



# Project SUN

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

2015 Results



# Important Notice

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- 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 cigarette market within the 28 EU Member States, Switzerland and Norway was fixed by agreement with the Beneficiaries 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.
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# Glossary

GLOSSARY	
<b>Average Daily Consumption</b>	Daily average consumption by the population of the legal smoking age
<b>BAT</b>	British American Tobacco plc
<b>Bn</b>	Billion
<b>C&amp;C</b>	Counterfeit and Contraband, including Illicit Whites
<b>CAGR</b>	Compound Annual Growth Rate
<b>Cigarette</b>	Any factory-made product that contains tobacco and is intended to be burned under ordinary conditions of use
<b>Cigarillos</b>	A short, narrow cigar, which, like cigarettes, is often machine-made and sold in packs
<b>Consumption</b>	Actual total consumption of cigarettes in a market, including Legal Domestic Consumption (LDC) and illicit products as well as those legally purchased overseas
<b>Contraband (CB)</b>	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
<b>Counterfeit (CF)</b>	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 participating manufacturers of BAT, ITL, JTI and PMI. No other counterfeit is included in the volumes reported due to lack of information
<b>Country of origin</b>	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
<b>Domestic Whites</b>	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
<b>Duty Free</b>	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
<b>EC</b>	European Commission
<b>EPS</b>	Empty Pack Survey
<b>EU</b>	European Union
<b>EU Flows Model</b>	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
<b>FYROM</b>	Former Yugoslav Republic of Macedonia
<b>Green Leaf</b>	Uncut dried tobacco leaf, which smokers cut themselves
<b>Illicit Whites (IW)</b>	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
<b>Illicit Whites with no country specific labelling</b>	Packs of Illicit White Cigarettes which have "duty free" or no identifiable labelling on the packs
<b>IMS</b>	In Market Sales (the primary source of legal domestic sales volumes)
<b>Inflows/Outflows</b>	Inflows of non-domestic product into a market / outflows of product from a market
<b>ITL</b>	Imperial Tobacco Limited
<b>JTI</b>	JT International SA
<b>LDC</b>	Legal Domestic Consumption is defined as Legal Domestic Sales (LDS) net of outflows

# Glossary

GLOSSARY	
<b>LDS</b>	Legal Domestic Sales of genuine domestic product through legitimate, domestic channels based on In Market Sales (IMS) data
<b>Mn</b>	Million
<b>MPPC</b>	Most Popular Price Category
<b>MYO</b>	Make Your Own tobacco products
<b>ND</b>	Non-Domestic product – product that originates from a different market than the one in which it is consumed
<b>ND(L)</b>	Non-Domestic (Legal) – product that is brought into the market legally by consumers, such as during a cross-border trip
<b>NMA /TMA</b>	National Manufacturers' Association /Tobacco Manufacturers' Association
<b>OLAF</b>	Office Européen de Lutte Antifraude also known as the European Anti-Fraud Office
<b>OTP</b>	Other Tobacco Products (RYO/MYO, cigarillos, portions, rolls and cigars; excluding smokeless tobacco and water-pipe tobacco)
<b>PMI</b>	Philip Morris International Management SA
<b>RYO</b>	Roll Your Own tobacco products
<b>Smoking prevalence</b>	The percentage of smokers in the total population of the legal smoking age
<b>Tobacco taxes</b>	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
<b>Unspecified</b>	Unspecified market variant refers to cigarette packs which do not bear specific market labelling or Duty Free labelling
<b>UNWTO</b>	World Tourism Organisation
<b>WAP</b>	The weighted average price for cigarettes calculated by reference to the total value of all cigarettes released for consumption, based on the retail selling price including all taxes, divided by the total quantity of cigarettes released for consumption. The WAP is provided by the European Commission Excise Duty Tables

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# Executive Summary

## Key findings

### Illicit trade has accounted for 1 in 10 cigarettes consumed since 2010

- Counterfeit and Contraband (C&C) as a proportion of total consumption declined marginally from 10.4% in 2014 to 9.8% in 2015
- The total volume of C&C consumed in the EU was 53.0 billion cigarettes with France and Poland experiencing the highest volumes
- If the C&C volume in the EU had been consumed legally, an additional tax revenue of €11.3 billion would have been raised

### The marginal decline in C&C may be attributed to several factors including improvements to supply chain controls, law enforcement and improved economic conditions

- By 2010 all four participants had signed agreements with OLAF committing to additional supply chain controls. C&C from lower priced countries within the EU has since declined from 22.2 billion to 6.5 billion cigarettes
- Legal domestic consumption remained stable against a backdrop of improved economic conditions in many countries, whilst non-domestic legal (ND(L)) increased, supported by travel trends
- Increased anti-illicit trade activity and border security reflected by a doubling in the volume of OLAF supported seizures, contributed to this overall decline of C&C

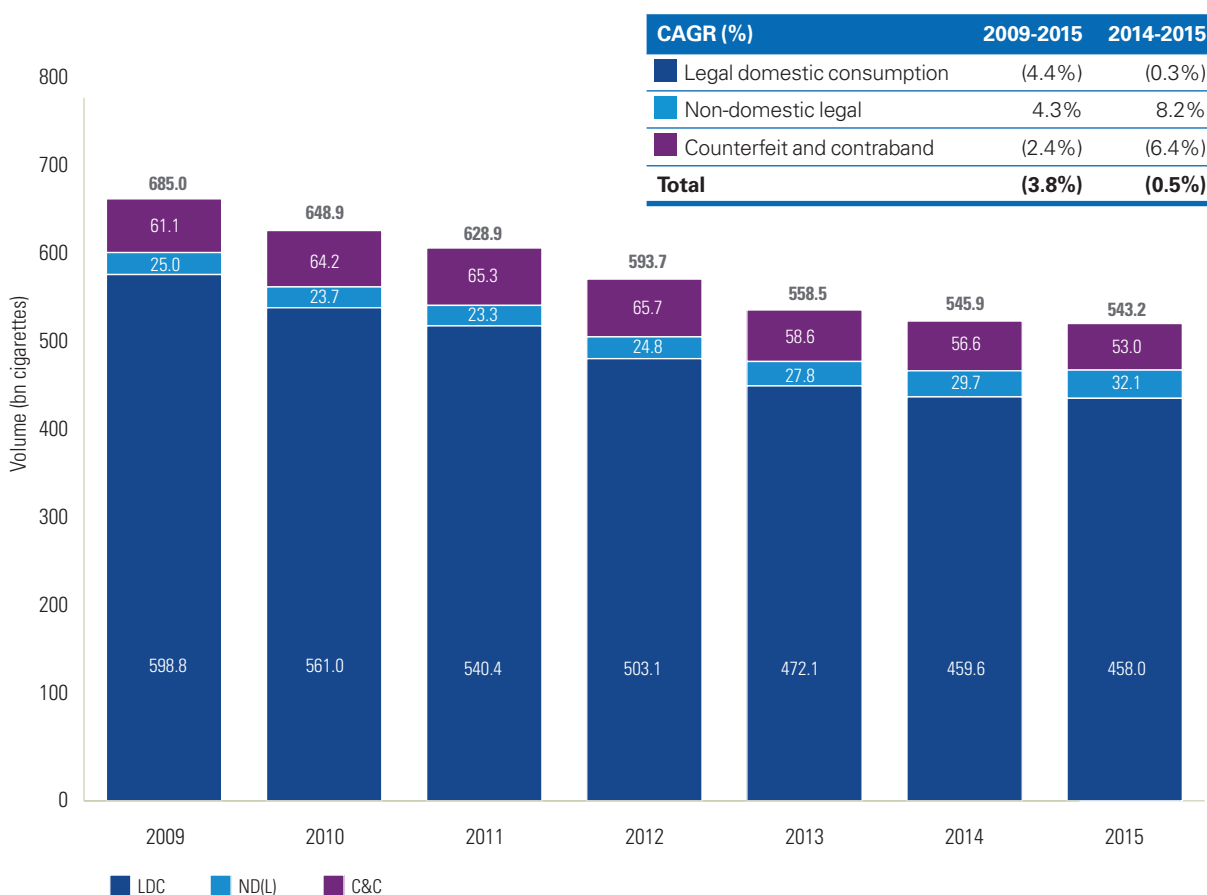
### Counterfeit and Illicit Whites brand flows made up a larger proportion of C&C in 2015 compared to previous years

