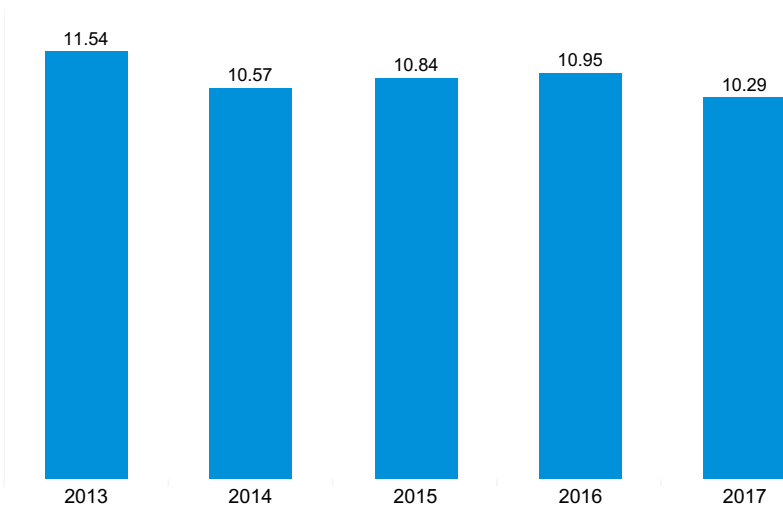
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



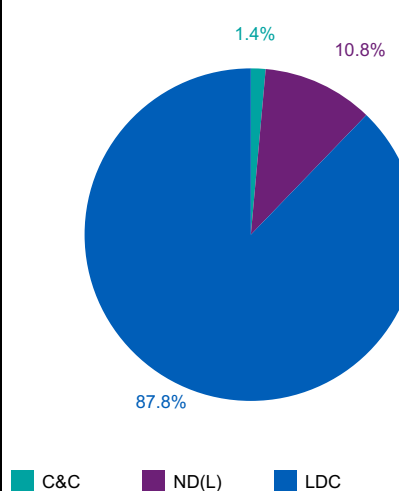
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

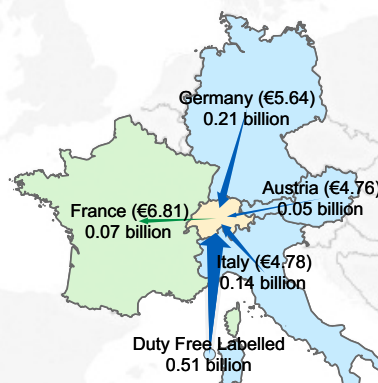
Key inflows and outflows



SWITZERLAND

Weighted average price: €7.72 (CHF8.58)

Average prices of manufactured cigarettes in Switzerland increased by 7.5% in 2017



41% of inflow to Switzerland was Duty Free labelled

Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:

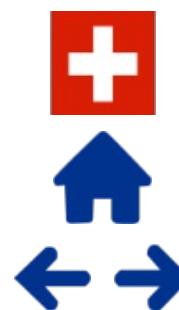
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model; KPMG analysis of WHO National taxes and retail price

Manufactured cigarette consumption, inflows and outflows



TOTAL SWITZERLAND CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	10.57	10.12	9.76	9.48	9.33	-2%
Outflows	-0.35	-0.47	-0.28	-0.20	-0.30	52%
Legal domestic consumption (LDC)	10.22	9.65	9.48	9.28	9.03	-3%
Non-domestic legal (ND(L))	0.88	0.68	1.07	1.36	1.11	-18%
Counterfeit and contraband (C&C)	0.44	0.24	0.29	0.31	0.15	-53%
Total non-domestic	1.32	0.92	1.36	1.67	1.26	-25%
Total consumption	11.54	10.57	10.84	10.95	10.29	-6%

- While legal domestic sales remained stable, there was a decrease in inflows and an increase in outflows in 2017, compared to the previous year
- Non-domestic inflows decreased in 2017 with the bulk of non-domestic legal coming from neighbouring countries Germany and Italy. This may have been a result of the value of the Swiss Franc diminishing against the Euro
- The increase in outflows to neighbouring countries was aligned to the increase in traveller numbers

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO SWITZERLAND

	2013	2014	2015	2016	2017
Duty Free Labelled	0.32	0.22	0.37	0.53	0.51
Germany	0.21	0.17	0.26	0.22	0.21
Italy	0.12	0.12	0.18	0.11	0.14
France	0.10	0.04	0.09	0.28	0.07
Austria	0.00	0.02	0.04	0.04	0.05
Other	0.57	0.35	0.42	0.47	0.28
Total Inflows	1.32	0.92	1.36	1.67	1.26

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM SWITZERLAND

	2013	2014	2015	2016	2017
France	0.14	0.08	0.03	0.04	0.07
Germany	0.03	0.12	0.10	0.05	0.06
Netherlands	0.08	0.07	0.04	0.03	0.05
UK	0.01	0.01	0.01	0.03	0.04
Ireland	0.01	0.01	0.01	0.01	0.02
Other	0.08	0.20	0.08	0.05	0.06
Total Outflows	0.35	0.47	0.28	0.20	0.30

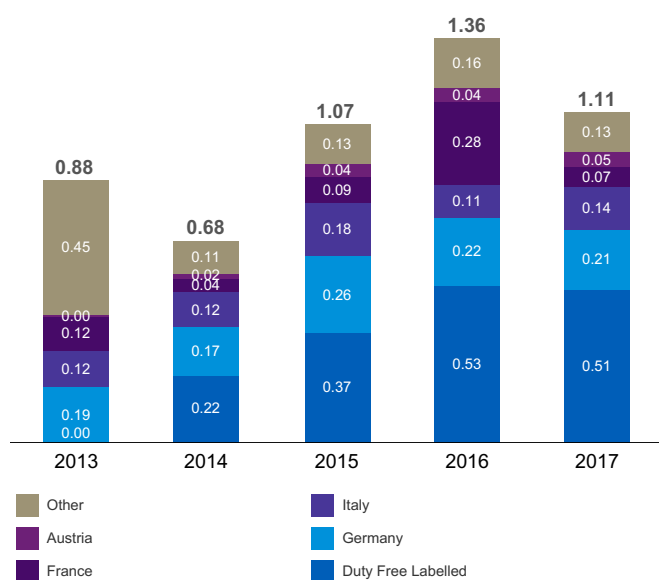
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ND(L) and C&C flows

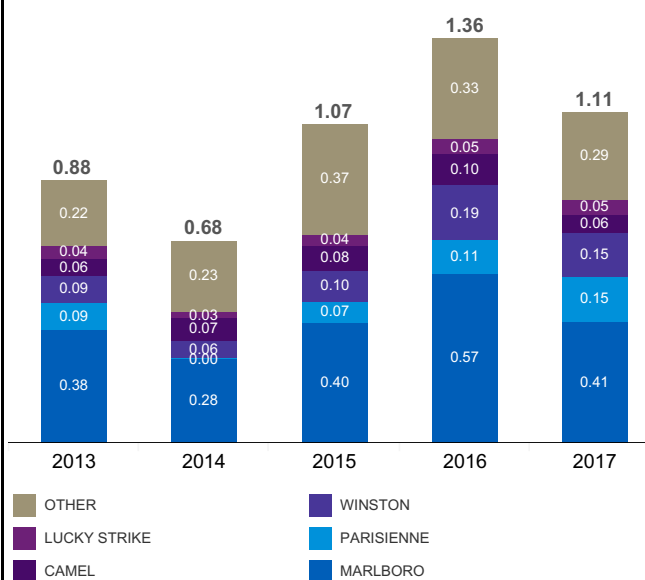
- Most non-domestic legal was from surrounding countries including Germany and Italy where cigarettes were up to 40% cheaper
- C&C decreased by 52% in 2017, however flows from the Balkan countries continued to account for a large component of C&C – The large decline in C&C comes from Switzerland's typical C&C source countries of Bosnia and Herzegovina and Serbia. Despite the large population of Bosnian and Serbian residents in Switzerland, there was no significant travel between these countries to support legal flows of cigarettes



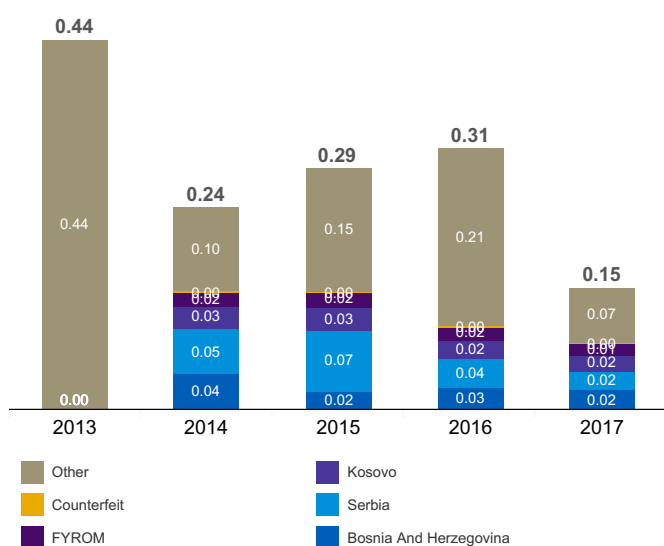
ND(L) by country of origin, 2013-2017 (bn cigarettes)



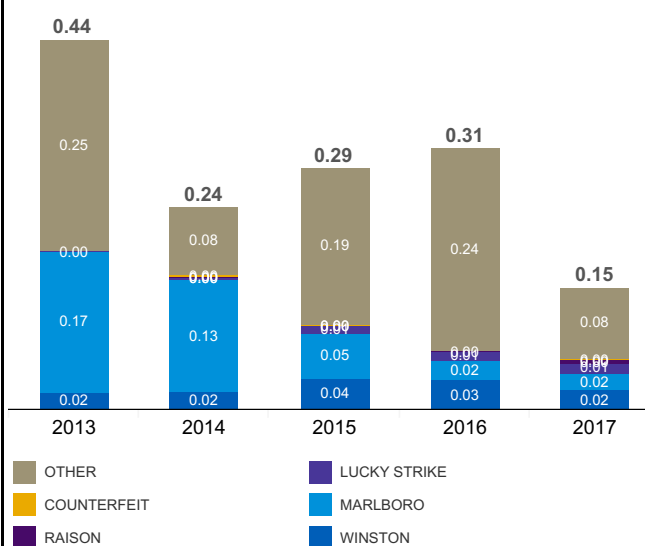
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)

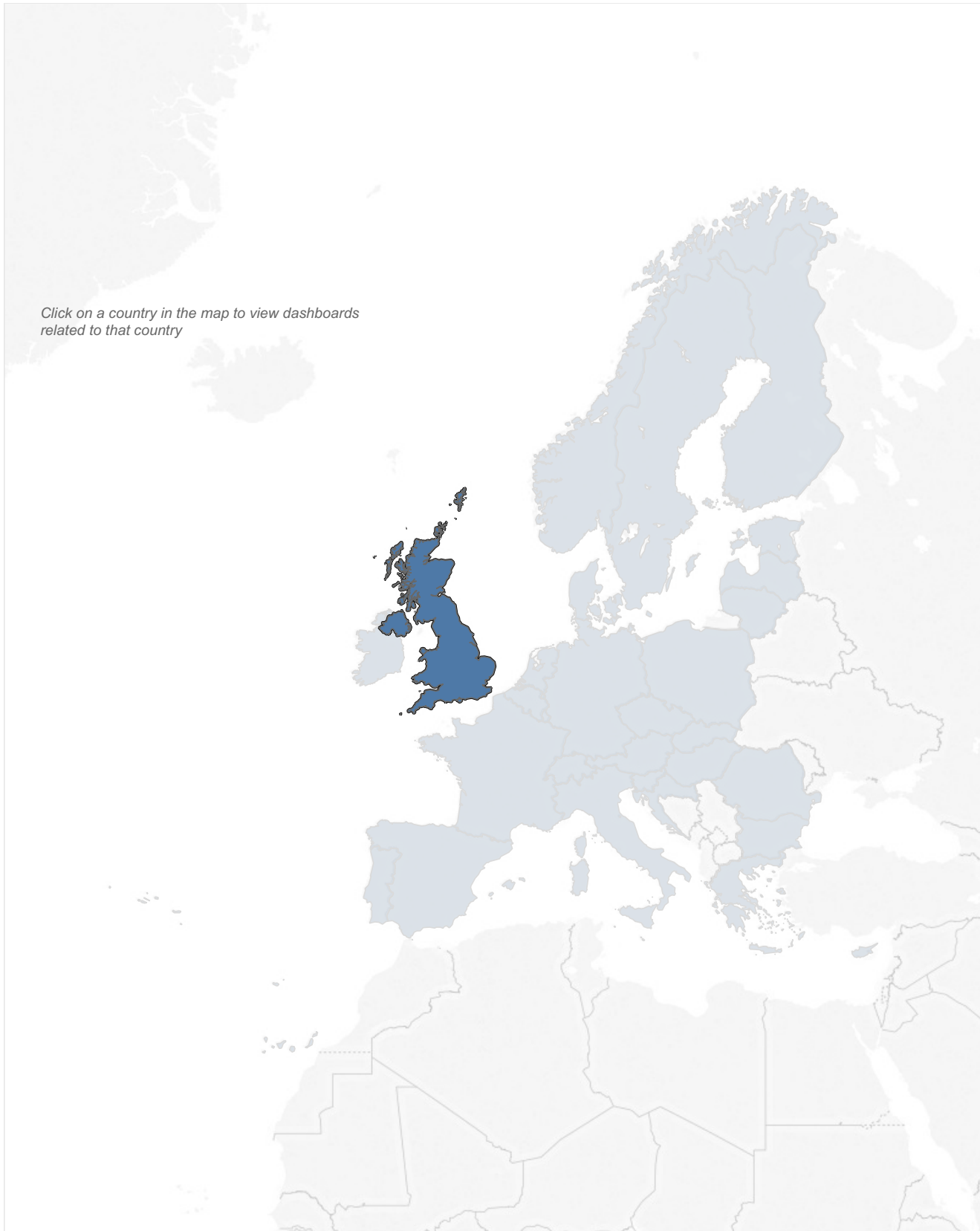


C&C by brand, 2013-2017 (bn cigarettes)



Notes: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html (a) KPMG calculates the split between C&C and Non-Domestic Legal by calculating the Non-Domestic Legal volumes and subtracting from the total inflows (b) In years 2014-2017 the Non-Domestic Legal analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) Additional information about the process for identifying Illicit Whites is provided in the appendix
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Countries included in this study



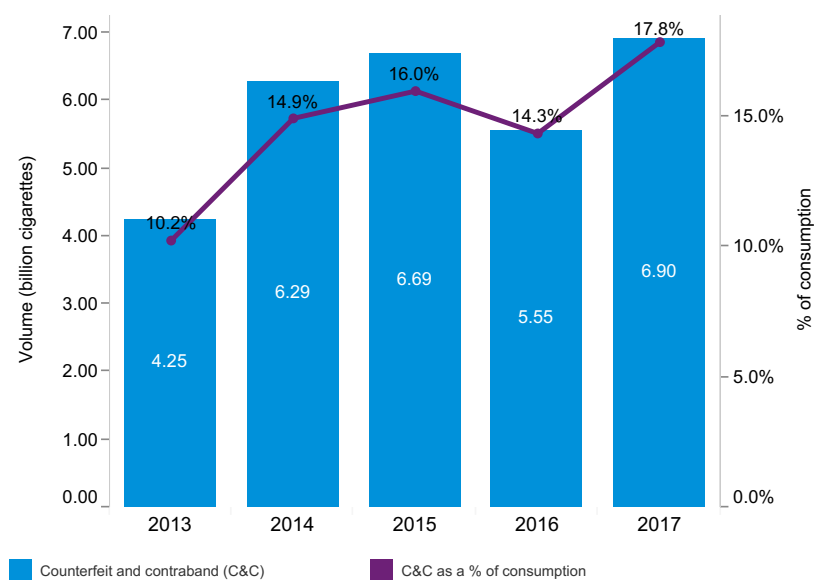
UK



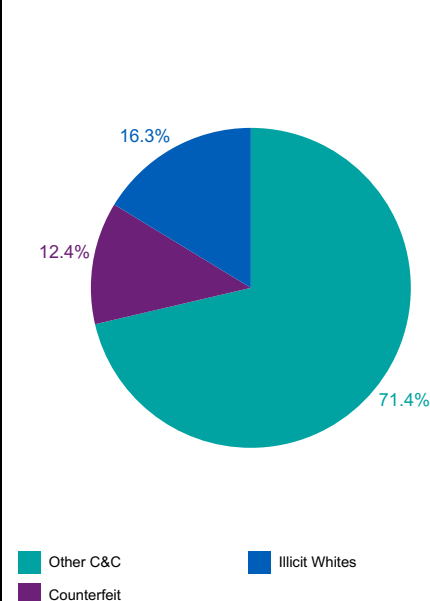
Overview

- C&C consumption in the UK increased from 14.3% to 17.8%, representing 6.9 billion cigarettes
- Total manufactured cigarette consumption remained stable against a backdrop of changes to the regulatory environment and limited economic growth
- Despite lower legal domestic consumption, the growth in C&C has kept overall cigarette consumption stable