- Illicit Whites brand flows, with limited or no legal distribution in the EU, again accounted for over one third of C&C, of which 5.3 billion cigarettes had Belarusian labelling
- Counterfeit identified by the four participating tobacco manufacturers increased by 28% but remains less than 9% of illicit cigarette consumption in Europe
- The changing mix of source countries and the increasing number of Illicit Whites brands demonstrates the flexibility of illicit cigarette flows

# Counterfeit and Contraband (C&C) declined by 6% against a backdrop of improved economic conditions and increased anti-illicit trade activities

- Personal Disposable Income (PDI) increased by an average of 2.6%<sup>(2)</sup> across all EU member states, which may have contributed to a stabilisation of Legal Domestic Sales, reversing a five year trend
- Many countries, especially in the Eastern EU, experienced more stable prices compared with 2014 when tobacco taxes increased to meet minimum EU excise requirements
- Increased anti-illicit trade activity, as evidenced by a rise in the number of seizures made across Europe, may also have contributed to the C&C decline<sup>(3)</sup>

## Manufactured cigarette total consumption – 2009-2015<sup>(1)</sup>



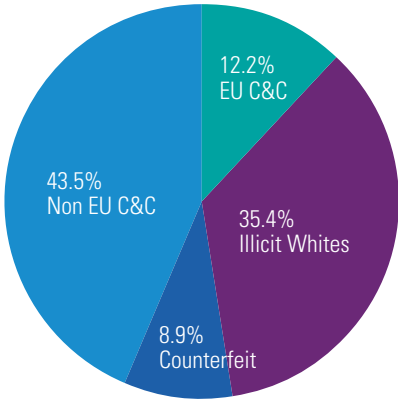
Sources: (1) KPMG EU Flows Model 2009-2015 (2) Economics Intelligence Unit, 2015 (3) The OLAF Report, 2015



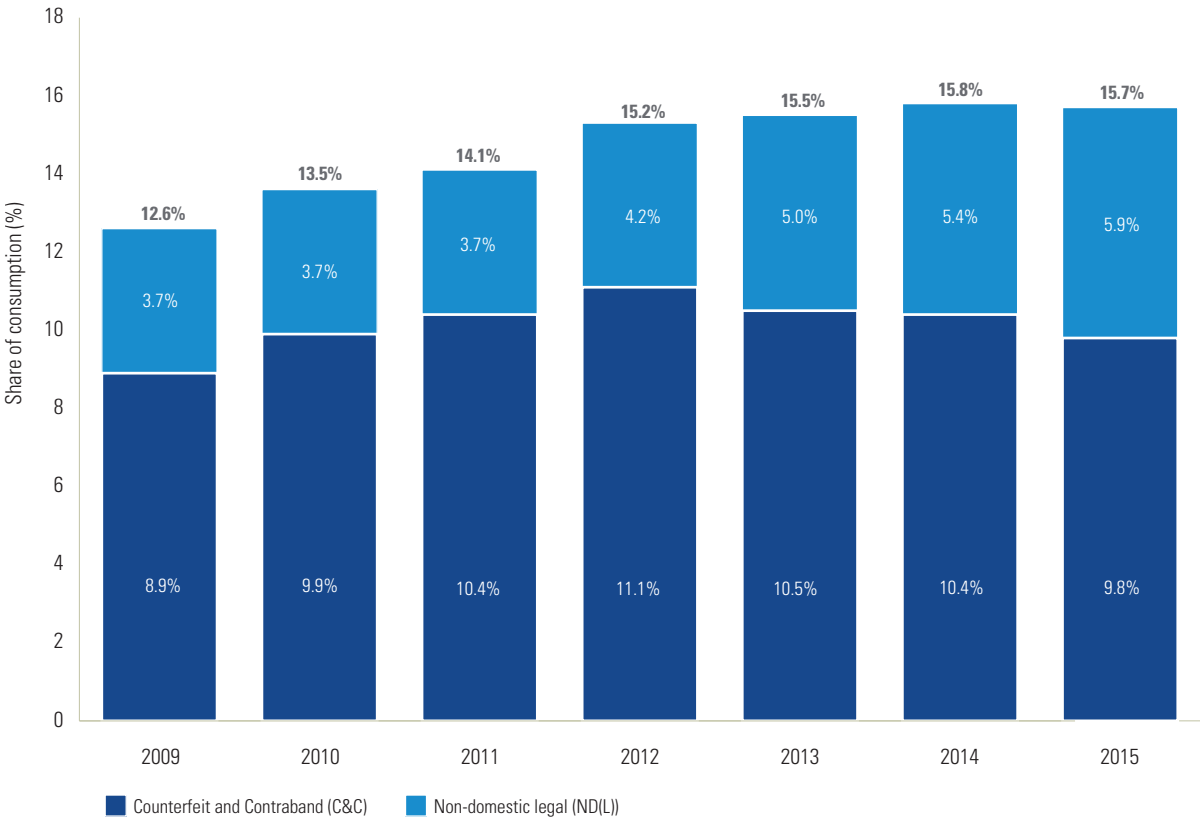
# C&C remained at around 10% of total consumption, with Illicit Whites and counterfeit representing a greater share of illicit consumption

- Flows of C&C from outside of the EU were the largest component of C&C identified in the study
- The overall proportion of Illicit Whites brand flows and counterfeit has grown to 44.3% in 2015
- The increased volume of seizures in Europe mainly identified counterfeit and Illicit Whites brand flows. Seizures of Duty Paid product from both within and outside the EU were limited