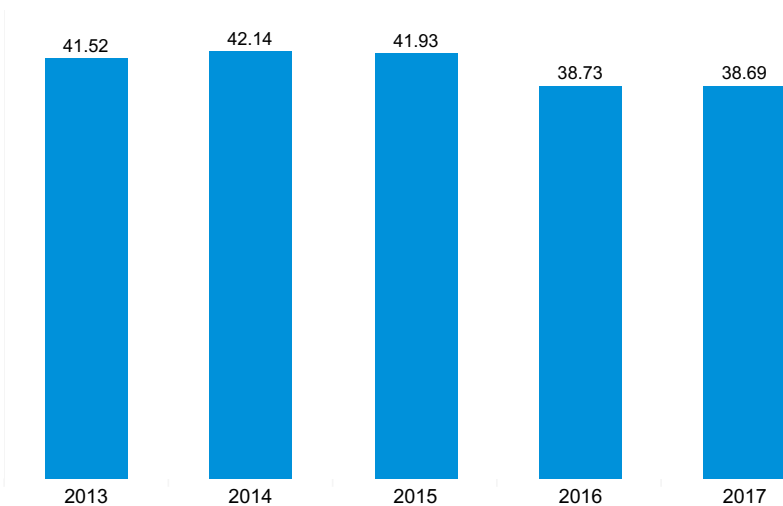
Manufactured cigarette C&C volumes and share of overall cigarette consumption – 2013-2017



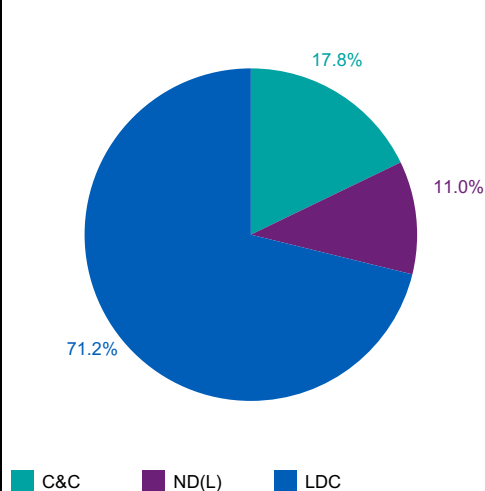
Breakdown of C&C - 2017 (%)



Manufactured cigarette consumption - 2013-2017 (bn cigarettes)



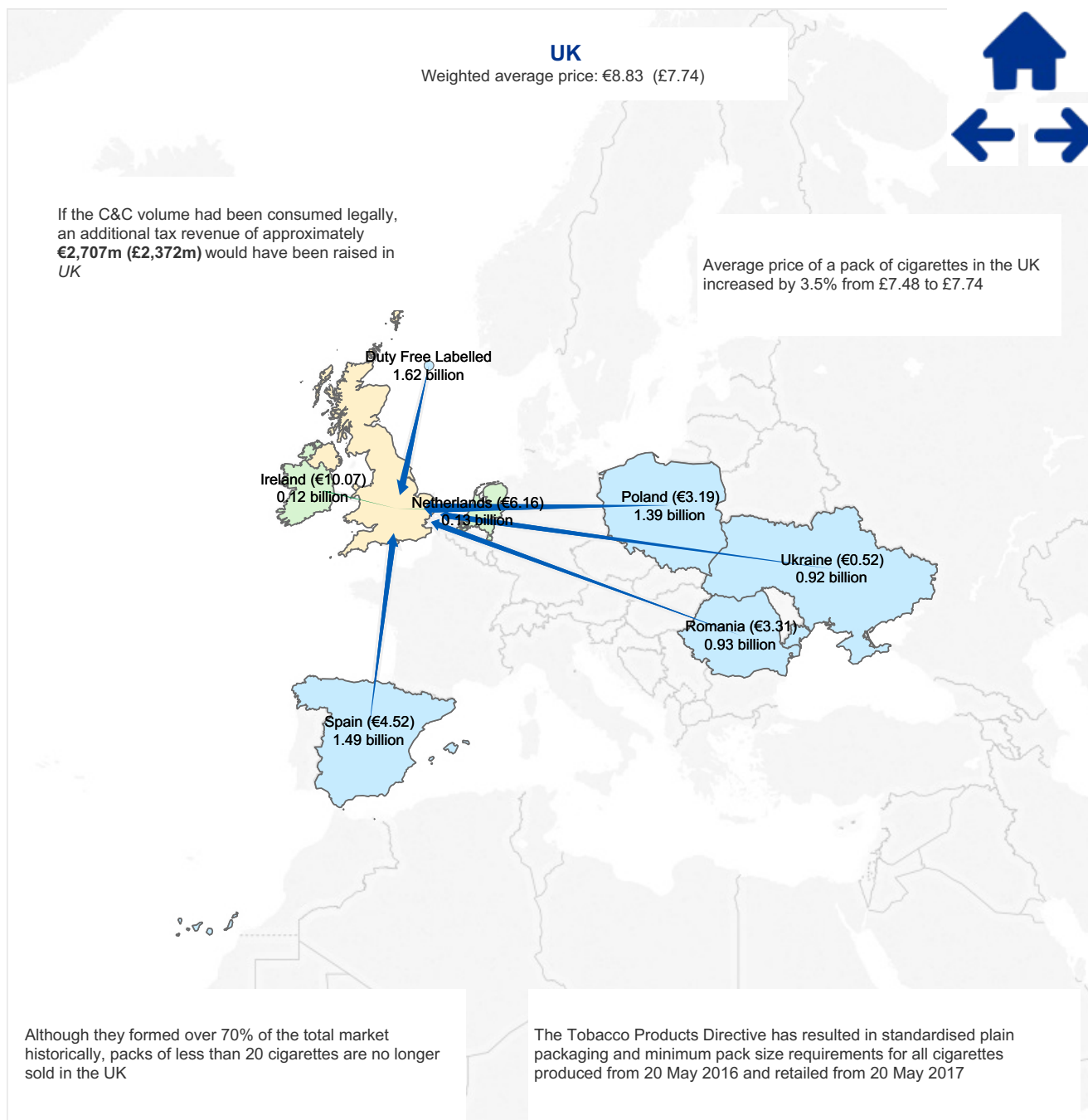
Breakdown of total consumption - 2017 (%)



Note: This is an extract from Project SUN for 2017, a study of the illicit cigarette market in the European Union, Norway and Switzerland. For more information including the Executive Summary, other Country Reports, Methodology or FAQs, please visit home.kpmg.com/uk/en/home/insights/2018/07/project-sun-2017.html

Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers

Key inflows and outflows



Country Colours

- Country of Study
- Destination
- Source

Flow Colours

- Inflow to Country of Study
- Outflow from Country of Study

Country label format:
Country Name (Average price per pack)
Volume of inflow/outflow

Map shows major flows. Countries which are both a source and a destination are coded according to the larger flow

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Sources: KPMG EU Flows Model; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)



Manufactured cigarette consumption, inflows and outflows

TOTAL UK CONSUMPTION

	2013	2014	2015	2016	2017	2016-17%
Legal Domestic Sales (LDS)	35.77	33.78	32.06	29.64	27.92	-6%
Outflows	-0.28	-0.31	-0.33	-0.32	-0.39	22%
Legal domestic consumption (LDC)	35.49	33.47	31.73	29.32	27.53	-6%
Non-domestic legal (ND(L))	1.78	2.39	3.51	3.86	4.25	10%
Counterfeit and contraband (C&C)	4.25	6.29	6.69	5.55	6.90	24%
Total non-domestic	6.03	8.67	10.20	9.41	11.16	19%
Total consumption	41.52	42.14	41.93	38.73	38.69	0%

- The proportion of non-domestic legal from Duty Free labelled products declined as there was a large decline in travel to non-EU holiday destinations
- Travel to non-EU holiday destinations like Egypt, Turkey and USA reduced by 86%, 39% and 13% respectively
- Inflows were predominantly from Eastern European countries with lower cigarette prices
- Average prices in Poland (€3.19), Romania (€3.31) and Ukraine (€0.52) were significantly lower than in the UK (€8.83)
- In 2017, the number of Bulgarian and Romanian nationals working in the UK increased by 28%, may have contributed to the increase in both consumption and flows from these countries

Total inflows by country of origin – 2013-2017 (bn cigarettes)

INFLOWS TO UK

	2013	2014	2015	2016	2017
Duty Free Labelled	0.77	1.55	1.99	1.22	1.62
Spain	0.50	0.72	0.91	1.08	1.49
Poland	0.89	1.23	1.38	1.51	1.39
Romania	0.05	0.17	0.71	0.67	0.93
Ukraine	0.02	0.05	0.13	0.32	0.92
Other	3.81	4.96	5.08	4.61	4.80
Total Inflows	6.03	8.67	10.20	9.41	11.16

Total outflows by destination country - 2013-2017 (bn cigarettes)

OUTFLOWS FROM UK

	2013	2014	2015	2016	2017
Netherlands	0.14	0.16	0.16	0.11	0.13
Ireland	0.06	0.08	0.08	0.12	0.12
France	0.04	0.02	0.01	0.04	0.04
Germany	0.01	0.00	0.01	0.01	0.03
Sweden	0.00	0.00	0.00	0.01	0.01
Other	0.03	0.05	0.06	0.04	0.06
Total Outflows	0.28	0.31	0.33	0.32	0.39

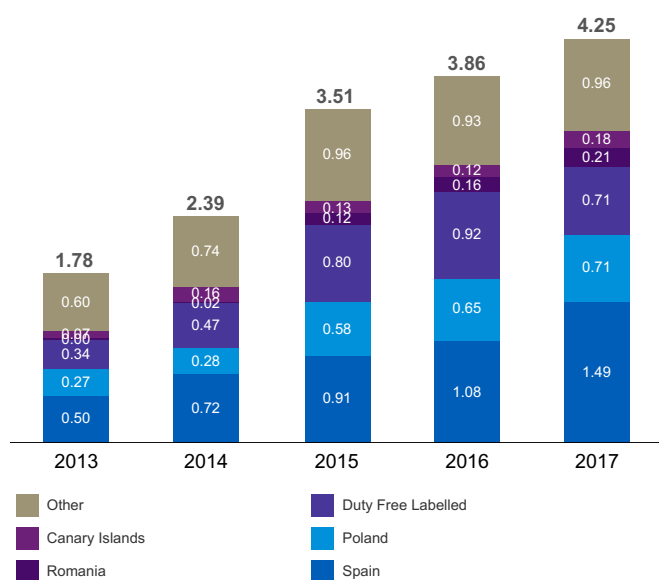
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Sources: KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers, KPMG analysis of UNWTO Factbook; EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco); Table EMP06: Employment levels by nationality: People aged 16 and over (not seasonally adjusted), UK National Statistics Office, 2017

ND(L) and C&C flows

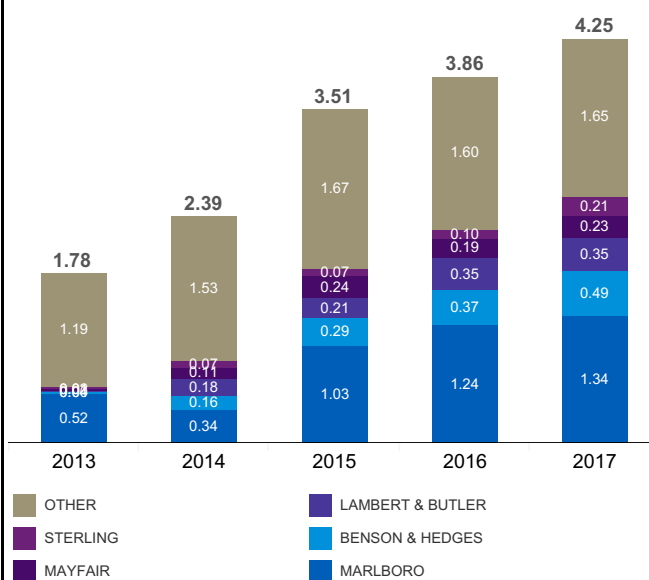


- Growth in inflows from Poland and Romania were accompanied by an increase in travel to these countries; however, the overall volume of cigarettes was higher than what could be accounted for by traveller numbers
- Ukraine, Belarus and Romania were among the largest sources of illicit cigarettes in the UK, with flows from Ukraine increasing from 0.32 to 0.92 billion cigarettes
- Counterfeit also increased significantly, with a large proportion of counterfeit bearing UK non-plain package labelling

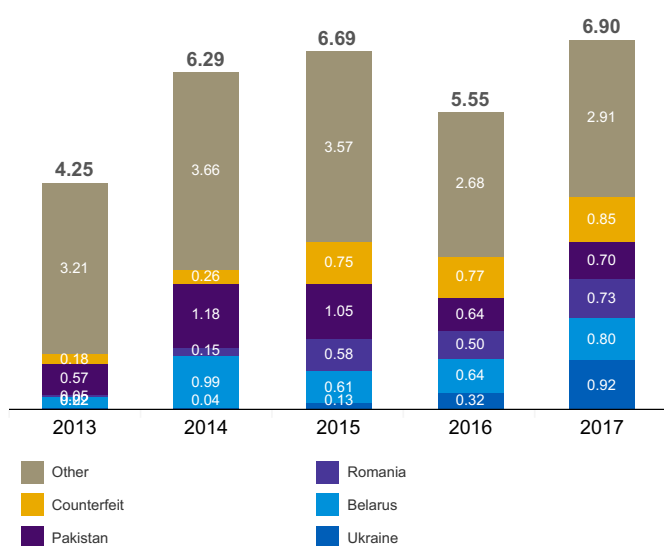
ND(L) by country of origin, 2013-2017 (bn cigarettes)



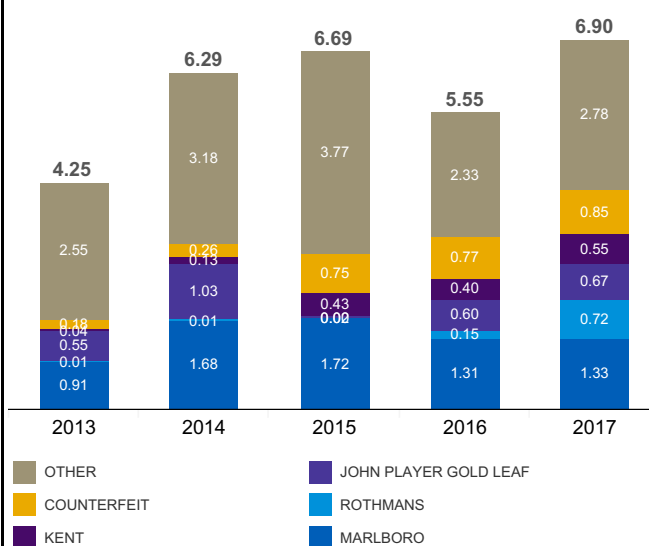
ND(L) by brand, 2013-2017 (bn cigarettes)



C&C by country of origin, 2013-2017 (bn cigarettes)



C&C by brand, 2013-2017 (bn cigarettes)