Type of C&C – 2015<sup>(1)</sup>



ND(L) and C&C share of total EU28 consumption – 2009-2015<sup>(1)</sup>

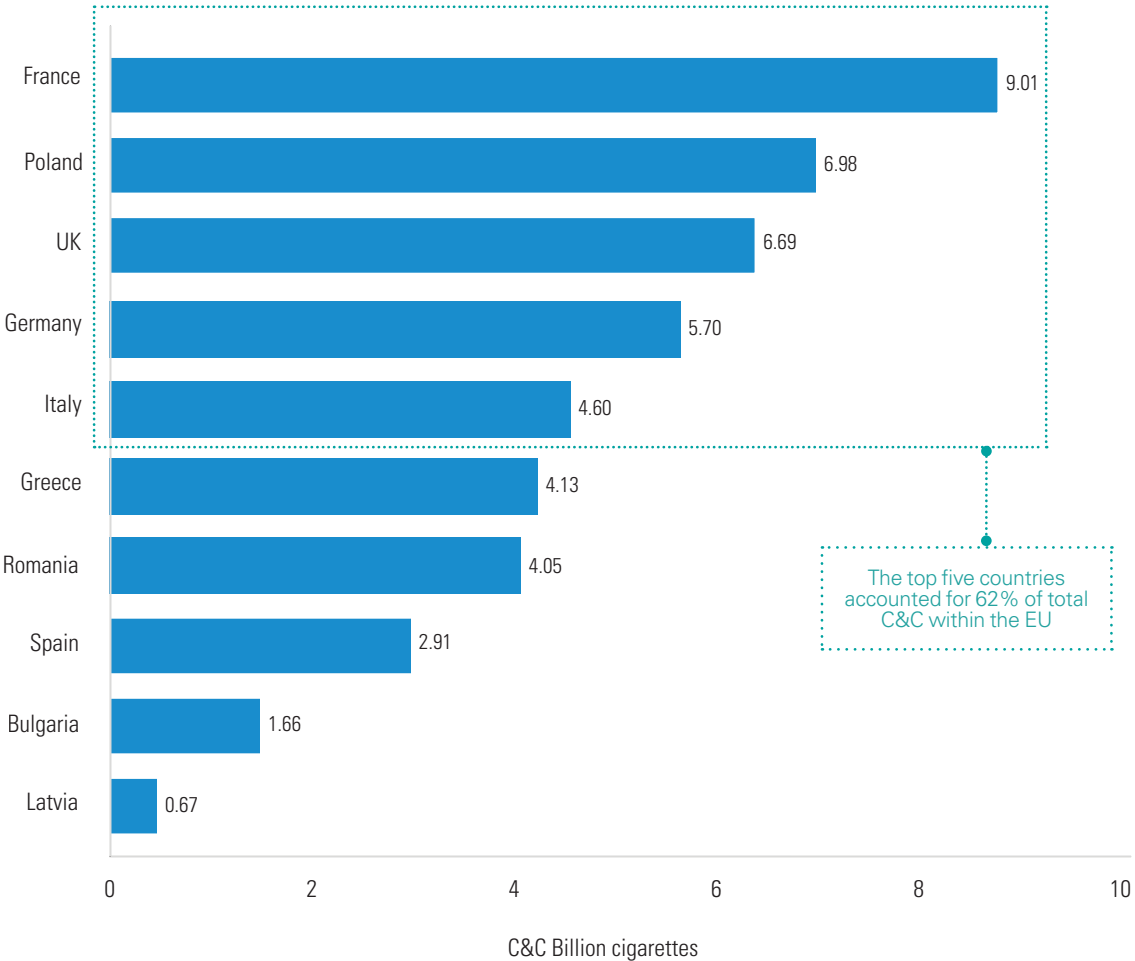


Sources: (1) EU Flows Model 2009 – 2015

# C&C as a percentage of consumption was often highest in EU countries bordering lower priced non-EU countries

- Eastern EU countries with high levels of C&C mainly bordered non-EU countries where average prices were 4 times lower
- C&C as a percentage of consumption was also high in Greece, Norway, UK and Ireland, which also have the highest prices within Europe
- Whilst not having the highest level of C&C as a proportion of consumption, the highest volume of C&C was identified in France

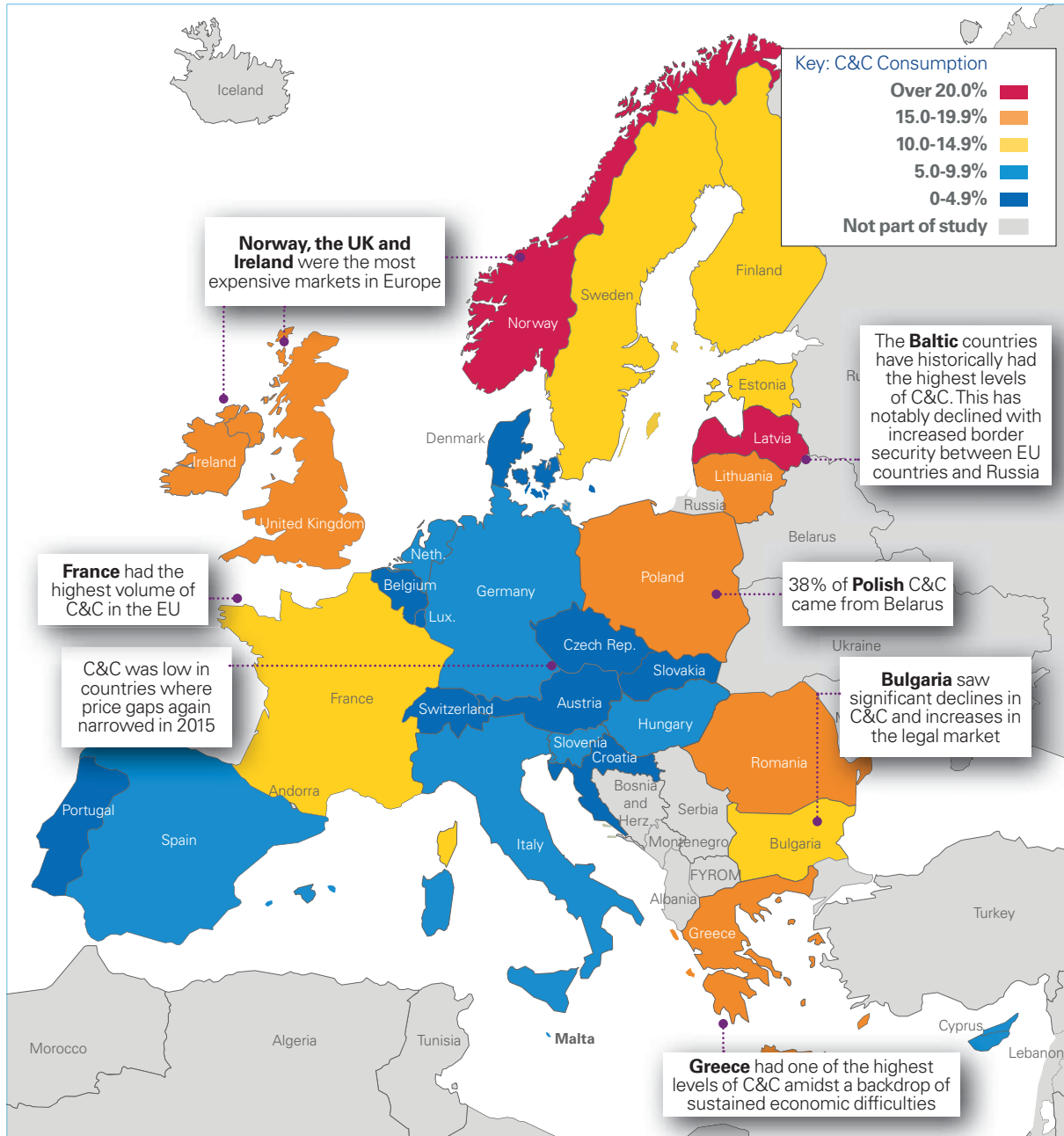
**Top 10 C&C countries by volume, 2015<sup>(1)</sup>**



Project SUN — Executive Summary

Source: (1) KPMG EU Flows Model 2009-2015

Counterfeit and contraband consumption as a percentage of overall consumption – 2015<sup>(1)</sup>

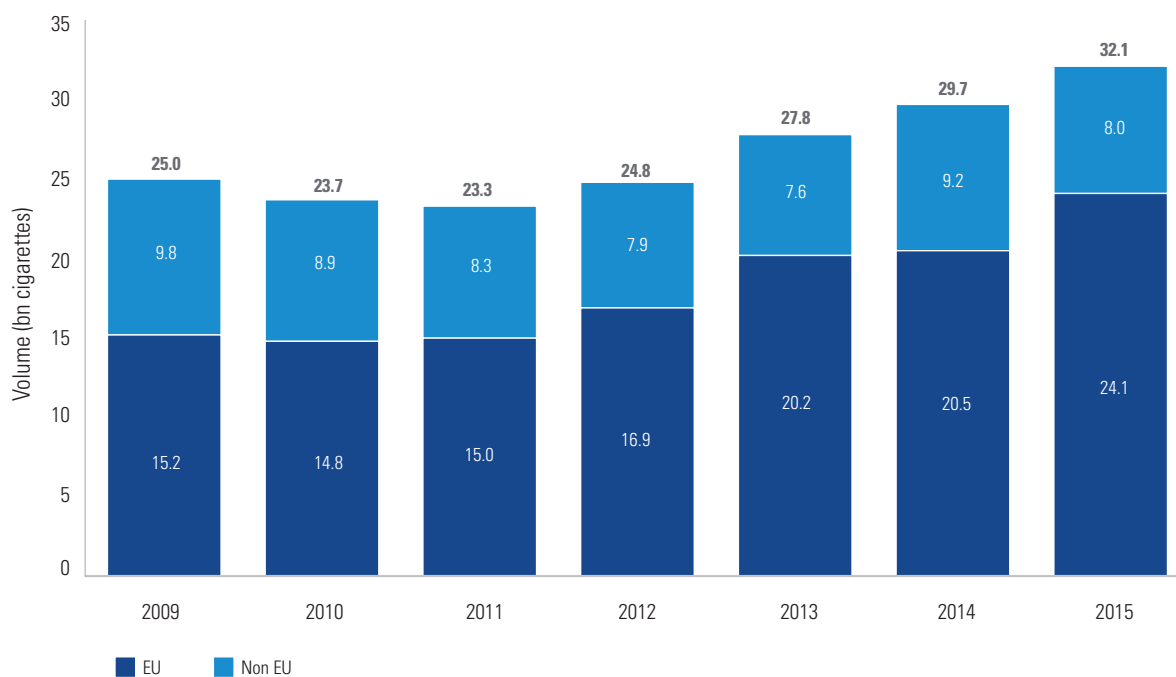


Source: (1) KPMG EU Flows Model 2015

# Non-domestic legal (ND(L)) continued to increase against a backdrop of travel trends and price incentives

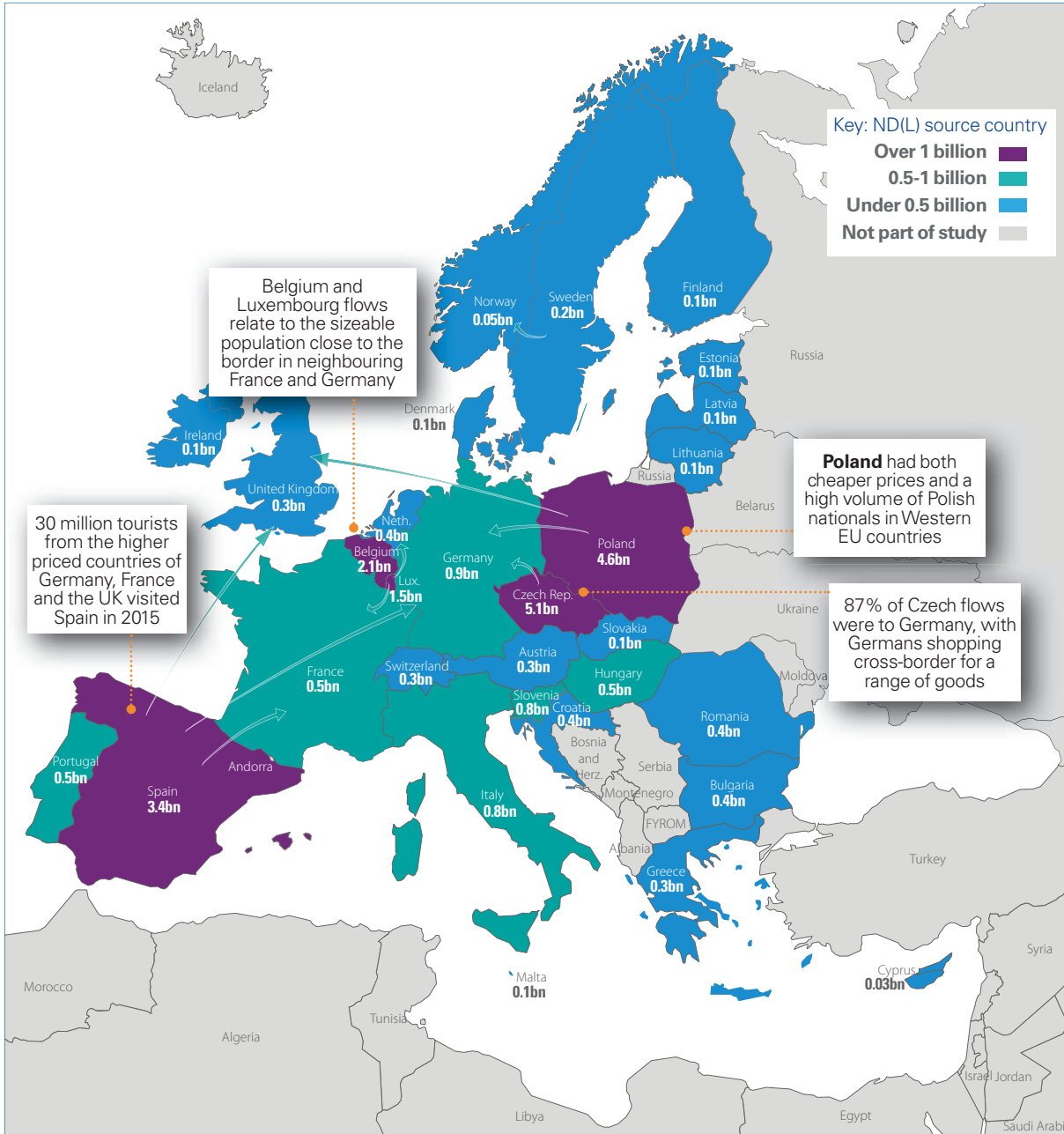
- Overall travel increased by 3.5%, but travel to some major source countries which were also tourist destinations increased further (e.g. travel from France to Spain increased by 8.5%)
- Consumers continued to take advantage of cross-border shopping from neighbouring lower priced EU countries with legal excise allowances
- Countries with the highest level of ND(L), as a percentage of overall consumption, bordered countries where prices were at least €1 lower per 20 pack