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Project SUN

**A study of the illicit cigarette
market in the European Union,
Norway and Switzerland**

2017 Results
Methodology and Appendices

kpmg.com/uk

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Methodology

Overview

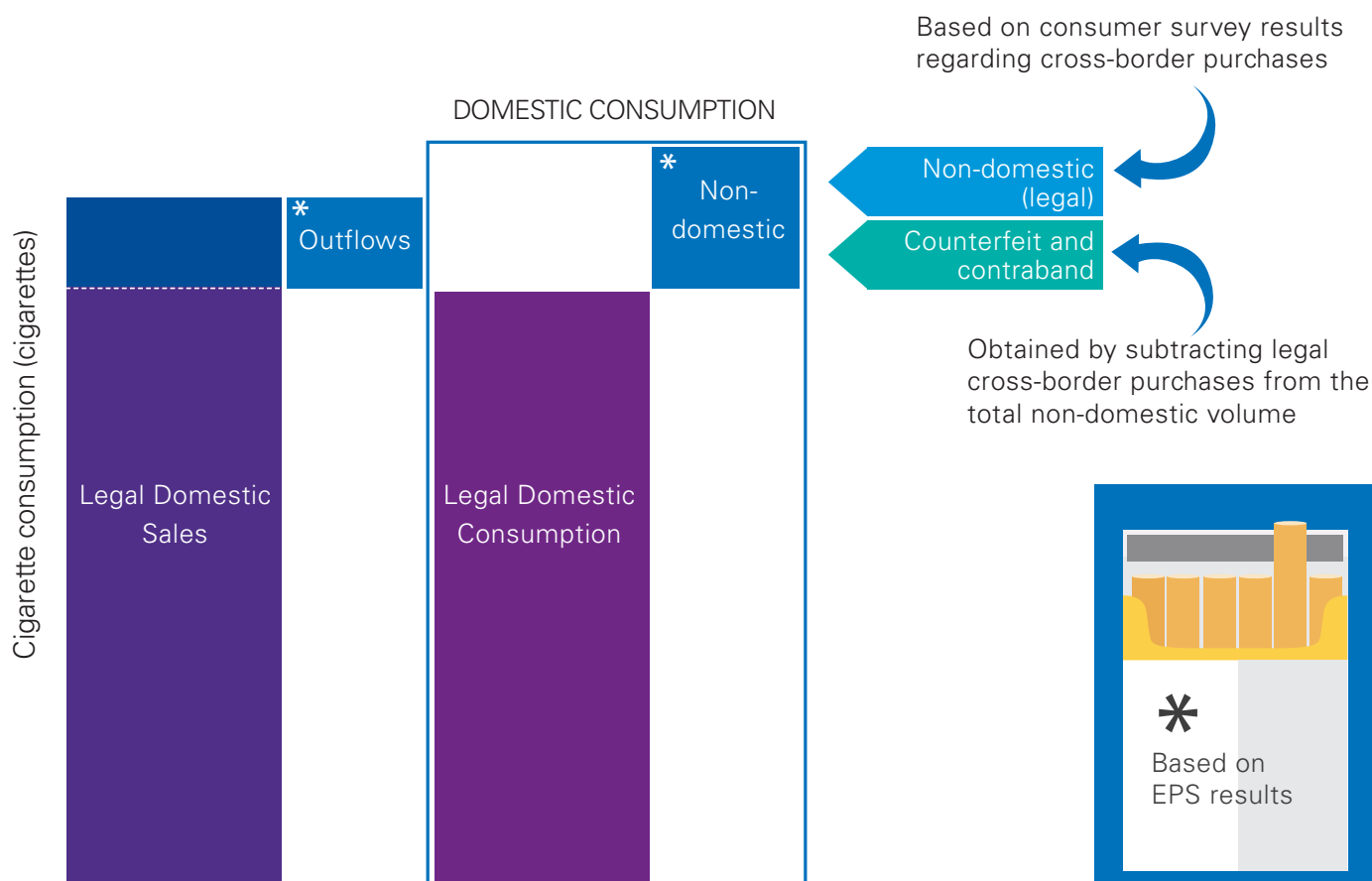
<p>KPMG has developed and refined its methodology for quantifying counterfeit and contraband incidence across the 28 EU markets since 2006, with Norway and Switzerland included in the study since 2014</p>	<p>The methodology has been tested extensively and refined to ensure that it delivers the most robust and justifiable results possible</p> <ul style="list-style-type: none"> • Our approach integrated multiple sources and custom-built analytical tools • In 2017, Project SUN was commissioned by the Royal United Services Institute (RUSI). RUSI contracted this work with funding from British American Tobacco and Philip Morris International destined for its broader illicit trade work. 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 destined to support its broader illicit trade research. 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'). This extension has provided access to previously unavailable data sources including Legal Domestic Sales data and proprietary consumer surveys owned by manufacturers who participated for the first time in 2013. These data sources have been used in the 2013, 2014, 2015 and 2016 reports
<p>The methodology is based primarily on objective evidence from LDS and EPS results, which are inputted to the bespoke EU Flows Model</p>	<p>The KPMG EU Flows Model is a dynamic, iterative model that is based on LDS and EPS results and is used to estimate overall manufactured cigarette volumes</p> <ul style="list-style-type: none"> • The KPMG EU Flows model has been developed by KPMG to specifically measure inflows and outflows of cigarettes between EU countries for the purpose of this report. It is an iterative data driven model that uses LDS and EPS results to estimate the volume of non-domestic outflows and inflows to and from each EU Member State, Norway and Switzerland • LDS are the starting point of the methodology, from which outflows of legal sales to other countries are then subtracted to estimate legal domestic consumption • Non-domestic inflows from other countries are then added in to give an estimate for the total consumption within a market • This methodology has been developed by KPMG for the manufactured cigarettes market specifically. For that reason, an assessment of the OTP market (both legal and illicit) is excluded from the scope of this report
<p>EPS results provide a robust indication of the incidence of non-domestic and counterfeit packs and country of origin</p>	<p>EPS relies purely on physical evidence, avoiding the variability of consumer bias found in interview-based methods</p> <ul style="list-style-type: none"> • The EPSs were conducted by independent market research agencies on a consistent basis across all the EU markets, Norway and Switzerland, allowing for direct comparison of data and the identification of inflows and outflows between all of the countries analysed • Over 500,000 packs were collected in 2017 as part of this research • Further detail regarding the reliability and validity of EPS, the sampling approach and results by country at a regional level are provided later in this document
<p>Tourism & travel trends are used to quantify legal non-domestic cigarette purchases</p>	<p>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</p> <ul style="list-style-type: none"> • United Nations World Tourism Organisation(1) data is the primary source used to identify travel trends, supplemented with other publicly available data • European Commission releases(2) are used to calculate changes in the weighted average price of a pack of cigarettes between countries. Where flows come into a country from a higher priced country they are assumed to be 100% legal

(1) UNWTO (2) EC Excise Duty Tables, January 2018 (Part III – Manufactured Tobacco)

Methodology - Overview

<p>There are some specific limitations in the Project SUN methodology</p>	<p>Given the complexity of measuring C&C, we recognise there are some limitations within the methodology</p> <ul style="list-style-type: none"> • There are broadly two types of limitations: scope exclusions and source limitations <ul style="list-style-type: none"> - 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 (OTP) and legal domestic product flows out of the EU - 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
<p>To help improve the accuracy of results, some minor refinements were necessary at a country level</p>	<p>Comparison of results from alternative sources identified a few markets where country-to-country flows required minor adjustment</p> <ul style="list-style-type: none"> • In nearly all instances, overall country results and flows from the KPMG EU Flows Model appeared reasonable, however, in a limited number of instances, specific adjustments were made to country-to-country flows where additional data provided by manufacturers allowed for further refinement of the analysis

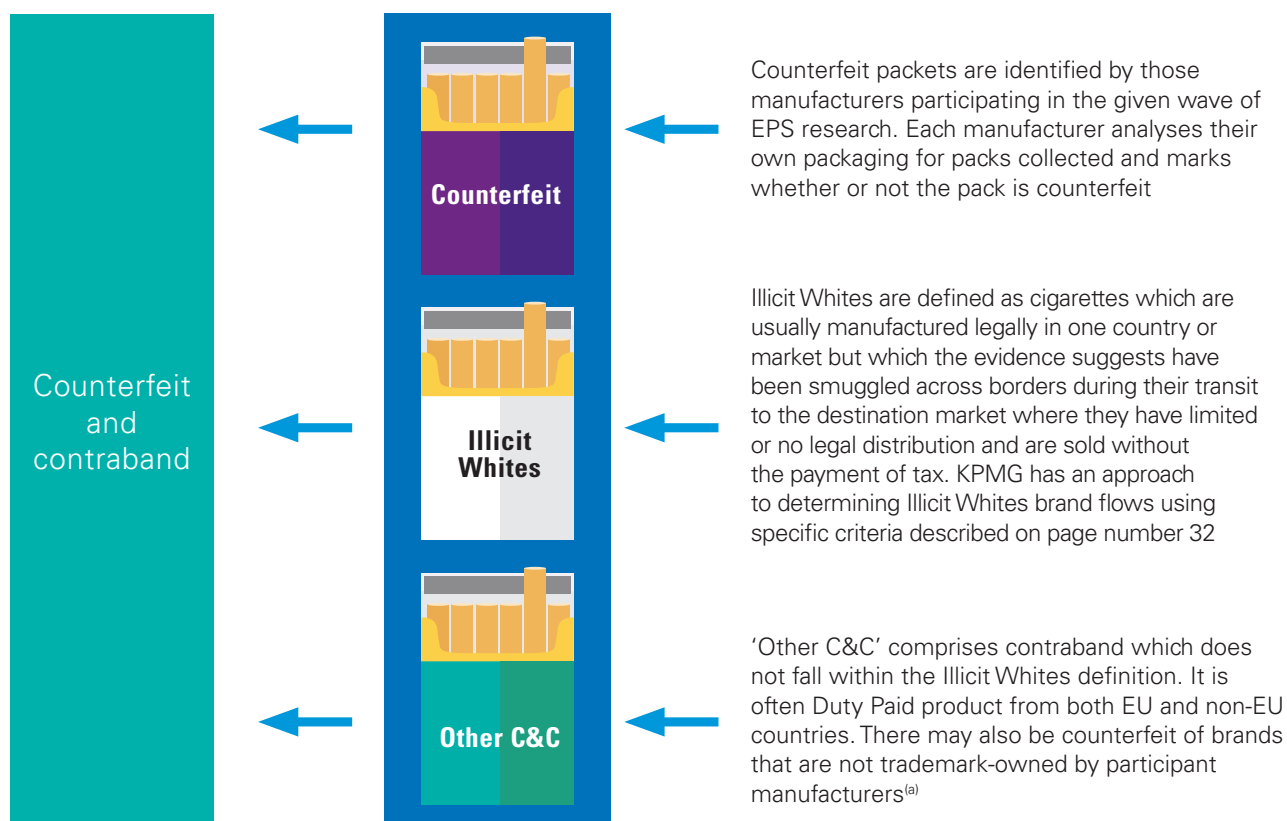
Project SUN uses LDS, EPS results and other consumer research to estimate the volume of C&C cigarettes consumed in the EU



The Project SUN methodology was developed by KPMG. It has been deployed on a consistent basis since 2006, enabling comparisons to be made between counterfeit and contraband volumes from year to year.

Methodology - Overview

Counterfeit and contraband is allocated into three constituent parts: Counterfeit, Illicit Whites and Other C&C



Understanding the differences between OLAF seizure data and Project SUN results

Over 50% of product identified within the SUN report is defined as 'other C&C'. However, when compared to OLAF seizures data, 'Other C&C' accounts for 2%-3% of total seizures volumes⁽¹⁾

There are several possible explanations for the different findings:

- Illicit Whites brand flows and counterfeit cigarettes tend to be transported in large volumes
 - Illicit Whites brand flows are not subject to the same high level of supply chain controls as those of genuine international brands. This means that product can be legally manufactured in one country, mainly outside of the EU, imported and distributed illegally in bulk within another country. This results in high volume seizures
 - Counterfeit cigarettes are usually seized within transport containers or are identified during law enforcement raids on the factories in which the product is manufactured. This often results in large volumes of counterfeit cigarettes being seized
- The remaining 'other C&C' is generally only available through legitimate Point of Sale locations as a Duty Paid product in a country. This means it is generally not transported in high volumes, resulting in the flow entering countries over and above legal allowances. This high frequency but low volume approach, sometimes referred to as "bootlegging," makes detection more difficult
- As the vast majority of 'other C&C' seems to be 'bootlegged', even if the smuggled product is seized by law enforcement agencies, volumes are usually below 50,000 cigarettes and are likely not notified to OLAF to be included in their seizure data

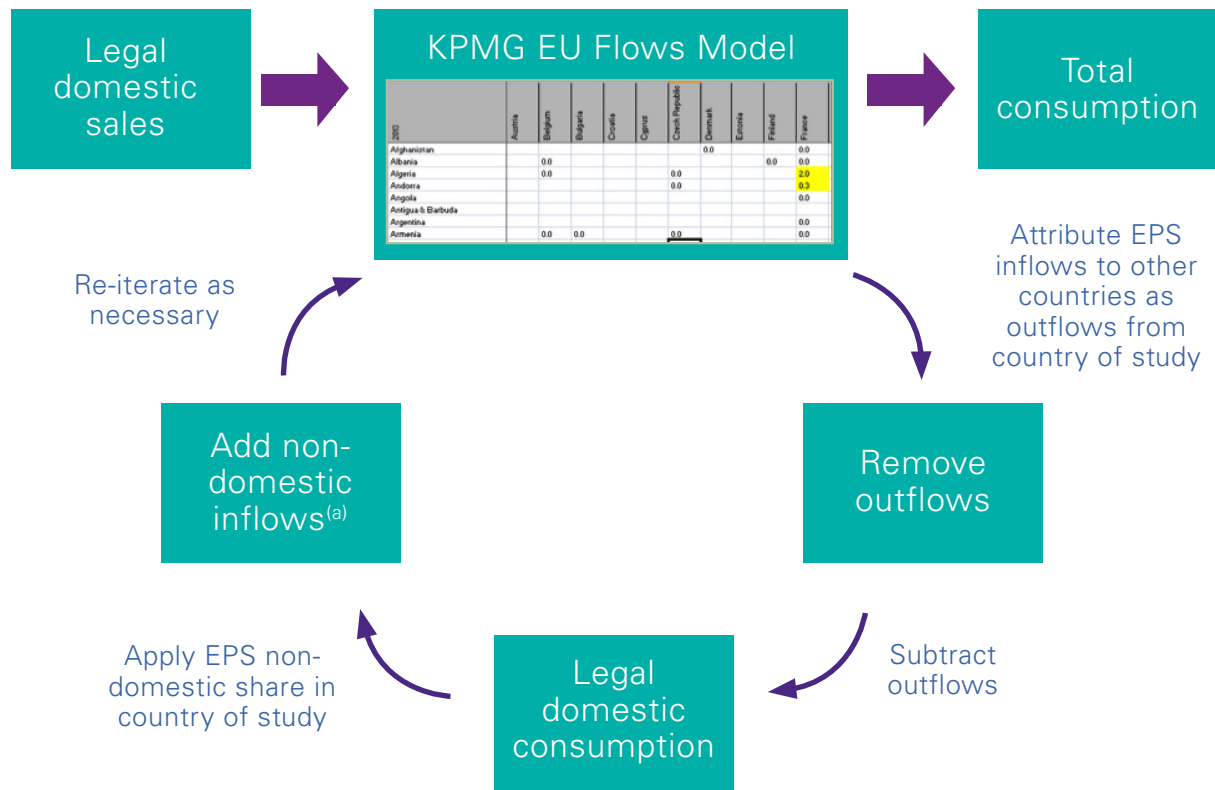
Note: (a) Cigarette packs of brands that are not trade mark owned by participant manufacturers are not analysed and are all considered to be genuine
Source: (1) OLAF, Q&A Fighting the illicit trade of tobacco products, 14 August 2015

Methodology – KPMG EU Flows Model

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Methodology – KPMG EU Flows Model

Primary information sources and tools – EU Flows Model



The KPMG EU Flows Model is a dynamic, iterative model that is principally based on LDS and EPS results

- LDS volumes are the starting point of the model 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 model is then re-iterated as necessary reflecting the relationship of inflows and outflows between all 28 EU countries, Norway and Switzerland
- EPS results provide a measurement of the share of non-domestic packs by country of origin in all markets
 - EPS results provide a consistent source across all 30 markets of non-domestic packs by country of origin from which we can calculate total product outflow from each market to the other 29 markets

Note: (a) The methodology to identify the ND(L) and C&C components of non-domestic flows is explained overleaf

Methodology – LDS

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Methodology - LDS

LDS data was provided to KPMG by the industry and was built up on an individual brands basis

- Where available, each manufacturer's LDS estimates were used for both the total market volumes and for their own sales
- Before 2013, Nielsen estimates were used for all non-PMI brands. The availability of sales by country and brand from all four manufacturers starting in 2013 has facilitated a more detailed analysis of LDS which has been added to the KPMG EU Flows model.