**Source of ND(L) – 2009-2015<sup>(1)</sup>**



Source: (1) KPMG EU Flows Model 2015

Total volume of ND(L) by source country – 2015<sup>(1)</sup>

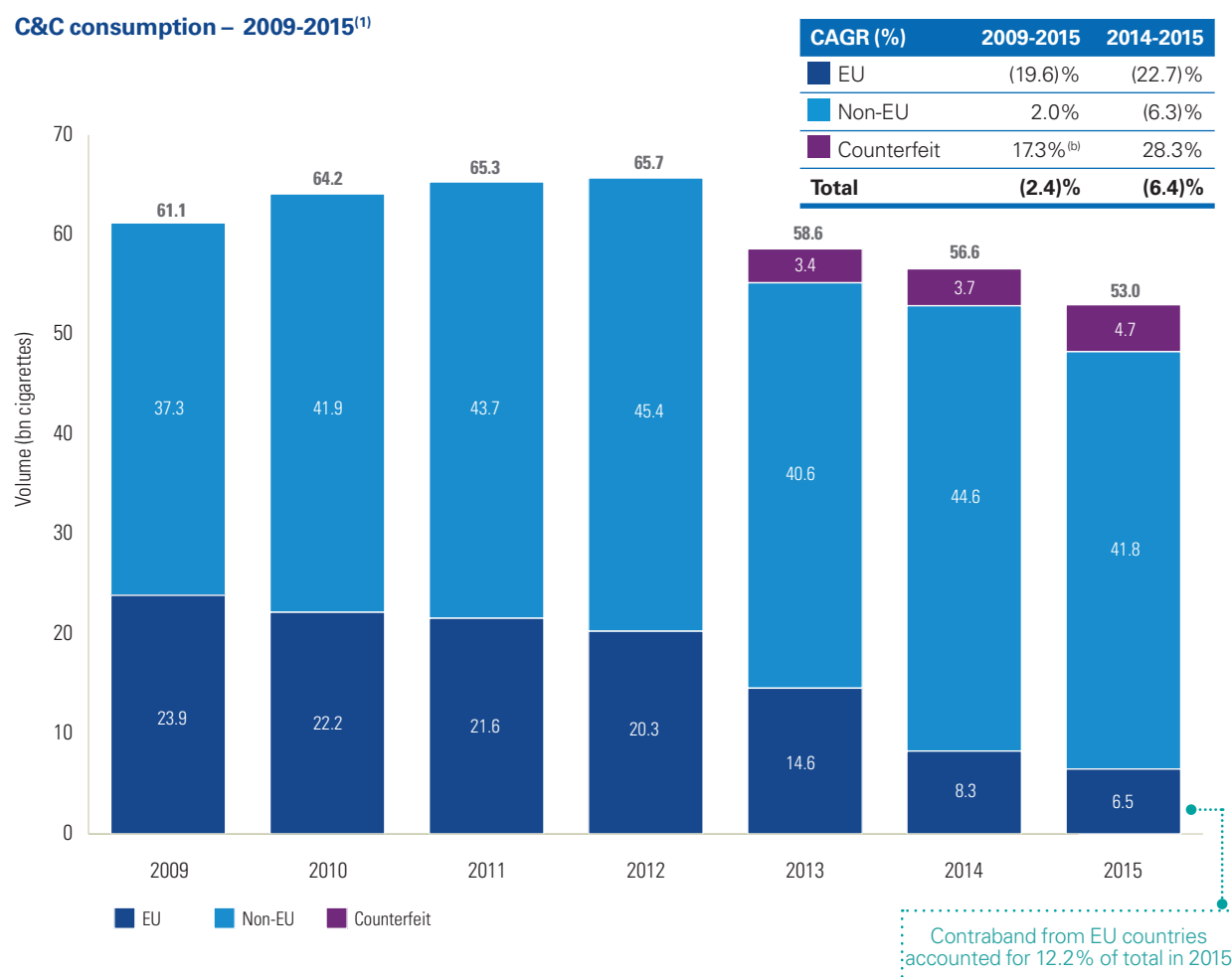


Source: (1) KPMG EU Flows Model 2015

# Non-EU source products and counterfeit contributed an increasingly greater proportion of C&C

- Belarus remained the largest source country, followed by Ukraine, Algeria and Russia. However, the mix of product from non-EU countries has shifted, indicating the flexibility of illicit cigarette sources
- The volume of C&C from EU countries continued to decline as the share of C&C from the OLAF agreement participants declined<sup>(a)</sup>
- Cigarettes seized with OLAF support<sup>(c)</sup> were in excess of 0.6 billion cigarettes, compared with 0.3 billion in 2014, indicating additional law enforcement activity<sup>(2)</sup>
- Whilst the overall volume of seizures increased in 2015, the proportion of cigarettes identified from OLAF agreement participants remained at 3% of the total<sup>(2)</sup>

**C&C consumption – 2009-2015<sup>(1)</sup>**



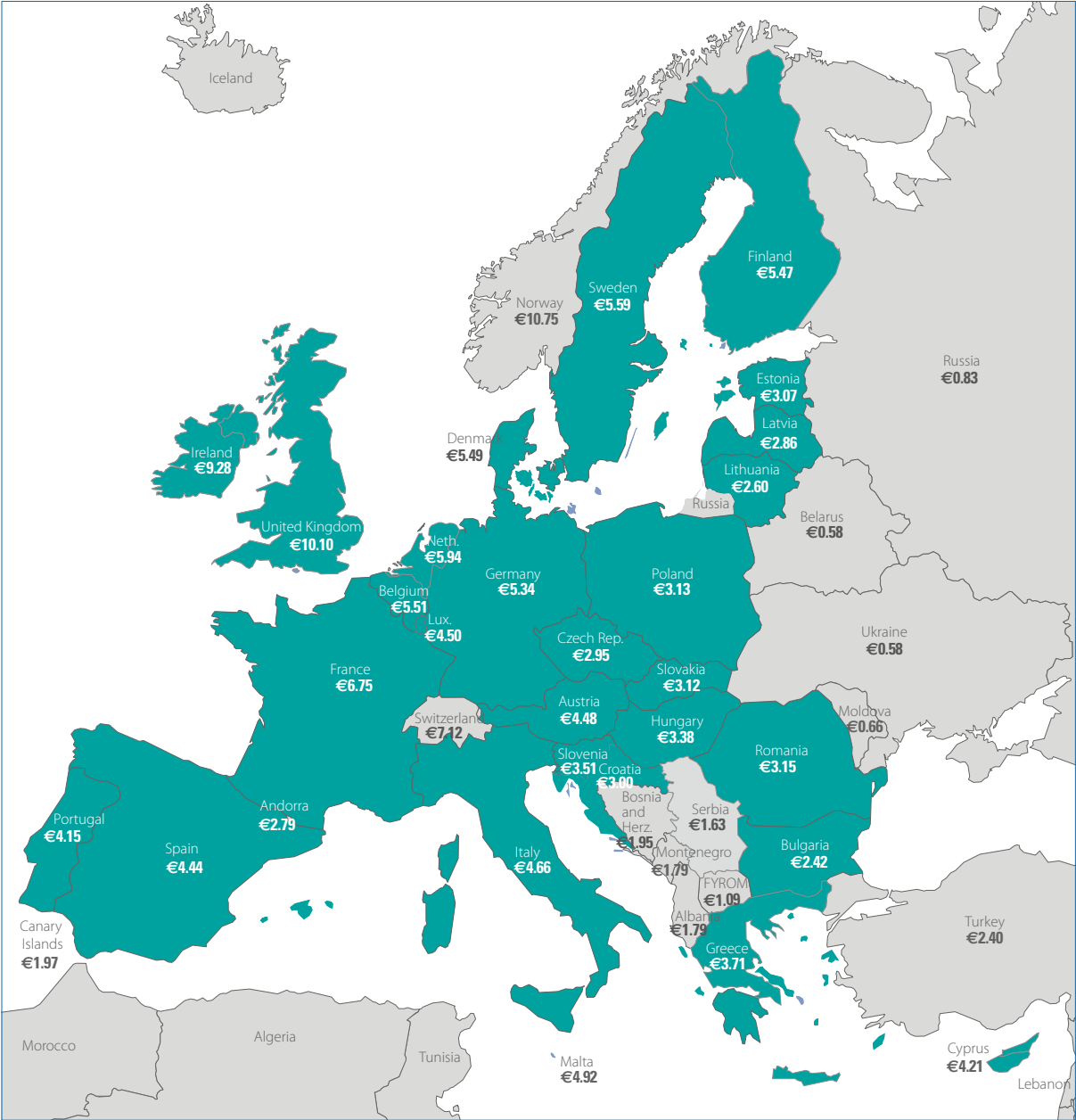
Notes: (a) OLAF agreement participants are those companies who have signed legally binding agreements with the European Union and Member States on anti-illicit trade cooperation (JT International SA, Philip Morris International Management SA, Imperial Tobacco Ltd, British American Tobacco Plc) (b) Counterfeit growth rate of 17.3% is for the period 2013-2015 (c) OLAF provides analysis, technical support and information obtained from Member States and third countries with the help of law enforcement agencies and other sources

Sources: (1) KPMG EU Flows Model 2009- 2015 (2) KPMG analysis of OLAF Press Release No.13, 2015; European Commission ST-6279-2016, February 2016; The OLAF Report, 2015

# The largest C&C source countries were those with the lowest prices on the Eastern EU border

- Prices stabilised in 2015 in many EU countries, especially those in the Eastern EU, as member states met minimum EU excise requirements in 2014
- Prices increased by 3 percentage points less in 2015 than in 2014 and legal domestic consumption stabilised

Map denotes weighted average prices for a pack of 20 cigarettes - January 2016<sup>(1)(2)(a)</sup>



**Key:**  
 EU countries   
 Non-EU countries

Note: (a) Manufacturer estimates based on the price of the most sold brand used for countries not included in the EU Tax Tables

Sources: (1) EU Tax Tables and pricing information on most sold brands outside of EU (2) Data provided by manufacturers for Canary Islands, Norway, Switzerland, Belarus, Ukraine, Russia and Albania

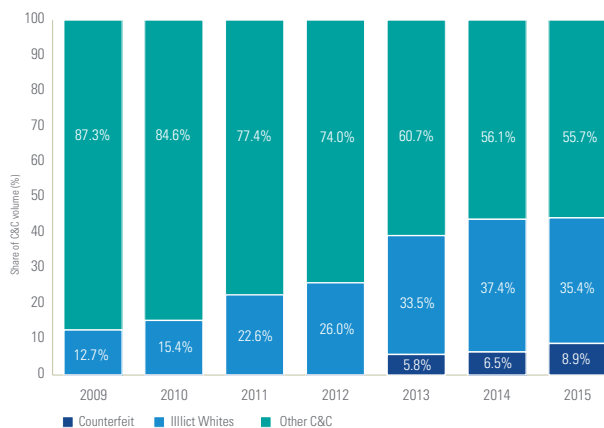
# Illicit Whites brand flows continued to represent over one third of C&C in the EU, equating to 3.5% of total cigarette consumption

- Illicit Whites brand flows have grown as a proportion of total C&C from 7.8 billion in 2009 to 18.8 billion in 2015
- 57% of Illicit Whites brand flows were either misleadingly labelled as Duty Free (as they are unavailable in Duty Free outlets) or had no country specific labelling, resulting in limited identification of the country of origin or trademark owner<sup>(a)</sup>
- 28% of Illicit Whites brand flows had Belarusian labelling, including the brands Fest, NZ and Minsk; all trademark-owned by Grodno Tobacco Company<sup>(1)</sup>
- 1.3 billion cigarettes are thought to originate from the Jebel Ali Free Trade Zone in the United Arab Emirates<sup>(2)(b)</sup>
- The number of Illicit Whites brands increased by 12% with many identified in small volumes; this may further complicate identification of the source and nature of the product

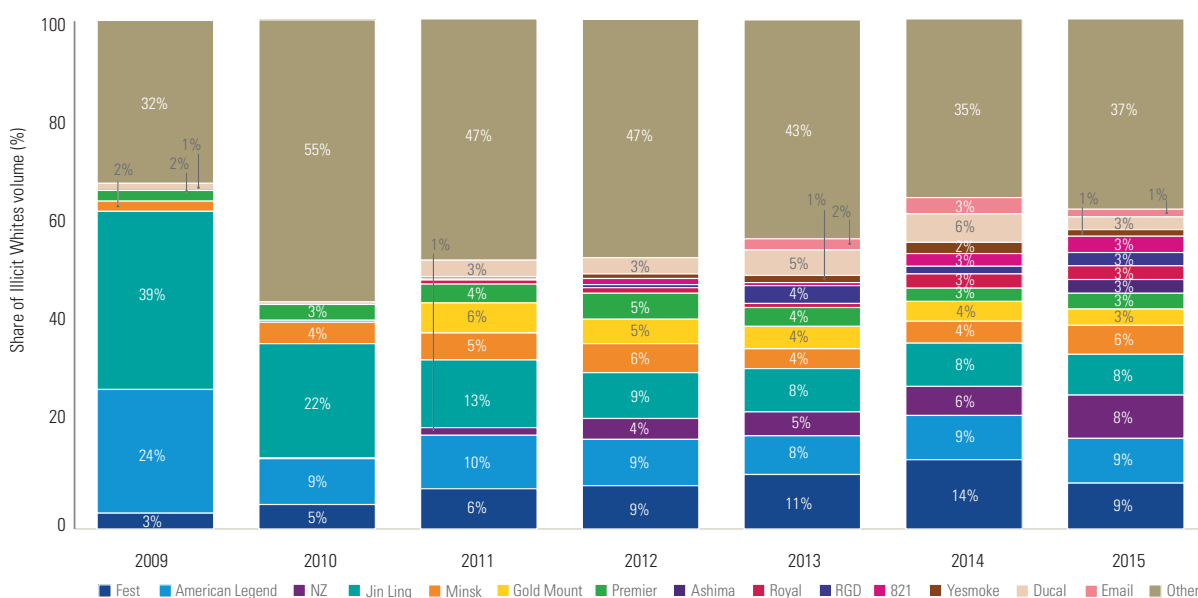
**Illicit Whites labelling – 2015<sup>(1)(a)</sup>**



**Illicit Whites as a percentage of total C&C<sup>(1)(c)</sup>**



**Illicit Whites by brand – 2009-2015<sup>(1)(a)</sup>**

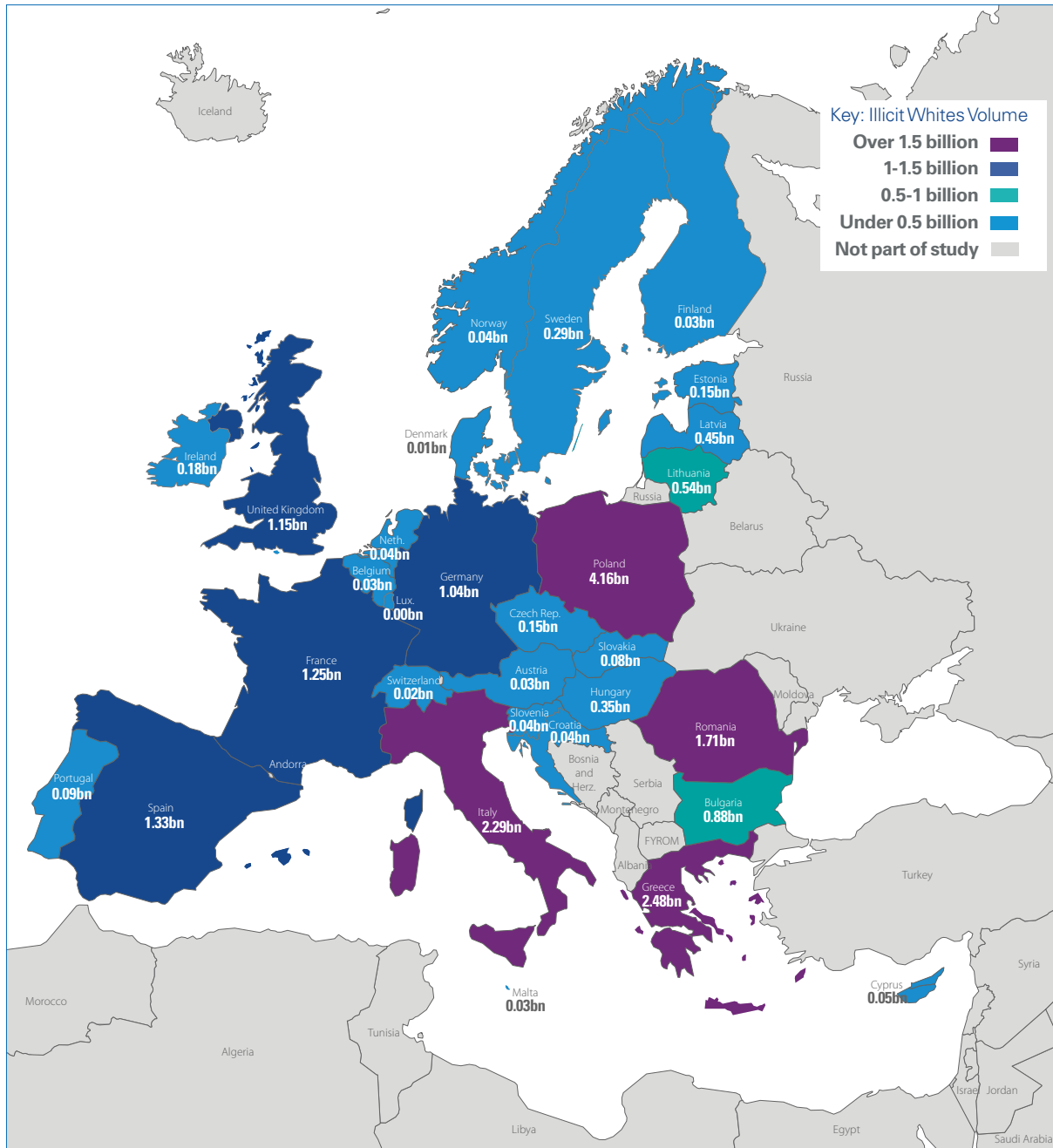


Notes: (a) KPMG's approach to identifying Illicit Whites is explained in the appendix. When determining Illicit Whites brand flows, KPMG is not able to distinguish between genuine and counterfeit product as counterfeit can only be identified from brands trademark-owned by the four participating companies in the study (b) Free Trade Zone: an area within which goods may be landed, handled, manufactured or reconfigured, and re-exported without the intervention of the customs authorities. However, in many countries products illegally pass through the free-zone border without duty being paid (c) Counterfeit reported from 2013 only due to all 4 manufacturers' participation