Example LDS methodology ^{(1)(a)}

Manufacturer's estimate of their own brands used to model total sales

Country 1	BAT		PMI		Section	Combined	
Brand name	LDS (bn sticks)	Market share (%)	LDS (bn sticks)	Market share (%)		LDS (bn sticks)	Market share (%)
Brand A			5.25	20.8%	PMI	5.25	21.0%
Brand B	4.50	18.4%			BAT	4.50	18.0%
Brand C			3.80	15.2%	PMI	3.80	15.2%
Brand D			3.10	12.5%	PMI	3.10	12.4%
Brand E	2.40	9.7%			BAT	2.40	9.6%
Brand F			2.20	8.8%	PMI	2.20	8.8%
Brand G	1.50	6.1%			BAT	1.50	6.0%
Brand H			1.00	4.0%	PMI	1.00	4.0%
Brand I			0.75	3.0%	PMI	0.75	3.0%
Brand J	0.50	2.0%			BAT	0.50	2.0%
Total market (bn sticks)	24.50		25.30			25.00	100.0%

Modelled LDS figure compared to manufacturer estimates

Where appropriate, nationally agreed 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, it has been deemed more appropriate to incorporate these recognised estimates of LDS in the KPMG EU Flows model. This is the case with:
 - Bulgaria: figure reported by the Customs Agency
 - Spain: figure reported by the Tobacco Commissioner

Note: (a) Example volumes included do not reflect actual sales data and are for illustrative purposes

Sources: (1) LDS data provided by all both manufacturers

Methodology – EPS

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Methodology – EPS

Overview	<p>EPS 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 (non-duty paid) and counterfeit packs in each of the markets</p> <ul style="list-style-type: none"> • EPSs were conducted by independent market research agencies (e.g. Nielsen, Ipsos or MSI) 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 within each given country • Results were 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	<p>EPSs rely purely on physical evidence, avoiding the variability of consumer bias in interview-based methods</p> <ul style="list-style-type: none"> • 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 determine the proportion of packs that did not originate from that jurisdiction (including Duty Free variants) <ul style="list-style-type: none"> – 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 inks, paper and other characteristics • KPMG used the results of the EPSs to extrapolate overall consumption in the market using LDS and the percentage of non-domestic cigarettes in the market as found through EPSs to calculate overall consumption • The process is repeated across all countries of study using a model which iterates the level of non-domestic cigarettes until all inflows and outflows are equal
Coverage	<p>Coverage per market is tailored to the size of the market, the likelihood of high non-domestic incidence and the manufacturers' share of the legal market</p> <ul style="list-style-type: none"> • Small surveys (300-4,999 packs): Cyprus, Luxembourg, Malta, Portugal, Slovenia, Sweden • Medium surveys (5,000-9,999 packs): Belgium, Croatia, Denmark, Estonia, Latvia, Norway, Slovakia, Switzerland • Large surveys (10,000 packs or more collected): Austria, Bulgaria, Czech Republic, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Netherlands, Poland, Spain, Romania, UK

Methodology – EPS

Calculation of non-domestic incidence on a stick basis in 2013-2017

Overview	<p>Prior to 2012, the KPMG EU Flows Model assumed that all packs collected were the same size (20 cigarettes). In 2012 the model was updated to take into account different pack sizes, and this approach has been continued in 2013, 2014, 2015, 2016 and 2017</p> <ul style="list-style-type: none"> • 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	<p>EPS results provide the number of cigarettes in each packet</p> <ul style="list-style-type: none"> • 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	<p>The effect of this change on non-domestic incidence was dependant upon whether the typical domestic pack size was greater or less than the average pack size of 20 on a country by country basis</p> <ul style="list-style-type: none"> • The average pack contains 20 cigarettes • In countries where the average domestic pack size was less than 20 cigarettes (for example, 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 EPS 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 EPS sample, giving a lower non-domestic incidence than estimating on a pack basis

Methodology – EPS

EPS example sample plan

Empty Pack Survey Methodology



- 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 neighborhoods 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 118 cities are sampled in each wave of 11,500 packs. Of all packs collected, 2320 are collected in Paris, which represents over 10% of the packs collected and sample sizes. 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 EPS in a way that enables easy processing and identification
- Packs where brands are unknown are sent to the participating manufacturers to assess whether they are Illicit Whites

4. Pack analysis

- The participating manufacturers check the packets belonging to their brands to identify counterfeit and inform the agency who collates and updates the data sheets
- These data sheets are finally provided to KPMG and analysed to calculate the non-domestic incidence and contraband and counterfeit volumes

Methodology – EPS

EPS adjustments

Adjustments are made to the EPS in the form of reweighting different packs or quarterly surveys, based on additional evidence provided by manufacturers. Adjustments are made to correct for issues identified in the EPS. The main issues identified are covered below:

EPS	Explanation	Method	Countries where adjustment made
1. Brand oversampling	Domestic packs collected by brand in the EPS deviate significantly from the domestic brand shares	<ul style="list-style-type: none"> Premium brands may be oversampled which we can check through a comparison with the LDS KPMG assumes that an oversampling of premium brands domestically will result in an oversampling of non-domestic brands. As a result, it down-weights all packs from this brand (domestic and non-domestic) by the domestic market share 	Austria, Belgium, Finland, France, Hungary, Ireland, Luxembourg, Netherlands, Norway, Slovakia, Slovenia, Sweden and Switzerland
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	<ul style="list-style-type: none"> Adjustments are made to survey results based on the time of year that the survey was undertaken to make it more reflective of the whole year For example, if a survey is undertaken before a price increase which may impact cross border sales, this is likely to increase the volume of packs collected for the country. In this case, where there is more than one survey, an adjustment can be made by KPMG to make one survey result account for a higher proportion of the overall year compared with others Seasonal adjustments can also be made to take account of increased tourism and travel between countries during the summer months. In France, an adjustment is made to take account of increased traveller numbers to Spain between June and September, when the EPS is undertaken in May and November 	France, Luxembourg and UK
3. Pack size adjustment	Certain domestic pack sizes are often over-sampled, resulting in an overstating of non-domestic product	<ul style="list-style-type: none"> In the UK and Italy where 10-packs are a sizeable proportion of the market, more 10-packs than 20-packs are often collected. The impact of this is to over-report the number of non-domestic sticks The domestic 10-packs and other pack sizes collected are re-weighted by KPMG to ensure that they are representative of the domestic market 	Italy and UK
4. Sweden “domestic whites” EPS adjustments	Addition of “domestic whites” volume to non-domestic consumption	<ul style="list-style-type: none"> In Sweden an adjustment is made to the non-domestic percentage based on the amount of “domestic whites” as reported by HUI Research 	Sweden

Methodology - EPS

EPS adjustments

Country	Sample dates	Packs	Number of cities	Adjustment	Impact
Austria	Q2: Apr-May Q4: Nov	13,000	24	Brand adjustment: Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.08 billion of non-domestic Marlboro
Belgium	Q2: April Q4: Oct-Nov	5,600	18	Brand adjustment: Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.06 billion of non-domestic Marlboro
Bulgaria	Q2: Apr-May Q3: Sep Q4: Nov	14,050	26	None	n/a
Croatia	Q4: Oct	3,000	8	None	n/a
Cyprus	Q4: Oct	1,000	4	None	n/a
Czech Republic	Q2: April Q4: Sep	21,004	30	None	n/a
Denmark	Q2: Mar-Apr	5,500	9	None	n/a
Estonia	Q2: April Q4: Sep-Oct	6,600	14	Adjustment to country flows Q2 EPS results were used to represent the first three quarters of 2016, and Q4 to represent the fourth quarter	C&C decreased from 0.22 billion to 0.18 billion
Finland	Q2: April Q4: Oct	12,000	14	Brand adjustment: Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.03bn of non-domestic Marlboro
France	Q1: Feb-Mar Q2: Apr-May Q4: Oct-Nov	34,500	118	Brand adjustment: Marlboro was over-sampled and therefore re-weighted according to its domestic share Adjustment to country flows a. Inflows from Spain were adjusted to reflect the tourism trend and border sales b. The Q4 sample appeared to overweight flows from Algeria that were not aligned to market conditions for the second half of the year	Reduction of 1.25bn of non-domestic Marlboro a. Inflows from Spain increased from 0.99 billion to 2.84 billion b. Inflows from Algeria decreased from 2.47 billion to 2.44 billion
Germany	Every month	189,210	45	None	n/a
Greece	Q2: April -May Q3: Sep	14,000	30	None	n/a
Hungary	Q2: May-Jun	19,905	53	Brand adjustment: Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.01bn of non-domestic Marlboro
Ireland	Q2: Apr-May Q4: Oct	10,000	22	Brand adjustment: Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.15bn of non-domestic Marlboro
Italy	Q1: Feb Q2: May-Jun Q3: Aug Q4: Oct-Nov	40,000	41	10-pack adjustment 4% of domestic packs collected were 10-packs whilst 0.4% of the market was represented by 10-packs, as a result the domestic 10-packs were down-weighted and the 20-packs were up-weighted, resulting in more domestic sticks and a lower percentage of non-domestic	Reduction of non-domestic share from 4.38% to 4.31%
Latvia	Q2: April Q4: Sep-Oct	9,800	25	None	n/a
Lithuania	Q2: April Q4: Sep	12,800	26	None	n/a

Methodology - EPS

EPS adjustments

Country	Sample dates	Packs collected	Number of cities	Adjustment	Impact
Luxembourg	Q2: Apr Q4: Oct	400	2	Brand adjustment: Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.004bn of non-domestic Marlboro
Malta	Q4: Oct	1,000	8	None	n/a
Netherlands	Q2: Apr-May Q4: Sep-Oct	14,000	50	Brand adjustment Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.19bn of non-domestic Marlboro
Norway	Q2: May-Jun	5,000	8	Brand adjustment: Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.09bn of non-domestic Marlboro
Poland	Q2: April Q3: Aug Q4: Oct-Nov	51,000	70	None	n/a
Portugal	Q2: April-May	3,000	10	None	n/a
Romania	Q1: Jan-Apr Q2: May Q3: Jul-Oct Q4: Nov-Dec	15,148	41	None	n/a
Slovakia	Q2: April	6,400	39	Brand adjustment: Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.01bn of non-domestic Marlboro
Slovenia	Q4: Oct	3,000	8	Brand adjustment Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.01 billion of non-domestic Marlboro
Spain	Q2: April- May Q4: Oct-Nov	30,000	58	Brand adjustment: Marlboro was over-sampled and therefore re-weighted according to its domestic share"	Reduction of 0.05 billionof nondomestic Marlboro
Sweden	Q2: Apr	10,000	29	Addition of domestic whites Addition of "domestic whites" as reported by HUI Research in Sweden Brand adjustment Marlboro was over-sampled and therefore re-weighted according to its domestic share	0.5% was added to the overall non-domestic consumption in order to include "domestic whites" Reduction of 0.05bn of non-domestic Marlboro

Methodology - EPS

EPS adjustments

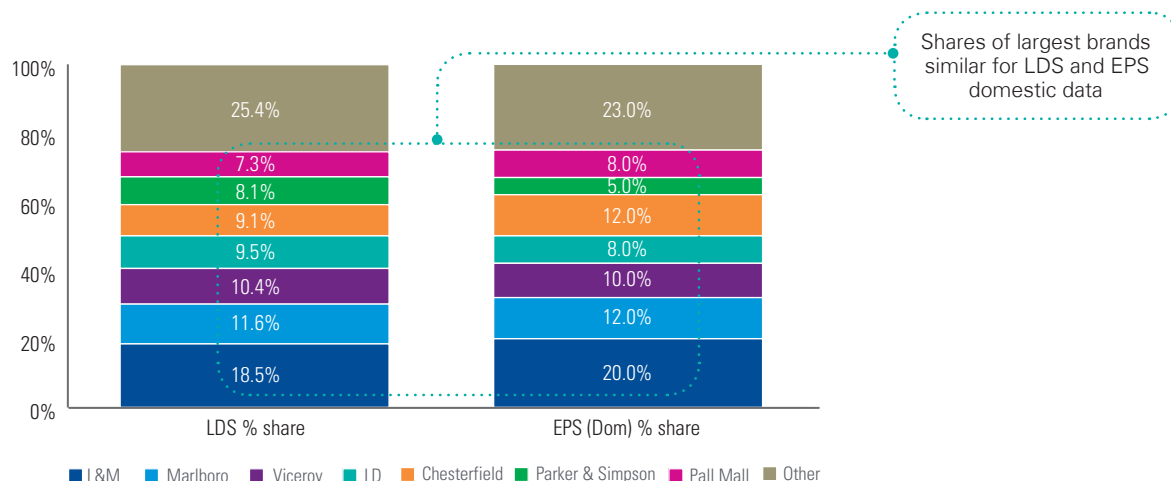
Country	Sample dates	Packs collected	Number of cities	Adjustment	Impact
Switzerland	Q2: Jun	6,600	25	Brand adjustment Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.04bn of non-domestic Marlboro
UK	Q1: Mar Q2: Apr-May Q3: Jul-Aug Q4: Sep-Oct	50,800	105	Pack size adjustment Whilst 10-packs represented 21% of the market, 24% were collected in the EPS. Pack sizes were therefore re-weighted to ensure that they are representative of the domestic market. This resulted in a lower level of non-domestic cigarettes. Adjustments to country flows Inflows from Spain were adjusted as the EPS did not account for the summer months where sales are higher. This adjustment was made based on the increase in sales volumes provided by industry participants	Reduction of non-domestic share from 28.90% to 28.84% Inflows from Spain increased from 0.58 bn to 1.49 bn

Methodology - EPS

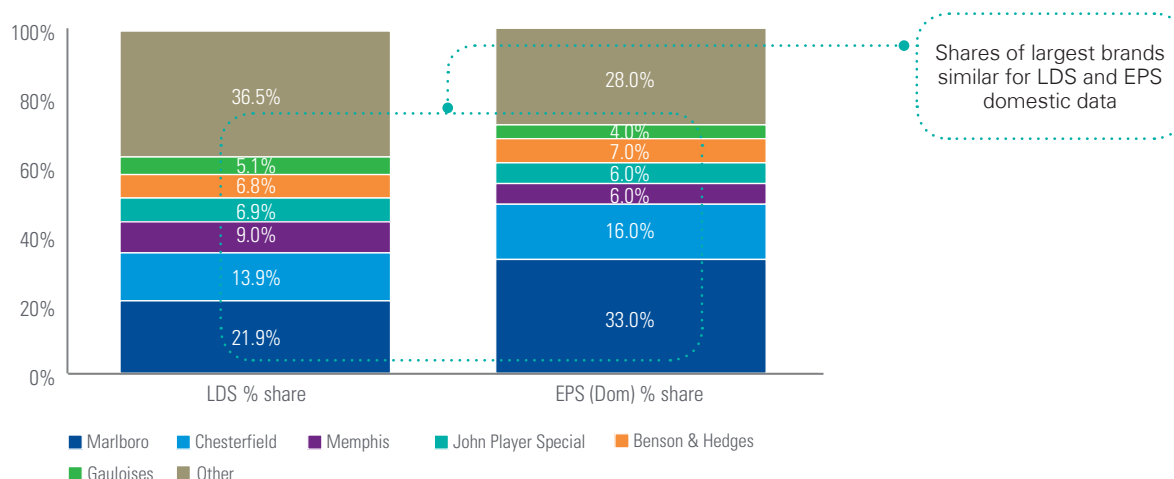
As collateral for the EPS, the brand shares of domestic origin packs collected during the EPSs closely reflect the brand shares seen in the LDS data

- If brand shares of domestic origin packs closely reflect the brand shares seen in LDS, EPSs are considered reflective of actual consumption in a market
- This provides additional confidence that the packs identified as non-domestic also fairly reflect the volume and brands actually consumed in that market (see exceptions on next page)
- As the EPSs collect any brand and market variant, there is no bias towards any specific brand being collected
- Two examples are shown below, for Poland and Austria

Comparison of LDS and domestic EPS brand share, using illustrative data – Poland^{(a)(1)(2)}



Comparison of LDS and domestic EPS brand share, using illustrative data – Austria^{(a)(1)(2)}



Note: (a) Number of 'top' brands shown chosen to reflect approximately two thirds of the total market on an LDS and EPS basis

Sources: (1) Analysis of LDS data provided by participating manufacturers in the given wave of EPS

(2) Independent agency Empty Pack Surveys, 2006-2014

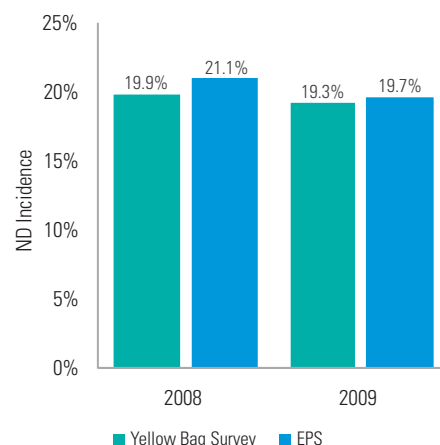
Methodology - EPS

EPS comparison

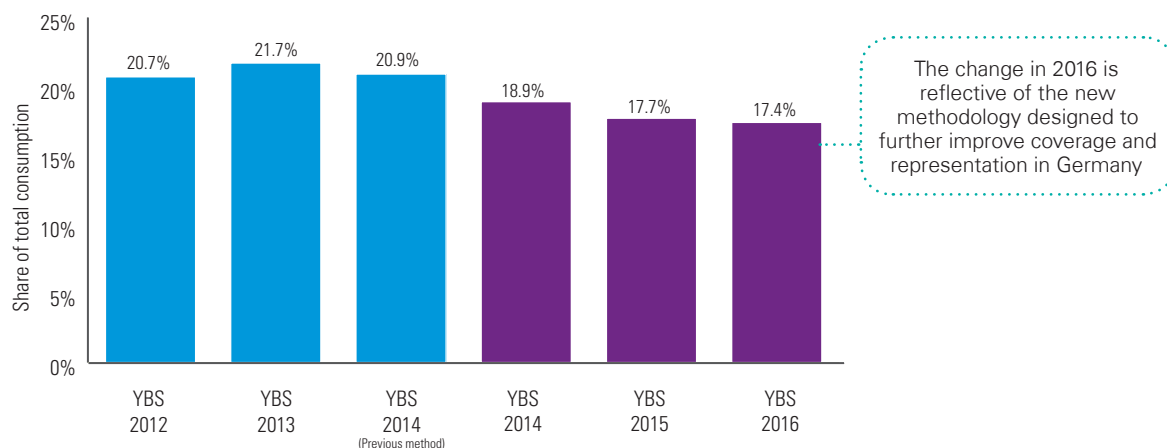
Validation of empty pack survey analysis