Sources: (1) EU Flows Model 2009 – 2015 (2) KPMG analysis of manufacturers operating in Free Trade Zone



**Illicit Whites Volume – 2015<sup>(1)</sup>**

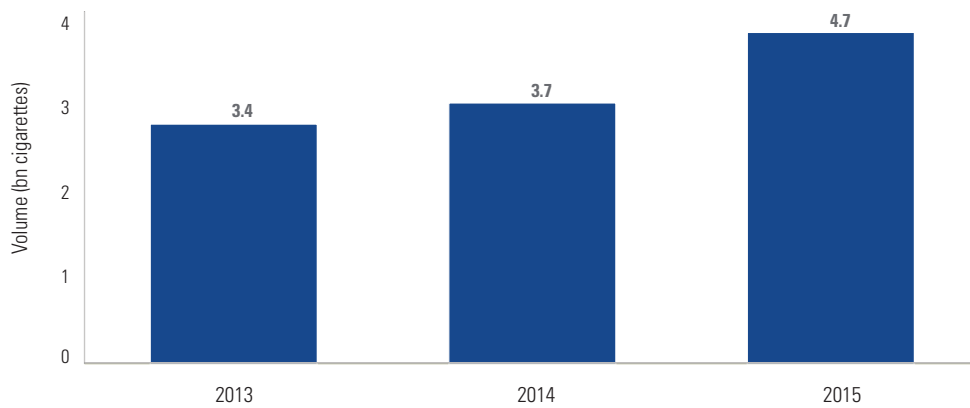


Sources: (1) EU Flows Model 2009 – 2015

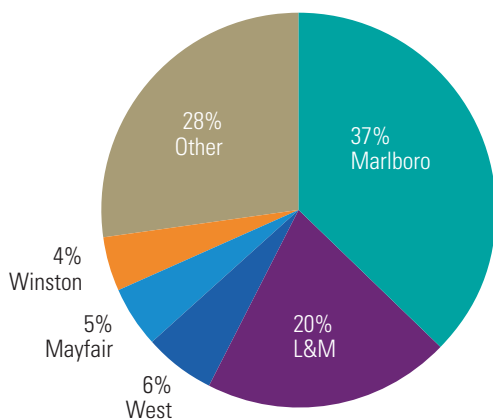
# Counterfeit experienced a 28% increase in volume, representing 9% of C&C consumption

- Counterfeit identified in the study was most common in brands with high levels of legal domestic sales in the country identified<sup>(a)</sup>
- The increase in counterfeit may have offset contraband flows from genuine major international brands originating from lower priced countries
- Counterfeit was mainly identified in markets where there was also high overall flows of C&C (Poland, UK and Italy accounted for 50% of total counterfeit identified)<sup>(1)</sup>
- The majority of counterfeit had Duty Free, Ukrainian and Russian labelling
- Unlike contraband, counterfeit is often seized in large volumes relative to legitimate international brands<sup>(a)(b)</sup>

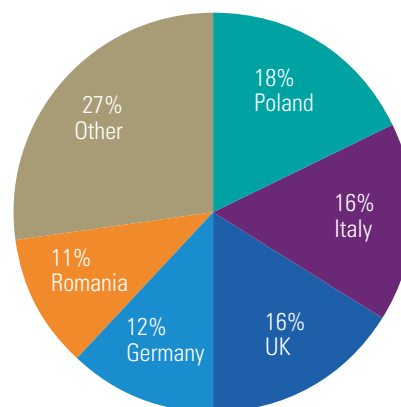
## Total volume of counterfeit cigarettes consumed in Europe - 2013-2015<sup>(1)</sup>



## Counterfeit brands identified - 2015<sup>(1)</sup>



## Consumption of counterfeit - 2015<sup>(1)</sup>



Notes: (a) Counterfeit was only identified from manufacturers participating in the study (JT International SA, Philip Morris International Management SA, Imperial Tobacco Ltd and British American Tobacco Plc) (b) Explanation of seizures data and its usage provided in appendix

Source: (1) EU Flows Model 2013 - 2015

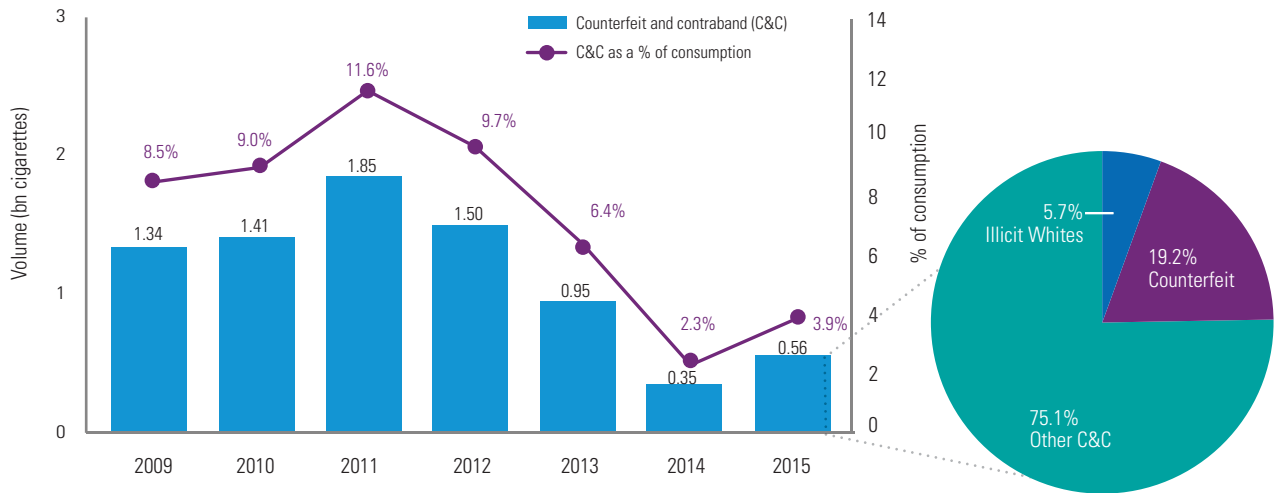


# Austria

## Overview

- C&C as a proportion of overall consumption is one of the lowest in Europe, but ND(L) is comparatively high as consumers bought cigarettes in neighbouring lower-priced countries
  - Whilst price differences have reduced in recent years, cross-border shopping still accounts for over 5% of consumption
- C&C from Bosnia and Herzegovina and Serbia accounted for 43% of total C&C whilst counterfeit volumes of 0.11 billion accounted for 19% of total C&C