- A criticism of the empty pack survey is that it samples discarded cigarette packs rather than household waste and therefore significantly overstated non-domestic incidence. Sampling for household waste is impractical in most countries, however it is available in Germany. The household waste survey, known as a Yellow Bag Survey (YBS), is possible in Germany because household waste is sorted, mainly for the purposes of recycling, which makes it possible to separate cigarette packs from other waste
- The Yellow Bag Survey collects 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 different methodologies in 2008 and 2009
- 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. This helps to address a common criticism of the EPS
- This enables us to compare the results of the Yellow Bag Survey with the EPS to understand differences in the amount of non-domestic product that is captured

Comparison of EPS and Yellow Bag Survey, Germany - 2008-2009^{(1)(2)(a)}



Germany historical Yellow Bag Surveys^{(2)(a)}



Improvement of German pack analysis in 2014, 2015, 2016 and 2017

- In 2014 the German pack collection was refined as fewer waste disposal centres were providing pack collections. Despite weighting the pack collections from each disposal centre according to the population of the region, some regions were not being represented
- As a result, a pack collection was started in 2014 in areas with no coverage from waste recycling centres. This has resulted in a much greater proportion of the German population covered, from 40% to close to 100% of the population
- The result of the change in methodology has been to reduce the overall non-domestic incidence by approximately 2 percentage points compared to the collection in previous years

Note: (a) The comparison between methodologies is made on a "sticks basis" in 2008 and 2009 rather than the packs basis reported in Project SUN and in the chart below

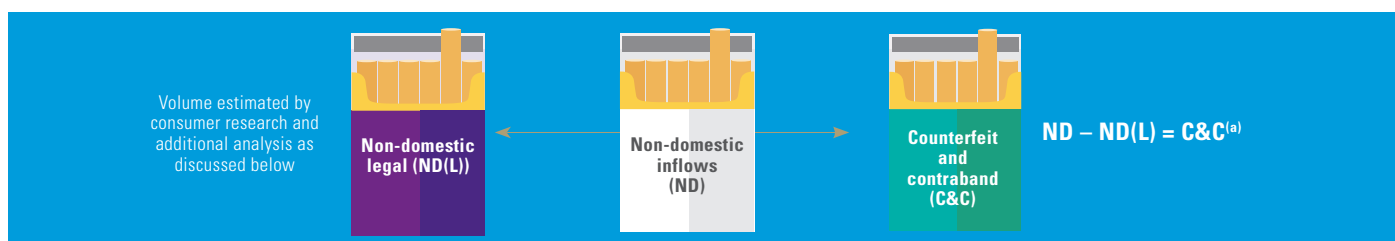
Sources: (1) MSI Intelligence Research, Germany Empty pack survey report, Q2 2009 (2) Ipsos Empty Pack Surveys, 2008-2009

Methodology – Non-domestic legal analysis

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Methodology – Non-domestic legal analysis

Primary information sources and tools – Non-domestic Legal analysis and assumptions



ND(L) was determined by analysis of travel trends, border crossings and cigarette pricing data

C&C volumes formed the remaining ND balance after subtracting ND(L) from total non-domestic

- ND(L) was calculated using 2 methods:

1) Countries where ND(L) is 100% of total ND

- Non-domestic product found in Empty Pack Surveys from higher priced inbound tourist/visitor countries was categorised as legal

2) Use of travel flows analysis

- Business and tourism travel data from the World Tourism Organization (UNWTO), national statistics offices and other publically available sources were used to calculate the number of trips made by travellers over the age of 18
- This total number of trips was then multiplied by the average smoking prevalence of the country of origin to calculate the total number of trips where cigarettes are purchased. Smoking prevalence data was provided by Euromonitor
- It was assumed that the number of packs purchased per trip is equal to the Duty Free allowance, or the indicative legal limit for intra-EU travel
- The EPS and EU Flows model 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 model it is capped at the volume generated by the EU flows model
- 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 and travel retail sales data

1 Countries where ND(L) is 100% of total

$$\begin{array}{lcl} \text{ND(L) is} & \Rightarrow & \text{ND from} \\ \text{100\% of} & & \text{EU Flows} \\ \text{total non-} & & \text{model} \\ \text{domestic} & & = \\ & & \text{Total} \\ & & \text{ND(L)} \\ & & \text{(sticks)} \end{array}$$

2 Travel flows analysis

$$\begin{array}{lcl} \text{Total trips} & \times & \text{Cigarettes} \\ \text{where} & & \text{per trip} \\ \text{cigarettes} & & \\ \text{purchased} & & = \\ & & \text{Total} \\ & & \text{ND(L)} \\ & & \text{(sticks)} \end{array}$$

Example using Illustrative data

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+ ⁽²⁾	Smoking prevalence	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 calculates 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

Sources: (1) KPMG EU Flows Model (2) UN WTO Tourism Factbook 2008-14 (3) Euromonitor

Methodology – Non-domestic legal analysis

Non-domestic Legal brand split analysis and assumptions

Illustrative example of ND(L) by brand approach



ND(L) brand split



Having determined the volume of ND(L) using travel statistics, the brand share of each ND(L) inflow was determined by an analysis of brands sold at border shops

- Border sales data was provided to KPMG by the manufacturers who participated in the EPS in a range of formats:
 - Sales data from participants from shops on the border – which can be either the total market, or restricted to the brands that each participant sells
 - Sales data by region bordering the destination country which is often collated by Nielsen for some of the larger countries
 - Any other individual studies that participants have made which can help the overall border sales
- KPMG used all data sources available to come up with a fair representation of the overall brand split, prioritising independent border sales data provided by a third party for all brands where possible
- These border sales are used to calculate the percentage split of brand sales. It is not used in order to calculate volumes
- Where the ND(L) flow was considered 100% of the total flow, all brands from that country were allocated to ND(L) and border sales data was not analysed

Methodology – Non-domestic legal analysis

Primary information sources and tools – 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)
Czech Republic	Outbound	Figure based on tourism statistics and border region consumption analysis							0.53bn
	Inbound								
Slovenia	Outbound	All flows considered legal							0.34bn
	Inbound								
Hungary	Outbound	All flows considered legal							0.31bn
	Inbound								
Slovakia	Outbound	Figure based on tourism statistics and border region consumption analysis							0.06bn
	Inbound								
Others									0.32bn
Total									1.55bn
Belgium									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Luxembourg	Outbound	All flows considered legal							0.09bn
	Inbound								
Poland	Outbound	0.30m	80%	19%	0.05m	40	800	0.04bn	0.04bn
	Inbound	0.42m	82%	24%	0.08m	2	40	0.003bn	
Netherlands	Outbound	All flows considered legal							0.04bn
	Inbound								
Germany	Outbound	All flows considered legal							0.03bn
	Inbound								
Others									0.29bn
Total									0.49bn
Bulgaria									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Turkey	Outbound	All flows considered legal							0.02bn
	Inbound								
United Arab Emirates	Outbound	Figure based on tourism statistics and border region consumption analysis							0.02bn
	Inbound								
Serbia	Outbound	0.12m	83%	32%	0.03m	10	200	0.01bn	0.01bn
	Inbound	0.51m	83%	33%	0.14m	2	40	0.01bn	
Greece	Outbound	All flows considered legal							0.01bn
	Inbound								
Others									0.14bn
Total									0.19bn

Methodology – Non-domestic legal analysis

Primary information sources and tools – 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)
Bosnia And Herzegovina	Outbound	0.09m	82%	28%	0.02m	10	200	0.004bn	0.009bn
	Inbound	0.40m	84%	35%	0.12m	2	40	0.005bn	
Czech Republic	Outbound			All flows considered legal					0.006bn
	Inbound								
Serbia	Outbound	0.08m	82%	28%	0.02m	10	200	0.004bn	0.005bn
	Inbound	0.12m	83%	33%	0.03m	2	40	0.001bn	
Italy	Outbound			All flows considered legal					0.004bn
	Inbound								
Others									0.019bn
Total									0.043bn

Cyprus									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Russia	Outbound			All flows considered legal					0.007bn
	Inbound								
Greece	Outbound			All flows considered legal					0.004bn
	Inbound								
Bulgaria	Outbound			All flows considered legal					0.003bn
	Inbound								
Turkey	Outbound			All flows considered legal					0.001bn
	Inbound								
Others									0.012bn
Total									0.027bn

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			All flows considered legal					0.037bn
	Inbound								
Slovakia	Outbound			All flows considered legal					0.020bn
	Inbound								
Germany	Outbound			All flows considered legal					0.009bn
	Inbound								
Bulgaria	Outbound			All flows considered legal					0.007bn
	Inbound								
Others									0.095bn
Total									0.168bn

Methodology – Non-domestic legal analysis

Primary information sources and tools – 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			All flows considered legal					0.066bn
	Inbound								
Poland	Outbound			All flows considered legal					0.022bn
	Inbound								
Spain	Outbound			All flows considered legal					0.014bn
	Inbound								
Czech Republic	Outbound			All flows considered legal					0.012bn
	Inbound								
Others									0.181bn
Total									0.295bn

Estonia									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Latvia	Outbound								0.029bn
	Inbound			All flows considered legal					
Russia	Outbound	0.44m	81 %	22%	0.08m	2	40	0.003bn	0.005bn
	Inbound	0.17m	80%	35%	0.05m	2	40	0.002bn	
Finland	Outbound								0.004bn
	Inbound			All flows considered legal					
Lithuania	Outbound								0.002bn
	Inbound			All flows considered legal					
Others									0.009bn
Total									0.049bn

Finland									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Estonia	Outbound	0.97m	81%	15%	0.11m	40	800	0.091bn	0.091bn
	Inbound	0.00m	81%	22%	0.00m	2	40	0.000bn	
Russia	Outbound	1.26m	81%	15%	0.15m	10	200	0.029bn	0.032bn
	Inbound	0.22m	80%	35%	0.06m	2	40	0.002bn	
Sweden	Outbound			All flows considered legal					0.018bn
	Inbound								
Latvia	Outbound	0.17m	81%	15%	0.02m	40	800	0.016bn	0.016bn
	Inbound	0.02m	82%	27%	0.005m	2	40	0.002bn	
Others									0.164bn
Total									0.321bn

Methodology – Non-domestic legal analysis

Primary information sources and tools – 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	10.79m	78%	28%	2.34m	40	800	1.869bn	1.91bn
	Inbound	5.74m	82%	24%	1.13m	2	40	0.045bn	
Belgium	Outbound	Figure based on tourism statistics and border region consumption analysis							1.04bn
	Inbound								
Luxembourg	Outbound	Figure based on tourism statistics and border region consumption analysis							0.77bn
	Inbound								
Algeria	Outbound	Figure based on tourism statistics and border region consumption analysis							0.43bn
	Inbound								
Others									2.55bn
Total									6.71bn

Germany									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Czech Republic	Outbound	Figure based on tourism statistics and border region consumption analysis							4.45bn
	Inbound								
Poland	Outbound	34.03m	84%	24%	6.94m	25	500	3.47bn	3.48bn
	Inbound	1.00m	82%	24%	0.20m	2	40	0.01bn	
Luxembourg	Outbound	All flows considered legal							0.34bn
	Inbound								
Austria	Outbound	All flows considered legal							0.21bn
	Inbound								
Others									2.52bn
Total									11.00bn

Greece									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Bulgaria	Outbound	All flows considered legal							0.066bn
	Inbound								
Albania	Outbound	0.43m	83%	40%	0.14m	10	200	0.029bn	0.029bn
	Inbound	0.00m	78%	0%	0.00m	2	40	0.000bn	
Italy	Outbound	All flows considered legal							0.011bn
	Inbound								
Romania	Outbound	All flows considered legal							0.009bn
	Inbound								
Others									0.125bn
Total									0.240bn

Methodology – Non-domestic legal analysis

Primary information sources and tools – 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)
Ukraine	Outbound	1.53m	83%	28%	0.36m	2	40	0.014	0.044bn
	Inbound	3.12m	100%	24%	0.73m	2	40	0.029	
Austria	Outbound	All flows considered legal							0.018bn
	Inbound								
Romania	Outbound	All flows considered legal							0.016bn
	Inbound								
Germany	Outbound	All flows considered legal							0.013bn
	Inbound								
Others									0.132bn
Total									0.223bn

Ireland									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Spain	Outbound								0.125bn
	Inbound			All flows considered legal					
UK	Outbound								0.117bn
	Inbound			All flows considered legal					
Italy	Outbound								0.044bn
	Inbound			All flows considered legal					
France	Outbound								0.040bn
	Inbound			All flows considered legal					
Others									0.270bn
Total									0.596bn

Italy									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Slovenia	Outbound								0.121bn
	Inbound			All flows considered legal					
Germany	Outbound								0.036bn
	Inbound			All flows considered legal					
Bulgaria	Outbound								0.019bn
	Inbound			All flows considered legal					
Croatia	Outbound								0.018bn
	Inbound			All flows considered legal					
Others									0.393bn
Total									0.586bn

Methodology – Non-domestic legal analysis

Primary information sources and tools – 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								0.009bn
	Inbound								
All flows considered legal									
Russia	Outbound	0.25m	82%	27%	0.06m	2	40	0.002bn	0.009bn
	Inbound	0.59m	80%	35%	0.16m	2	40	0.007bn	
Estonia	Outbound								0.004bn
	Inbound								
All flows considered legal									
Belarus	Outbound	0.10m	82%	27%	0.02m	2	40	0.001bn	0.002bn
	Inbound	0.13m	81%	25%	0.03m	2	40	0.001bn	
Others									0.009bn
Total									0.033bn

Lithuania										
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip		# of cigarettes	ND(L) volume	Total ND(L)
Poland	Outbound									0.005bn
	Inbound									
All flows considered legal										
Belarus	Outbound	0.36	82%	27%	0.08	2	40		0.0032	0.004bn
	Inbound	0.16	81%	25%	0.03	2	40		0.0013	
Latvia	Outbound									0.004bn
	Inbound									
All flows considered legal										
Russia	Outbound	0.18	82%	27%	0.04	2	40		0.0016	0.003bn
	Inbound	0.12	80%	35%	0.03	2	40		0.0014	
Others										0.022bn
Total										0.038bn

Luxembourg									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
France	Outbound								0.011bn
	Inbound			All flows considered legal					
Belgium	Outbound								0.008bn
	Inbound			All flows considered legal					
Germany	Outbound								0.006bn
	Inbound			All flows considered legal					
Italy	Outbound								0.004bn
	Inbound			All flows considered legal					
Others									0.012bn
Total									0.041bn

Methodology – Non-domestic legal analysis

Primary information sources and tools – 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								0.008bn
	Inbound			All flows considered legal					
Spain	Outbound								0.004bn
	Inbound			All flows considered legal					
Germany	Outbound								0.004bn
	Inbound			All flows considered legal					
Greece	Outbound	0.01m	83%	20%	0.01m	40	800	0.001bn	0.001bn
	Inbound	0.01m	83%	40%	0.003m	2	40	0.0001bn	
Others									0.009bn
Total									0.026bn

Netherlands									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Germany	Outbound								0.260bn
	Inbound			All flows considered legal					
Italy	Outbound								0.168bn
	Inbound			All flows considered legal					
France	Outbound								0.151bn
	Inbound			All flows considered legal					
Belgium	Outbound								0.145bn
	Inbound			All flows considered legal					
Others									0.932bn
Total									1.656bn

Poland									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Ukraine	Outbound	1.23m	82%	24%	0.24m	2	40	0.010bn	0.104bn
	Inbound	9.99m	100%	24%	2.35m	2	40	0.094bn	
Germany	Outbound			All flows considered legal					0.046bn
	Inbound								
Andorra	Outbound			All flows considered legal					0.032bn
	Inbound								
Belarus	Outbound	0.32m	82%	24%	0.06m	2	40	0.003bn	0.029bn
	Inbound	3.27m	81%	25%	0.65m	2	40	0.026bn	
Others									0.235bn
Total									0.445bn

Methodology – Non-domestic legal analysis

Primary information sources and tools – 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	All flows considered legal						0.078bn	
	Inbound								
Belgium	Outbound	All flows considered legal						0.014bn	
	Inbound								
Ireland	Outbound	All flows considered legal						0.008bn	
	Inbound								
Czech Republic	Outbound	0.044m	83%	19%	0.01m	40	800	0.006bn	0.007bn
	Inbound	0.181m	82%	25%	0.04m	2	40	0.001bn	
Others									0.067bn
Total									0.175bn

Romania									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Ukraine	Outbound	0.89m	81%	24%	0.17m	10	200	0.034bn	0.044bn
	Inbound	1.05m	100%	24%	0.25m	2	40	0.010bn	
Serbia	Outbound	0.06m	81%	24%	0.01m	10	200	0.002bn	0.008bn
	Inbound	0.50m	83%	33%	0.13m	2	40	0.005bn	
Italy	Outbound	All flows considered legal						0.007bn	
	Inbound								
Poland	Outbound	All flows considered legal						0.007bn	
	Inbound								
Others									0.063bn
Total									0.129bn

Slovakia									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Czech Republic	Outbound	All flows considered legal						0.066bn	
	Inbound								
Ukraine	Outbound	0.41m	82%	31%	0.10m	10	200	0.021bn	0.029bn
	Inbound	0.85m	100%	24%	0.20m	2	40	0.008bn	
Hungary	Outbound	All flows considered legal						0.021bn	
	Inbound								
Austria	Outbound	All flows considered legal						0.020bn	
	Inbound								
Others									0.043bn
Total									0.178bn

Methodology – Non-domestic legal analysis

Primary information sources and tools – 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)
Croatia	Outbound								0.036bn
	Inbound			All flows considered legal					
Serbia	Outbound	0.08m	82%	24%	0.02m	10	200	0.003bn	0.004bn
	Inbound	0.12m	83%	33%	0.03m	2	40	0.001bn	
Germany	Outbound								0.003bn
	Inbound			All flows considered legal					
Italy	Outbound								0.003bn
	Inbound			All flows considered legal					
Others									0.012bn
Total									0.060bn

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							0.760bn
	Inbound								
Andorra	Outbound			All flows considered legal					0.461bn
	Inbound								
Canary Islands	Outbound			All flows considered legal					0.203bn
	Inbound								
Portugal	Outbound			All flows considered legal					0.045bn
	Inbound								
Others									0.394bn
Total									1.865bn

Sweden									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Germany	Outbound								0.025bn
	Inbound			All flows considered legal					
Italy	Outbound								0.023bn
	Inbound			All flows considered legal					
Poland	Outbound								0.023bn
	Inbound			All flows considered legal					
Finland	Outbound								0.019bn
	Inbound			All flows considered legal					
Others									0.308bn
Total									0.398bn

Methodology – Non-domestic legal analysis

Primary information sources and tools – 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	Outbound	All flows considered legal							1.494bn
	Inbound								
Poland	Outbound	2.39m	79%	23%	0.43m	40	800	0.344bn	0.708bn
	Inbound	2.18m	82%	28%	0.49m	37	740	0.364bn	
Romania	Outbound	0.20m	79%	17%	0.03m	40	800	0.021bn	0.208bn
	Inbound	1.22m	81%	24%	0.23m	40	800	0.186bn	
Canary Islands	Outbound	All flows considered legal							0.177bn
	Inbound								
Others									1.668bn
Total									4.255bn

Norway									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Sweden	Outbound	All flows considered legal							0.312bn
	Inbound								
Germany	Outbound	All flows considered legal							0.017bn
	Inbound								
Spain	Outbound	All flows considered legal							0.012bn
	Inbound								
Poland	Outbound	0.53m	79%	11%	0.05m	10	200	0.009bn	0.010bn
	Inbound	0.13m	82%	24%	0.02m	2	40	0.001bn	
Others									0.462bn
Total									0.814bn

Switzerland									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Germany	Outbound								0.205bn
	Inbound								
Italy	Outbound								0.145bn
	Inbound								
France	Outbound								0.066bn
	Inbound								
Austria	Outbound								0.053bn
	Inbound								
Others									0.643bn
Total									1.111bn

Note: (a) Smoking prevalence has been weighted to take account of the nationality and gender of the travellers between Poland and the UK

Methodology – Illicit Whites analysis

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Methodology – Illicit Whites analysis

Illicit Whites brand flows continued to account for over a third of total C&C volumes in the EU

- Illicit Whites are defined as
 - Cigarettes that are usually produced legally in one country/market but which the evidence suggests are 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
- KPMG undertook the following analysis to determine which brands made up Illicit Whites brand flows:
 - Illicit volumes were compared to LDS on a country by country basis to determine a share of total consumption
 - KPMG conservatively assumed that where non-domestic volumes represented >99% of total consumption, the brand is an Illicit White where a large flow has no country specific labelling or tax stamp
 - Once identified, the brand's overall volume is determined only in countries where the brand flow meets the 99% criteria
- Many of the Illicit Whites brand flows are identified in high volumes in the EPS. However, given our identification of counterfeit product is limited to the four industry participants, we cannot assess whether these flows are genuine or counterfeit
- We also categorise illicit whites as those which have no legal country specific labelling, even if there is legal distribution within a country

Illicit Whites identification process, Project SUN – worked example

Project SUN - 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

Project SUN - LDS by brand and by country				
Brand	Country 1	Country 2	Country 3	Country 4
Brand A	-	0.00	-	0.01

Project sun - Non-domestic volumes as share of total consumption				
Brand	Country 1	Country 2	Country 3	Country 4
Brand A	100%	100%	100%	38%

Project SUN - 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 2 where there is no evidence of legal distribution and all flows are unspecified origin

Not classified as an Illicit White in country 4 where non-domestic volumes are 38% of consumption

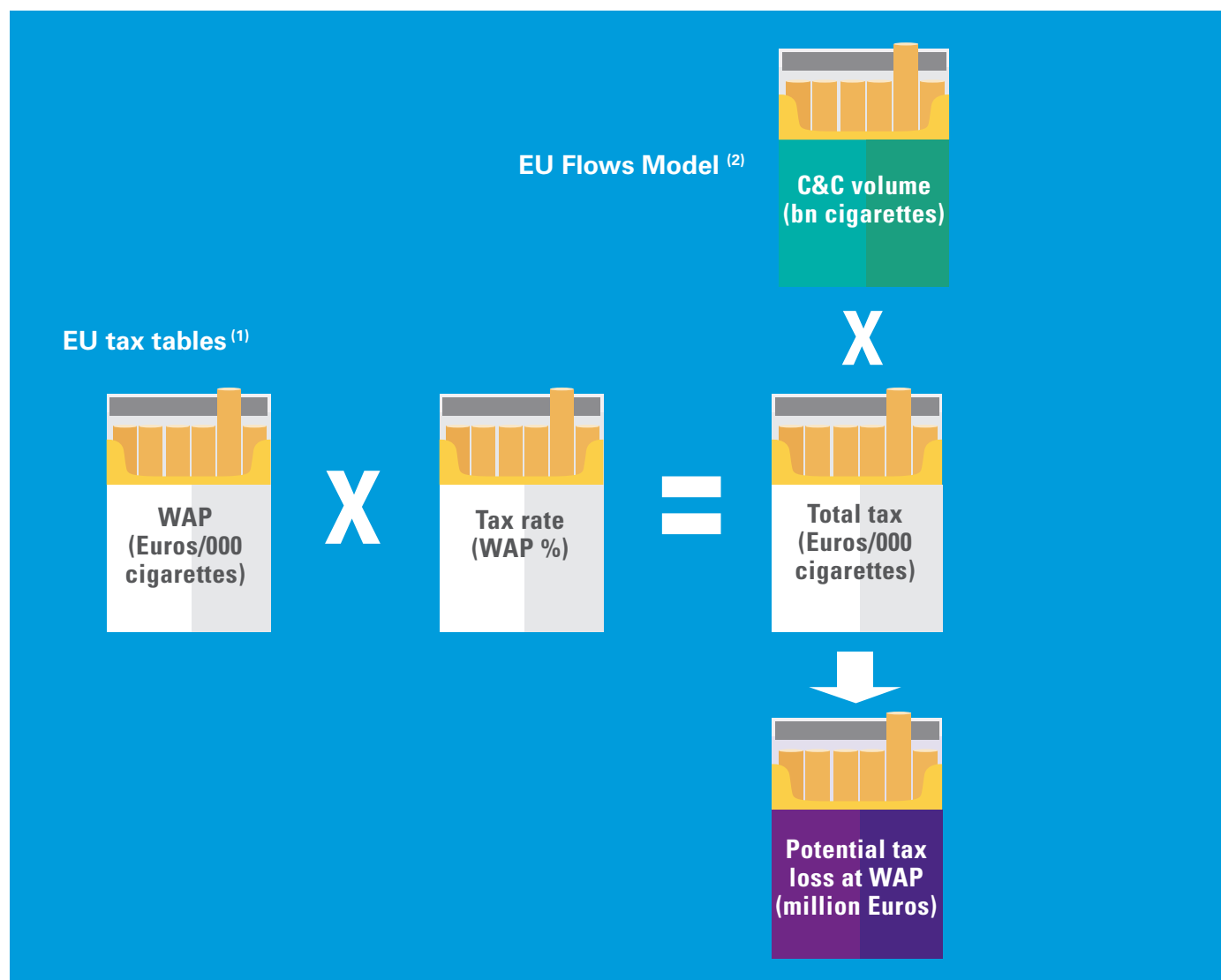
Methodology – EU Tax Loss Calculation

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Methodology - EU Tax Loss Calculation

Tax losses are calculated to estimate the tax revenue that would have been gained had the volume of C&C cigarettes consumed been legally purchased in that country

- The calculation shown below was performed for each country:
 - EU tax tables were used to determine the WAP(a) for cigarettes in January 2018
 - This is then multiplied by the tax rate (as a % of WAP)
 - The resultant tax take (per cigarette) is multiplied by the C&C consumption volumes for that country per the EU Flows Model to give the total potential tax loss based on WAP
- Total tax losses for the EU 28 countries based on WAP were estimated to be €10.0bn in 2017. This was a decrease versus prior year (2016: €10.2bn)
- Tax losses are calculated 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) EC Excise Duty tables (Part III – Manufactured Tobacco) as at January 2018

(2) KPMG EU Flows Model and analysis of data sources provided by manufacturers

Appendices – Limitation of Results

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Appendices – Limitation of Results

Limitation	Detail	Impact	Adjustment
Geographic coverage	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 are 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 	Not adjusted for
Non-major manufacturer counterfeit	<ul style="list-style-type: none"> EPS results do not identify counterfeit packs that have been made by manufacturers other than British American Tobacco plc, and Philip Morris International Management SA as only the manufacturer / trademark owner can confirm whether their brand pack is genuine^(a) 	<ul style="list-style-type: none"> 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 	Not adjusted for
OTP	<ul style="list-style-type: none"> EPSs collect cigarette packs only Non-domestic consumption for OTP cannot be measured via EPS results 	<ul style="list-style-type: none"> Reports in a number of countries suggest that non-domestic consumption of OTP may have been growing in recent years. These observations are supported by Customs organisations in some countries 	Not adjusted for
Non-EU outflows	<ul style="list-style-type: none"> In order to calculate consumption, we have assumed no outflows of LDS outside the 30 countries of study 	<ul style="list-style-type: none"> Non-EU LDS outflows are not considered to be material due to the high prices relative to other parts of the world and Duty Free import restrictions. This is supported by market discussions and non-EU EPSs 	Not adjusted for

Note: (a) Imperial Tobacco Limited counterfeit data is included for Germany in 2017

Appendices – Limitation of Results

Source	Limitation
EPS	<ul style="list-style-type: none"> • Whilst the EPS for every country is designed to be representative of the overall population, in some countries, owing to the geographical circumstances or demographics it is not possible to ensure that the sample is fully representative. This may be because: <ul style="list-style-type: none"> – 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. Therefore, they are not directly comparable with the EPS results from other countries due to the difference in the methodology. However, both methods produce similar results (see page 186 for details)^(a) • Although EPS dates are selected 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 <ul style="list-style-type: none"> – In some instances the timing of EPSs has changed between years. In order to ensure comparability of results, monthly LDS figures, consumption trends and visitor data are all analysed and adjustments made 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 EPS will only capture 1 point in time • 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 • EPS results are analysed to identify any outliers that may impact results, such as geographic concentrations of a specific brand or market variant. Brand specific data is also compared to known sales in the source market to identify whether results are credible <ul style="list-style-type: none"> – Where data suggests a sampling or data capture error may have occurred at a specific location, results are adjusted and the remainder of the survey is re-weighted accordingly • In some specific instances it is not possible to differentiate between Duty Free and Duty Paid variants from the empty packs collected <ul style="list-style-type: none"> – In some countries it is possible to purchase duty free labelled product but, when travelling within the EU, duty is in fact paid on the product. It is not possible to determine this distinction – The study also does not take account of various duty free loopholes that exist for some travel within the EU ^(b)

Note: (a) Over 500,000 packs were collected as part of the YBS in Germany; however once weighted, the survey is presented in 120,000 data lines
(b): With the exception of Arland island off the coast of Finland

Appendices – Limitation of Results































Source	Limitation
LDS	<ul style="list-style-type: none"> • In some cases tax stamp data 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 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 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)	<ul style="list-style-type: none"> • From 2014, we have used business and tourism travel data from sources such as the UN World Tourism Organization and national statistics offices to calculate the number of trips made • We have calculated the volume of cigarettes purchased by assuming that smokers purchase the Duty Free limit, or the indicative legal limit for intra-EU travel • This may over-weight ND(L) volume as a proportion of the total non-domestic flow • Comparison of ND(L) volumes as calculated by travel flows analysis with historic consumer research has ensured that some of these limitations have been corrected, such as the number of packs purchased per trip • In order to determine the ND(L) brand split, border sales data is used. Whilst this gives an accurate approximation of the likely brand split, some brands may be sold more specifically on the border than others, which could increase the share of that brand • Where border sales data is not available and the EPS cannot be used, the brands are categorised as “other”

Appendices – EPS results by country

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Appendices – EPS results by country


EPS results for EU 28 countries, Norway and Switzerland

EU 28 countries, Norway and Switzerland		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Austria		13,000	13,002	13,000	14%	18%	17%
Belgium		5,600	5,600	5,600	13%	9%	9%
Bulgaria		13,000	13,000	14,050	13%	9%	8%
Croatia		3,000	3,000	3,000	5%	6%	3%
Cyprus		1,000	1,000	1,000	7%	9%	8%
Czech Republic		21,004	21,004	21,004	4%	4%	4%
Denmark		5,500	5,500	5,500	6%	5%	7%
Estonia		6,600	6,600	6,600	15%	16%	14%
Finland		5,794	5,800	12,000	18%	14%	20%
France		22,998	23,000	34,500	30%	27%	21%
Germany		186,823	191,506	189,210	17%	17%	17%
Greece		14,000	14,000	14,000	21%	19%	19%
Hungary		19,905	19,895	19,905	11%	7%	8%
Ireland		9,999	20,000	10,000	25%	30%	35%
Italy		39,982	40,000	40,000	8%	8%	4%
Latvia		9,800	9,800	9,800	28%	25%	23%
Lithuania		12,800	19,200	12,800	21%	19%	20%
Luxembourg		399	400	400	18%	7%	7%
Malta		1,000	1,000	1,000	12%	19%	18%
Netherlands		21,000	28,000	14,000	19%	18%	25%
Poland		51,000	51,000	51,000	18%	16%	14%
Portugal		3,000	3,000	3,000	4%	3%	4%
Romania		15,126	15,152	15,148	16%	17%	16%
Slovakia		12,800	6,400	6,400	4%	5%	7%
Slovenia		3,000	3,000	3,000	10%	13%	12%
Spain		29,983	30,000	30,000	10%	9%	10%
Sweden		10,031	10,000	10,000	13%	13%	13%
UK		25,400	50,800	50,800	28%	26%	29%
Norway		5,000	5,000	5,000	46%	43%	44%
Switzerland		6,600	6,600	6,600	14%	15%	12%
Total		508,321	430,753	608,317	13.0%	16.3%	16.0%

Appendices - EPS results by country

Austria and Belgium EPS results by region, 2015-17⁽¹⁾⁽²⁾⁽³⁾

Austria		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Burgenland		440	440	440	17%	26%	29%
Kärnten		850	850	850	21%	18%	23%
Niederösterreich		2,484	2,486	2,484	15%	25%	16%
Oberösterreich		2,179	2,178	2,178	13%	15%	18%
Salzburg		816	816	816	12%	12%	13%
Steiermark		1,853	1,854	1,854	16%	15%	13%
Tirol		1,104	1,104	1,104	6%	7%	9%
Vorarlberg		574	574	574	9%	23%	34%
Wien		2,700	2,700	2,700	14%	20%	17%
Total		13,000	13,002	13,000	14%	18%	17%

Belgium		Number of packs collected			ND incidence in EPS		
Region		2014	2015	2017	2014	2015	2017
Aalst		200	200	200	10%	8%	14%
Anderlecht		240	240	240	10%	9%	12%
Antwerp		1,100	1,100	1,100	14%	8%	15%
Arlon		160	160	160	37%	7%	11%
Brugge		240	240	240	7%	8%	8%
Brussels		380	380	380	8%	6%	14%
Charleroi		460	460	460	12%	11%	10%
Genk		200	200	200	15%	9%	9%
Gent		500	500	500	11%	6%	6%
Hasselt		200	200	200	18%	10%	7%
Kortrijk		200	200	200	10%	6%	5%
Leuven		200	200	200	29%	17%	5%
Liege		440	440	440	14%	13%	6%
Mechelen		200	200	200	6%	8%	7%
Mons		200	200	200	10%	10%	6%
Namur		240	240	240	14%	7%	6%
Sambreville		160	160	160	15%	6%	7%
Schaerbeek		280	280	280	12%	5%	6%
Total		5,600	5,600	5,600	13%	9%	9%

Source: (1) Ipsos marketing Empty pack surveys, 2015-2017
(3) MS Intelligence Empty Pack Surveys, 2015-2017

Appendices - EPS results by country


Bulgaria results by region, 2015-17⁽¹⁾


Bulgaria		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Blagoevgrad		300	500	500	32%	13%	13%
Burgas		660	663	666	10%	5%	5%
Dobric		300	300	300	7%	8%	5%
Gabrovo		300	300	500	43%	2%	6%
Grad Sofia			3,744	3,528		6%	6%
Haskovo		252	1,035	1,162	18%	14%	16%
Jambol		244	272	300	5%	6%	12%
Kjustendil		300	400	500	26%	22%	18%
Lovec			344	536		4%	5%
Montana		300	400	300	21%	5%	5%
Pazardzik		236	268	500	29%	10%	14%
Pernik		264	282	300	12%	26%	9%
Plovdiv		1,114	1,264	1,414	24%	14%	7%
Ruse		492	492	742	8%	6%	4%
Sliven		302	301	300	20%	11%	10%
Sumen		266	283	300	3%	3%	3%
Varna		1,102	1,102	1,102	8%	6%	3%
Veliko Tarnovo		300	400	500	13%	4%	5%
Vidin		300	300	300	26%	8%	12%
Vratsa			150	300		3%	6%
Total		13,000	13,000	14,050	13%	9%	8%


Source: (1) Nielsen Empty Pack Surveys, 2015-2017

Appendices - EPS results by country

Croatia, Cyprus and Czech Republic EPS results by region, 2015-17⁽¹⁾⁽²⁾

Croatia		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Osijek		193	193	193	5%	13%	7%
Pula		132	132	132	2%	1%	1%
Rijeka		294	294	294	3%	3%	3%
Sesvete		126	126	126	4%	4%	3%
Slavonski Brod		124	124	124	25%	46%	2%
Split		383	383	383	4%	4%	3%
Zadar		163	163	163	2%	0%	3%
Zagreb		1,585	1,585	1,585	5%	3%	3%
Total		3,000	3,000	3,000	5%	6%	3%


Cyprus		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Larnaca		150	150	150	4%	8%	13%
Limassol		300	300	300	4%	8%	5%
Nicosia		400	400	400	11%	10%	8%
Paphos		150	150	150	3%	13%	10%
Total		1,000	1,000	1,000	7%	9%	8%


Czech Republic		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Jihocesky Kraj		724	724	724	2%	3%	6%
Jihomoravsky Kraj		2,148	2,148	2,148	4%	4%	4%
Karlovarsky Kraj		300	300	300	8%	4%	6%
Kralovehradecky Kraj		526	526	526	2%	4%	4%
Liberecky Kraj		1,034	1,034	1,034	4%	4%	4%
Moravosslezsky Kraj		3,332	3,332	3,332	6%	4%	4%
Olomoucky Kraj		1,062	1,062	1,062	3%	5%	4%
Pardubicky Kraj		510	510	510	3%	4%	7%
Plzensky Kraj		948	948	948	3%	4%	5%
Praha		7,114	7,114	7,114	4%	4%	5%
Stredocesky Kraj		636	636	636	5%	3%	4%
Ustecky Kraj		1,750	1,750	1,750	9%	5%	5%
Vysocina		496	496	496	3%	5%	4%
Zlinsky Kraj		424	424	424	4%	3%	4%
Total		21,004	21,004	21,004	4%	4%	4%

Sources: (1) Nielsen Empty Pack Surveys, 2015-2017
(2) Ultex Empty Pack Surveys, 2015-2017

Appendices - EPS results by country

Denmark and Estonia EPS results by region, 2015-17⁽¹⁾⁽²⁾


Denmark		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Capital Region		2,612	2,613	2,612	6%	4%	7%
Mid Jutland		1,211	1,211	1,211	5%	5%	5%
North Jutland		422	422	422	5%	4%	7%
South Denmark		1,105	1,105	1,105	6%	4%	8%
Zealand		150	150	150	2%	5%	3%
Total		5,500	5,500	5,500	6%	5%	7%


Estonia		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Har		3,200	3,200	3,200	11%	11%	10%
Ida		1,100	1,100	1,100	32%	33%	27%
Lääne		200	200	200	17%	17%	15%
Lvi			200	200		15%	19%
Pär		300	300	300	11%	20%	14%
Saa		200	200	200	11%	11%	11%
Tar		800	800	800	13%	11%	16%
Val		200	200	200	23%	22%	14%
Vil		200	200	200	12%	15%	14%
Võr		200	200	200	22%	22%	15%
Total		6,600	6,600	6,600	15%	16%	14%

Sources: (1) MS Intelligence Empty Pack Surveys, 2015-2017
(2) Nielsen Empty Pack Surveys, 2015-2017

Appendices - EPS results by country

Finland and France EPS results by region, 2015-17⁽¹⁾


Finland		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Keski-Suomi		318	319	634	17%	13%	19%
Kymenlaakso		206	206	399	14%	14%	17%
Lappi		199	200	2,000	23%	12%	27%
Paijat-Hame		245	246	517	14%	15%	18%
Pirkanmaa		522	523	1,040	20%	13%	18%
Pohjois-Savo		252	252	519	14%	13%	22%
Prohiois-Pohianmaa		461	459	913	17%	13%	16%
Uusimaa		2,559	2,563	5,121	20%	15%	18%
Varsinais-Suomi		432	432	857	15%	12%	18%
Total		5,794	5,800	12,000	18%	14%	20%


France		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Alsace Lorraine Champagne Ardennes		2,200	2,200	3,300	31%	31%	23%
Aquitaine		1,400	1,400	2,100	26%	29%	26%
Auvergne Limousin		1,000	1,000	1,500	24%	25%	18%
Basse Haute Normandie		1,600	1,600	2,400	23%	20%	12%
Bourgogne Franche Comte		2,000	2,000	3,000	21%	25%	16%
Bretagne		2,000	2,000	3,000	15%	18%	14%
Centre		1,000	1,000	1,500	20%	20%	16%
Ile De France		2,998	3,000	4,500	33%	28%	21%
Languedoc Roussillon Midi Pyrenees		1,600	1,600	2,400	33%	33%	31%
Nord Picardie		2,000	2,000	3,000	31%	32%	24%
Pays De Loire Poitou Charentes		1,600	1,600	2,400	24%	20%	12%
Provence Alpes Cote D Azur		1,600	1,600	2,400	52%	29%	28%
Rhone Alpes		2,000	2,000	3,000	27%	30%	22%
Total		22,998	23,000	34,500	30%	27%	21%

Source: (1) MS Intelligence Empty Pack Surveys, 2015-2017

Appendices – EPS results by country

Germany and Greece EPS results by region, 2015-17^{(1)(2)(a)}


Germany		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Nielsen 1		40,059	40,036	33,210	10%	10%	9%
Nielsen 2		29,642	29,762	29,928	10%	10%	10%
Nielsen 3a		18,827	19,848	19,711	9%	9%	9%
Nielsen 3b		19,165	21,337	24,985	10%	7%	8%
Nielsen 4		30,130	29,773	29,688	23%	21%	20%
Nielsen 5		12,000	11,898	12,000	39%	41%	44%
Nielsen 6		11,311	11,063	11,488	32%	31%	30%
Nielsen 7		25,689	27,789	28,200	42%	46%	44%
Total		186,823	191,506	189,210	17%	17%	17%


Greece		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Attica		4,600	4,600	4,600	25%	22%	21%
Central Greece		400	400	400	17%	20%	20%
Central Macedonia		3,000	3,000	3,000	23%	23%	23%
Crete		1,000	1,000	1,000	13%	14%	12%
East Macedonia/Thrace		800	800	800	15%	15%	17%
Epirus		600	600	600	21%	19%	21%
Ionian Islands		400	400	400	19%	17%	14%
South Aegean		400	400	400	12%	16%	13%
Thessaly		1,200	1,200	1,200	16%	16%	17%
West Greece		1,200	1,200	1,200	17%	17%	18%
West Macedonia		400	400	400	21%	13%	17%
Total		14,000	14,000	14,000	21%	19%	19%

Note: (a) Due to additional analysis conducted in 2017, the EPS results have been re-stated for 2015 and 2016 to enable comparison with the 2017 figures
Sources: (1) Ipsos Yellow Bag Surveys, 2015-2017
(2) Nielsen Empty Pack Surveys, 2015-2017

Appendices - EPS results by country

Hungary and Ireland EPS results by region, 2015-17⁽¹⁾⁽²⁾

Hungary 		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Bács-Kiskun		980	979	980	15%	8%	8%
Baranya		645	645	645	7%	7%	7%
Békés		760	758	760	7%	6%	9%
Borsod-Abaúj-Zemplén		1,465	1,465	1,465	13%	11%	11%
Budapest		6,250	6,250	6,250	9%	6%	8%
Csongrád		1,310	1,310	1,310	13%	6%	10%
Fejér		640	640	640	6%	5%	6%
Győr-Moson-Sopron		934	934	934	3%	6%	7%
Hajdú-Bihar		1,195	1,194	1,195	11%	9%	9%
Heves		390	390	390	8%	6%	9%
Jász-Nagykun-Szolnok		520	518	520	9%	10%	10%
Komárom-Esztergom		440	440	440	6%	7%	7%
Nógrád		165	165	165	2%	6%	9%
Pest		1,235	1,233	1,235	11%	7%	7%
Somogy		490	490	490	4%	4%	6%
Szabolcs-Szatmár-Bereg		1,099	1,097	1,099	50%	12%	11%
Tolna		145	145	145	2%	4%	8%
Vas		335	335	335	1%	5%	6%
Veszprém		417	417	417	1%	3%	7%
Zala		490	490	490	5%	2%	7%
Total		19,905	19,895	19,905	11%	7%	8%

Ireland 		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Connacht		800	1,600	800	23%	29%	36%
Leinster		6,449	12,900	6,450	26%	31%	35%
Munster		2,550	5,100	2,550	24%	30%	35%
Ulster		200	400	200	25%	28%	26%
Total		9,999	20,000	10,000	25%	30%	35%

Sources: (1) GfK Hungary Empty Pack Surveys, 2015-2017
(2) MS Intelligence Empty Pack Surveys, 2015-2017

Appendices - EPS results by country

Italy and Latvia EPS results by region, 2015-17⁽¹⁾⁽²⁾


Italy		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Abruzzo		400	400	400	2%	0%	2%
Calabria		552	552	556	5%	7%	5%
Campania		3,648	3,648	3648	37%	33%	21%
Emilia Romagna		4,413	4,416	4416	2%	2%	1%
Friuli Venezia Giulia		608	608	608	26%	21%	14%
Lazio		7,889	7,892	7892	7%	3%	1%
Liguria		1,794	1,796	1796	2%	4%	2%
Lombardia		5,283	5,284	5284	6%	6%	4%
Marche		400	400	400	2%	2%	1%
Piemonte		3,080	3,080	3080	4%	5%	1%
Puglia		1,968	1,968	1968	3%	7%	1%
Sicilia		3,915	3,920	3920	9%	14%	9%
Toscana		2,126	2,128	2128	5%	1%	1%
Trentino Alto Adige		400	400	400	0%	1%	3%
Umbria		896	896	896	2%	2%	1%
Veneto		2,610	2,612	2612	3%	4%	1%
Total		39,982	40,000	40,000	9%	8%	4%


Latvia		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Kurzeme		1,200	1,200	1,200	20%	22%	25%
Latgale		1,400	1,400	1,400	46%	36%	40%
Pieriga		1,400	1,400	1,400	27%	28%	21%
Riga		4,000	4,000	4,000	27%	24%	19%
Vidzeme		800	800	800	19%	18%	21%
Zemgale		1,000	1,000	1,000	22%	19%	29%
Total		9,800	9,800	9,800	28%	25%	23%


Sources: (1) MS Intelligence Empty Pack Surveys, 2015-2017
(2) Nielsen Empty Pack Surveys, 2015-2017

Appendices - EPS results by country

Lithuania, Luxembourg and Malta EPS results by region, 2015-17⁽¹⁾⁽²⁾

Lithuania 		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Alytus		800	1,200	800	23%	24%	24%
Kaunas		3,000	4,500	3000	21%	17%	19%
Klaipeda		1,600	2,400	1,600	16%	12%	13%
Marijampole		600	900	600	22%	21%	24%
Panevezys		800	1,200	800	23%	25%	23%
Siauliai		800	1,200	800	31%	30%	28%
Taurage		200	300	200	19%	19%	13%
Telsiai		800	1,200	800	15%	16%	15%
Utena		600	900	600	14%	16%	20%
Vilnius		3,600	5,400	3600	21%	18%	20%
Total		12,800	19,200	12,800	21%	19%	20%

Luxembourg 		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Esch-Sur-Alzette		160	160	160	14%	8%	7%
Luxembourg		239	240	240	21%	7%	7%
Total		399	400	400	18%	7%	7%

Malta 		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Northern		350	350	350	11%	21%	19%
Northern Harbour		550	550	550	14%	18%	18%
Southern Harbour		100	100	100	8%	19%	15%
Total		1,000	1,000	1,000	12%	19%	18%

Sources: (1) Nielsen Empty Pack Surveys, 2015-2017
(2) MS Intelligence Empty Pack Surveys, 2015-2017

Appendices - EPS results by country

Netherlands and Poland EPS results by region, 2015-17⁽¹⁾⁽²⁾


Netherlands		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Drenthe		303	404	202	15%	19%	19%
Flevoland		756	1,008	504	20%	15%	25%
Friesland		498	664	332	15%	18%	16%
Gelderland		1,626	2,168	1,084	19%	15%	22%
Groningen		546	728	364	16%	15%	19%
Limburg		1,128	1,504	752	21%	23%	21%
North Brabant		2,790	3,720	1,860	23%	22%	21%
North Holland		4,635	6,180	3,090	19%	18%	29%
Overijssel		1,488	1,984	992	19%	19%	22%
South Holland		5,916	7,888	3,944	17%	17%	27%
Utrecht		1,314	1,752	876	17%	18%	31%
Total		21,000	28,000	14,000	19%	18%	25%


Poland		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Dolnoslaskie		3,900	3,900	3,900	6%	6%	9%
Kujawsko-Pomorskie		2,775	2,775	2,775	13%	9%	9%
Lodzkie		3,375	3,375	3,375	20%	20%	20%
Lubelskie		2,550	2,550	2,550	32%	37%	29%
Lubuskie		1,350	1,350	1,350	7%	8%	10%
Malopolskie		2,925	2,925	2,925	16%	11%	9%
Mazowieckie		8,100	8,100	8,100	29%	24%	22%
Opolskie		1,800	1,800	1,800	6%	7%	6%
Podkarpackie		2,850	2,850	2,850	32%	29%	16%
Podlaskie		1,425	1,425	1,425	39%	35%	33%
Pomorskie		2,325	2,325	2,325	0%	2%	2%
Slaskie		7,350	7,350	7,350	16%	13%	12%
Swietokrzyskie		1,575	1,575	1,575	8%	12%	10%
Warminsko-Mazurskie		2,400	2,400	2,400	58%	47%	30%
Wielkopolskie		4,050	4,050	4,050	4%	0%	0%
Zachodniopomorskie		2,250	2,250	2,250	5%	8%	6%
Total		51,000	51,000	51,000	18%	16%	14%


Sources: (1) MS Intelligence Empty Pack Surveys, 2015-2017
(2) Almares Research Empty Pack Surveys, 2015-2017

Appendices – EPS results by country

Portugal, Romania and Slovakia EPS results by region, 2015-17⁽¹⁾⁽²⁾⁽³⁾

Portugal		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Center		200	200	200	2%	1%	0%
Lisboa		900	900	1,900	4%	6%	4%
North		1,900	1,900	900	3%	3%	5%
Total		3,000	3,000	3,000	4%	3%	4%


Romania		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Bucharest		1,600	1,742	1,570	10%	7%	7%
Center		1,531	1,583	1,592	2%	2%	2%
North-East		2,637	2,399	2,824	37%	42%	39%
North-West		1,891	2,048	1,937	20%	21%	16%
South		2,084	2,005	1,897	3%	2%	4%
South-East		2,062	1,948	1,959	11%	13%	11%
South-West		1,676	1,798	1,784	24%	24%	24%
West		1,645	1,629	1,585	23%	24%	24%
Total		15,126	15,152	15,148	16%	17%	16%


Slovakia		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Banskobystricky Kraj		1,100	550	550	3%	2%	7%
Bratislavsky Kraj		2,400	1,200	1,200	2%	3%	3%
Kosicky Kraj		2,600	1,300	1,300	6%	8%	10%
Nitriansky Kraj		1,700	850	850	3%	4%	9%
Presovsky Kraj		2,200	1,100	1,100	4%	7%	11%
Trenciansky Kraj		800	400	400	4%	2%	4%
Trnavsky Kraj		800	400	400	2%	3%	3%
Zilinsky Kraj		1,200	600	600	3%	5%	5%
Total		12,800	6,400	6,400	4%	5%	7%

Source: (1) Ipsos Empty Pack Surveys, 2015-2017
(2) Novel Study, 2015-2017
(3) Nielsen Empty Pack Surveys, 2015-2017

Appendices - EPS results by country

Slovenia and Spain EPS results by region, 2015-17⁽¹⁾⁽²⁾


Slovenia 		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Celje		210	210	210	9%	12%	10%
Koper		139	139	139	6%	11%	9%
Kranj		208	208	208	4%	13%	7%
Ljubljana		1,539	1,539	1,539	12%	13%	13%
Maribor		531	531	531	7%	15%	13%
Novo Mesto		130	130	130	3%	11%	21%
Ptuj		101	101	101	6%	12%	11%
Velenje		142	142	142	18%	17%	8%
Total		3,000	3,000	3,000	10%	13%	12%

Spain 		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Andalucia		5,172	5,176	5,176	33%	28%	33%
Aragon		1,169	1,170	1,170	2%	2%	3%
Asturias		858	858	858	3%	2%	2%
Basque Country		1,533	1,534	1,534	6%	5%	7%
Cantabria		303	304	304	6%	2%	4%
Castilla Y Leon		1,318	1,320	1,320	4%	2%	4%
Castilla-La Mancha		295	296	296	7%	1%	4%
Catalonia		5,394	5,394	5,394	6%	7%	5%
Comunidad Valenciana		2,840	2,842	2,842	5%	4%	4%
Extremadura		257	258	258	19%	6%	2%
Galicia		1,130	1,130	1,130	5%	4%	3%
La Rioja		262	262	262	3%	2%	1%
Madrid		7,988	7,992	7,992	6%	5%	6%
Murcia		1,126	1,126	1,126	7%	4%	6%
Navarra		338	338	338	4%	4%	3%
Total		29,983	30,000	30,000	10%	9%	10%

Sources: (1) MS Intelligence Empty Pack Surveys, 2015-2017
(2) Ipsos Empty Pack Surveys, 2015-2017

Appendices - EPS results by country


Sweden EPS results by region, 2015-17⁽¹⁾


Sweden		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Blekinge		90	150	150	14%	16%	20%
Dalarna		112	150	150	22%	11%	18%
Gastrikland		190	190	190	15%	14%	12%
Halland		226	304	304	11%	12%	11%
Jönköping		233	233	233	13%	14%	13%
Kronoberg		154	154	154	12%	15%	15%
Norrbottn		136	150	150	19%	15%	10%
Örebro		272	272	272	11%	12%	15%
Östergötland		500	500	500	8%	12%	12%
Skåne		1,177	1,101	1,101	13%	13%	12%
Smaland		97	150	150	20%	13%	11%
Södermanland		225	316	316	12%	14%	16%
Stockholm		3,628	3,284	3,284	13%	13%	14%
Uppsala		355	355	355	13%	14%	10%
Värmland		163	162	162	9%	8%	18%
Västerbotten		299	359	359	16%	10%	12%
Västernorrland		146	150	150	23%	12%	14%
Västmanland		296	296	296	13%	10%	14%
Västra Götaland		1,732	1,724	1,724	13%	12%	11%
Total		19,909	10,031	10,000	11%	13%	13%

Source: (1) MS Intelligence Empty Pack Surveys, 2015-2017

Appendices - EPS results by country

UK and Norway EPS results by region, 2015-17⁽¹⁾


UK		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
East Midlands		2,000	4,000	4,000	29%	26%	28%
East of England		2,200	4,400	4,400	27%	28%	29%
London		3,000	6,000	6,000	28%	27%	28%
North East England		1,000	2,000	2,000	26%	27%	29%
North West England		2,598	5,196	5,196	28%	28%	29%
Northern Ireland		1,000	2,000	2,000	31%	27%	29%
Scotland		2,198	4,396	4,396	15%	15%	24%
South East England		4,002	8,004	8,004	29%	27%	34%
South West England		1,800	3,600	3,600	28%	26%	32%
Wales		1,400	2,800	2,800	31%	28%	27%
West Midlands		2,402	4,804	4,804	32%	26%	28%
Yorkshire and The Humber		1,800	3,600	3,600	30%	27%	28%
Total		25,400	50,800	50,800	28%	26%	29%

Norway		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Akershus		376	376	376	48%	42%	43%
Hordaland		866	866	866	44%	43%	43%
Oslo		2,012	2,012	2,012	46%	45%	43%
Ostfold		248	248	248	46%	44%	48%
Rogaland		419	419	419	48%	42%	43%
Sor-Trondelag		579	579	579	45%	43%	43%
Vest-Adger		273	273	227	41%	39%	46%
Troms		227	227	273	55%	42%	49%
Total		5,000	5,000	5,000	46%	43%	44%

Source: (1) MS Intelligence Empty Pack Surveys, 2015-2017

Appendices – EPS results by country

Switzerland EPS results by region, 2015-17⁽¹⁾

Switzerland		Number of packs collected			ND incidence in EPS		
Region		2015	2016	2017	2015	2016	2017
Aargau		200	200	200	24%	14%	13%
Basel		400	400	400	15%	15%	12%
Bern		900	900	900	11%	12%	12%
Fribourg		200	200	200	10%	14%	7%
Geneva		700	700	700	18%	31%	12%
Grisons		200	200	200	28%	13%	13%
Jura		200	200	200	15%	10%	9%
Luzern		200	200	200	8%	14%	9%
Neuchatel		400	400	400	14%	11%	7%
Schaffhausen		200	200	200	11%	12%	9%
St. Gallen		400	400	400	16%	15%	12%
Thurgau		200	200	200	16%	12%	7%
Ticino		400	400	400	31%	10%	31%
Valais		200	200	200	7%	8%	7%
Vaud		300	300	300	9%	16%	6%
Zurich		1,500	1500	1500	8%	12%	14%
Total		6,600	6,600	6,600	14%	15%	12%

Source: (1) MS Intelligence Empty Pack Surveys, 2015-2017

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Appendices – Sources

Macro-economic factors

The sources listed below are those used only in this year's analysis of the Project SUN 2017 Results report. Sources for analysis and findings for previous years can be found in previous year reports.

GDP growth (annual %) ⁽¹⁾		
Country	2016	2017
Austria	1.5	3.0
Belgium	1.4	1.7
Bulgaria	3.9	3.6
Croatia	3.2	2.8
Cyprus	3.4	3.9
Czech Republic	2.6	4.3
Denmark	2.0	2.2
Estonia	2.1	4.9
Finland	2.1	2.6
France	1.2	1.8
Germany	1.9	2.2
Greece	-0.2	1.4
Hungary	2.2	4.0
Ireland	5.1	7.8
Italy	0.9	1.5
Latvia	2.2	4.5
Lithuania	2.3	3.8
Luxembourg	3.1	2.3
Malta	5.2	6.4
Netherlands	2.2	3.2
Norway	1.1	1.9
Poland	2.9	4.6
Portugal	1.6	2.7
Romania	4.8	6.9
Slovakia	3.3	3.4
Slovenia	3.1	5.0
Spain	3.3	3.1
Sweden	3.2	2.3
Switzerland	1.4	1.1
United Kingdom	1.9	1.8

Unemployment rate (%) ⁽²⁾		
Country	2016	2017
Austria	6.0	5.5
Belgium	7.9	7.1
Bulgaria	7.6	6.2
Croatia	13.4	11.1
Cyprus	12.9	11.0
Czech Republic	4.0	2.9
Denmark	6.2	5.7
Estonia	6.8	5.8
Finland	8.8	8.6
France	10.1	9.4
Germany	4.1	3.8
Greece	23.6	21.5
Hungary	5.1	4.2
Ireland	8.4	6.7
Italy	11.7	11.2
Latvia	9.6	8.7
Lithuania	7.9	7.1
Luxembourg	6.3	5.5
Malta	4.7	4.0
Netherlands	6.0	4.9
Norway	4.8	4.2
Poland	6.2	4.9
Portugal	11.2	9.0
Romania	5.9	4.9
Slovakia	9.7	8.1
Slovenia	8.0	6.6
Spain	19.7	17.2
Sweden	6.9	6.7
Switzerland	4.9	4.8
United Kingdom	4.9	4.4

Sources: (1) World Bank, 2017
(2) Euromonitor, 2017

Appendices – Sources

Data sources

The sources listed below are those used only in this year's analysis of the Project SUN 2017 Results report. Sources for analysis and findings for previous years can be found in previous year reports.

Sources
Bulgarian Customs, 2017
Customs impose much harsher penalties on contraband cigarettes, Malta Today, November 2017
Czech Statistical Office, 2017
Euromonitor, 2017
EC Excise Duty Tables, January 2017 (Part III - Manufactured Tobacco)
EC Excise Duty Tables, January 2018 (Part III - Manufactured Tobacco)
Federal Ministry of Finance, February 2018
Federal Statistics Office, 2017
GDP Statistics, World Bank, 2017
Government Gazette, January 2018
Government of Spain, Treasury, 2017
Hungary builds new high-tech border fence - with few migrants in sight, Reuters, March 2017
International Monetary Fund, 2017
KPMG analysis of manufacturers operating in Free Trade Zones
KPMG analysis of UNWTO Factbook
KPMG analysis of WHO National taxes and retail price
KPMG EU Flows Model 2013-2017 and analysis of data sources provided by manufacturers
Legifrance, January 2018
Ministry of Social Affairs and Health, Finland Press Release, 2017
Poland smashes international tobacco smuggling gang', Radio Poland, February 2017
Police smash illegal tobacco racket, Ekathimerini, July 2017
SENT system introduced in Poland, Mainfreight, May 2017
Smoking and tobacco consumption in Norway, Norwegian Institute of Public Health, 2017
Romanian seizures information, Stop Contrabanda, 2017
Table EMP06: Employment levels by nationality: People aged 16 and over (not seasonally adjusted), UK National Statistics Office, 2017
Tobacco Commissioner Decree, 2017
Tobacco in Bosnia and Herzegovina, Euromonitor, July 2017
Tobacco in Finland, Euromonitor, July 2017
UK and non-UK people working in the labour market, ONS, May 2018

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Appendices – Scope of work

The scope of work below forms the basis of our contract with the Beneficiaries

Methodology and Reporting

1. This study will report on the estimated size and composition of the total cigarette market (including counterfeit and contraband products), as detailed below, for each of the 28 EU Member States, Norway and Switzerland.
2. The findings from the work on the 30 countries will be used to produce a report which includes an executive summary covering an overall view of the total market for the 28 EU Member States (with Norway and Switzerland 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. We will also provide a section in the report on counterfeit and contraband flows for each of the 30 countries.
3. KPMG will publish an interactive version of the SUN report where the landing page will consist of a Map of Europe, through which the executive summary of the report is accessible. It should then allow individual country reports to be accessed by a simple click on the respective countries through the map of Europe.
4. Each country report will consist of the equivalent of four pages if printed, but will be hosted interactively including a table detailing total manufactured cigarette consumption from 2013 to 2017, along with charts showing the Non-Domestic Legal (ND(L)) and C&C by source country and by brand. The commentary will be factual and will source publicly available data on tobacco prices, traveller data, smoking prevalence and total tobacco consumption (including OTP) where relevant. The commentary will also source qualitative research and analysis undertaken by RUSI.
5. Our analysis of the cigarette market will be based on a methodology that incorporates primary research, market analysis and existing industry surveys.
 - For each of the 30 countries, we will use in market sales data provided by Philip Morris International Management SA (PMI) 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 PMI.
 - Non domestic inflows for each country will be based on the results of Empty Pack Surveys and added to Legal Domestic Consumption to estimate Total Consumption.
 - Analysis of tourism flows and border sales data provided by PMI will be used to estimate the proportion of non-domestic inflows that are counterfeit and contraband for each of the 30 countries
 - The bespoke Project SUN methodology will be used to analyse the inflows and outflows between all of the 30 countries, based on the data sources above.
 - Additional data sources (as per point 11 below) will be used to refine our analysis.
- We will include a methodology section in our report detailing the research process, highlighting its key strengths and providing comparisons with other approaches to estimating illicit tobacco consumption, including seizures data and consumer surveys.
6. KPMG will also conduct analysis on illicit whites which will be analysed in the same way as point 5 above. This will be reported in the executive summary of the report.
7. Upon finalisation of our work, KPMG will provide separately to RUSI data tables containing the following information:
 - Summary of EU total counterfeit and contraband inflows by source and destination market; and
 - Detailed analysis of total non-domestic outflows to the EU split by destination market and brand; and
 - Collation of both source and brand matrix to enable analysis of source and market in the same tables
8. KPMG will present initial findings to RUSI in the form of country specific reports. We understand that RUSI will disclose the initial findings reports to PMI and BAT (together defined for the purposes of this letter as the "Industry Participants") for the purposes of factual accuracy discussions. The KPMG Project SUN team, as well as RUSI participants, will also be made available to support two external stakeholder presentations following the completion of the report under the terms of this agreement.

Process

9. KPMG will manage the overall day-to-day process and will arrange factual accuracy discussions with the Industry Participants will consider the results of the analysis and such discussions will also be attended by RUSI. RUSI will be responsible for procuring the involvement of the Industry Participants in the factual accuracy discussions arranged by KPMG in accordance with the timetable as agreed between KPMG and RUSI. KPMG will provide agenda and meeting minutes for all factual accuracy meetings planned, as well as take responsibility for leading the meetings and collating feedback from the Industry Participants and RUSI, ensuring that the subject matter discussed will be confined to the project only. KPMG will request additional data where necessary. A dashboard which tracks data provided and highlights potential delays will be provided by KPMG to RUSI. RUSI will be responsible for ensuring that the Industry Participants provide such data.

KPMG will undertake factual accuracy discussions where required with each of the Industry Participants and with RUSI for 5 priority countries to help build understanding of: data sources and their limitations; first draft results and their possible implications for the country's anti-illicit trade activity. The 5 priority markets will be France, UK, Germany, Poland and Romania. In addition, KPMG will have factual accuracy

Appendices – Scope of work

discussions with each of the Industry Participant Duty Free teams. RUSI may also attend such discussions.

In order to hold these factual accuracy discussions, KPMG will share country specific preliminary results with RUSI and the management teams of the Industry Participants for each of the priority EU Member States as outlined above. The discussions provide opportunity for feedback and comment from each of those management teams and RUSI. These discussions can be arranged in advance by KPMG and RUSI will be responsible for ensuring that the Industry Participant country management teams comment verbally on the draft reports. In the event that a participant does not provide sufficient comments within the timeframe, the report publication date will be delayed.

For the remaining 25 non-priority countries, KPMG will share preliminary findings of the analysis with the management teams of the Industry Participants and RUSI for each non-priority country via a central point of contact for each of the Industry Participants in a process agreed between RUSI and the Industry Participants. We understand that comments on the factual accuracy of these reports from non-priority countries will be collected centrally by a point of contact for each of Industry Participant and communicated to KPMG and RUSI. KPMG will hold discussions with the management teams of non-priority countries on an exceptions basis and RUSI will attend such discussions.

It should be noted that KPMG will only agree to make changes and undertake additional analysis which may be requested by the Industry Participants where such changes and additional analysis have first been agreed by the Industry Participants with RUSI. KPMG will be responsible for managing the transparency and alignment of the revision process. RUSI will be provided with the “pre-final” report and will be responsible for ensuring that feedback from Industry Participants is provided within 10 working days (including legal reviews). It should be noted that KPMG and RUSI will jointly determine which comments and amendments to make to the report.

10. In addition to the detailed report and management update meetings, KPMG will also undertake to manage and lead key intervention sessions between RUSI, the Industry Participants and the KPMG team, as set out below. RUSI will be responsible for procuring the involvement of the Industry Participants in such meetings in accordance with the timetable agreed between RUSI and KPMG:
 - Project Kick Off (to take place week commencing 7 May 2018) to agree detailed project process and approach, reporting format and highlight potential communication considerations;
 - A review of updated EU and country level findings for each of the 30 countries to address key challenges and actions, along with agreeing on the digital report format, to take place in mid-June 2018;
 - A review to agree on final changes to the report to take place in the first week of July 2018.

Data Sources

11. Information from several independent sources will be used. These sources are set out below.
 - Tobacco industry research and statistics:
 - In Market Sales data provided by the Industry Participants and/or Tobacco Manufacturers’ Associations. Where Industry Participants have separate sales data which improves the accuracy of the total industry sales data this will be provided during the factual accuracy process. The Project SUN report will only provide aggregated sales data that cannot be attributed to any Industry Participant;
 - Consumer survey data will be provided by Industry Participants where available to help demonstrate trends discussed during the factual accuracy discussions from Project SUN results and identify further areas of analysis (e.g. extent of smokers switching to roll-your-own products).
 - Estimates of non-domestic consumption used by the Industry Participants in each market (where available) will be shared during the factual accuracy discussions. These estimates provide evidence-based support for observed trends in each of the EU Member States, Switzerland and Norway and will remain confidential. These will comprise:
 - Detailed survey results; and
 - Information regarding the methodology and sampling plan. Existing public studies and statistics;
 - Existing public studies and statistics;
 - Research and data published by government agencies (including Ministries of Finance), health bodies, customs authorities, market researchers and academics will be provided by Industry Participants teams to help corroborate findings.

Data from external sources will be obtained on a best efforts basis by KPMG. We will require access to identified Industry Participant personnel throughout this engagement which will be enabled by RUSI and our ability to deliver this scope depends on this access being made available.

If you would like further information, please talk to your usual KPMG contact or contact:

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