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

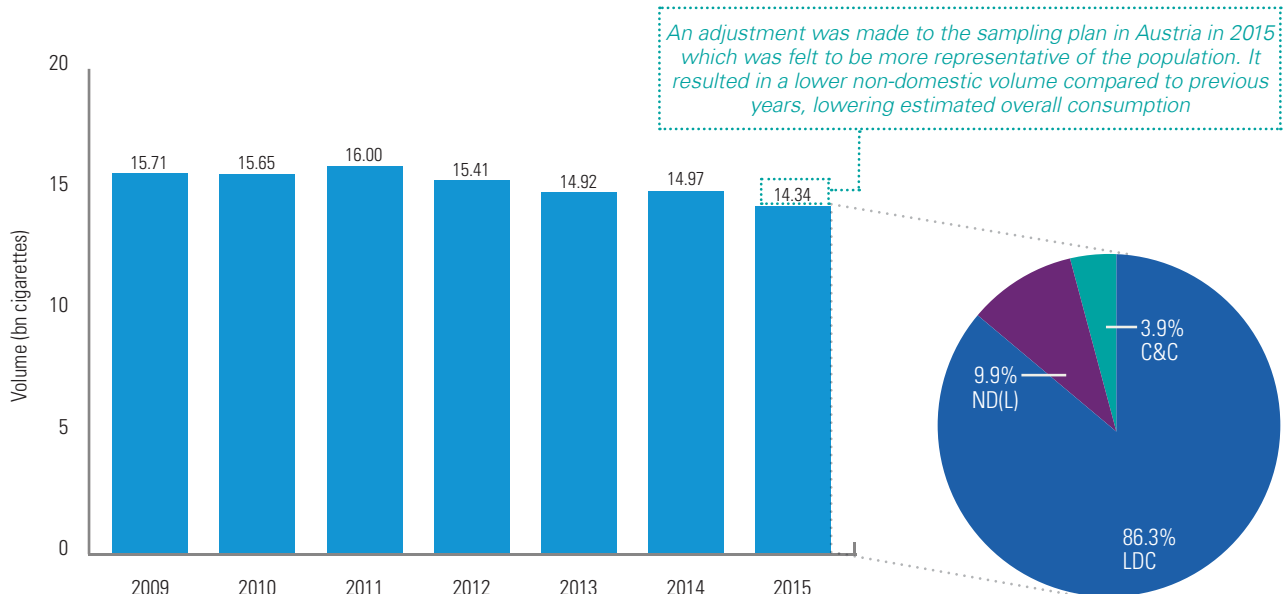


Austria

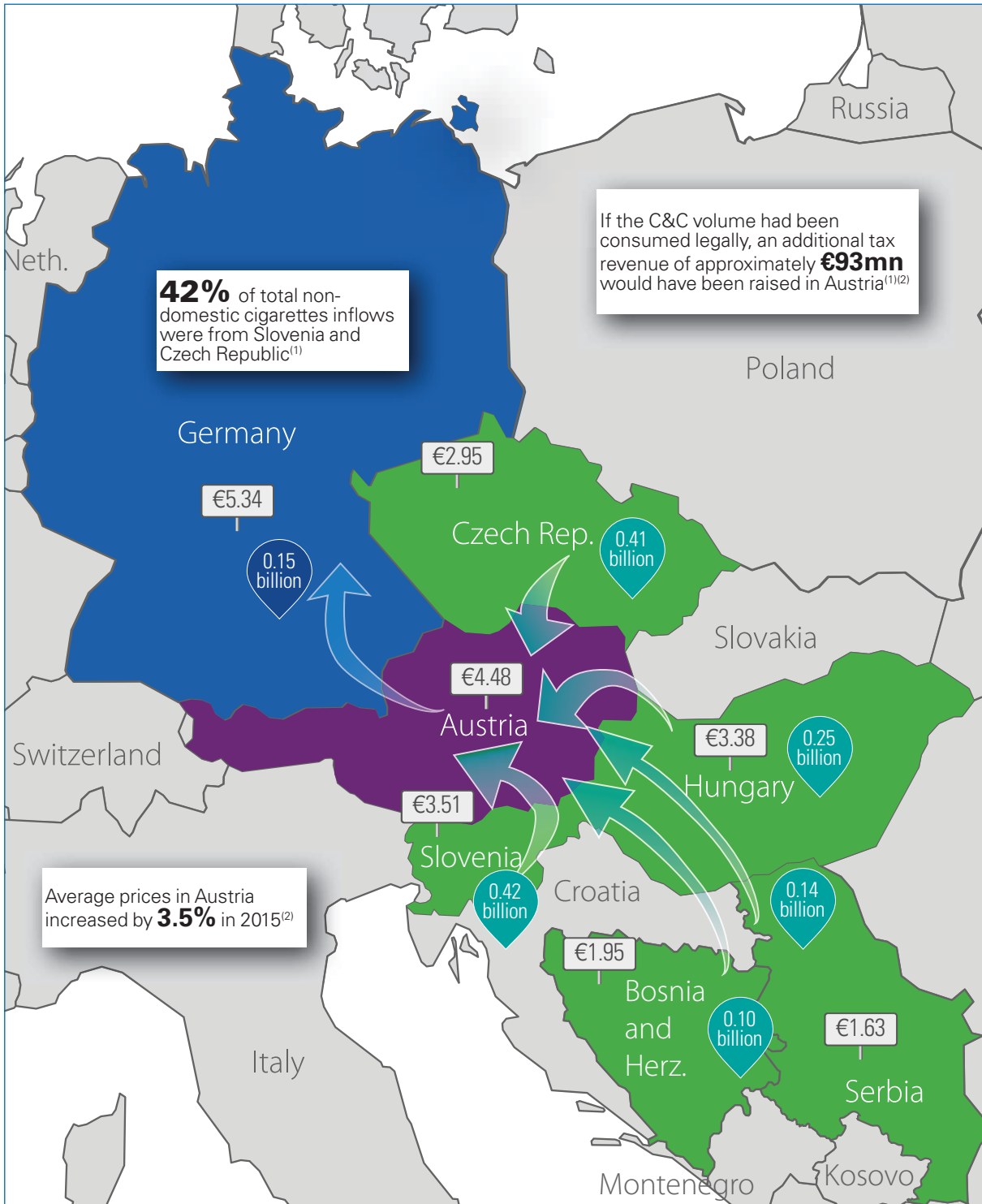


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## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows

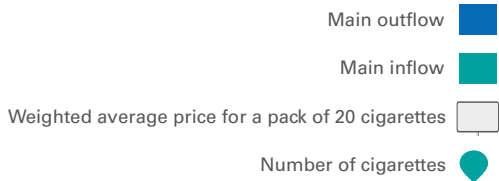


**42%** of total non-domestic cigarettes inflows were from Slovenia and Czech Republic<sup>(1)</sup>

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€93mn** would have been raised in Austria<sup>(1)(2)</sup>

Average prices in Austria increased by **3.5%** in 2015<sup>(2)</sup>

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Austria



Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL AUSTRIA CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	13.39	13.54	13.09	12.96	13.04	12.90	12.73	(1%)
Outflows	-0.27	-0.45	-0.36	-0.31	-0.75	-0.38	-0.36	(5%)
Legal domestic consumption (LDC)	13.12	13.09	12.72	12.65	12.29	12.52	12.37	(1%)
Non-domestic legal (ND(L))	1.25	1.15	1.43	1.25	1.69	2.11	1.41	n/a
Counterfeit and contraband (C&C)	1.34	1.41	1.85	1.50	0.95	0.35	0.56	n/a
Total non-domestic	2.59	2.56	3.28	2.76	2.64	2.46	1.97	n/a
<b>Total consumption</b>	<b>15.71</b>	<b>15.65</b>	<b>16.00</b>	<b>15.41</b>	<b>14.92</b>	<b>14.97</b>	<b>14.34</b>	<b>n/a</b>

- Over 50% of inflows to Austria originated from the neighbouring lower-priced countries of Slovenia, Czech Republic and Hungary
  - These countries have lower-priced cigarettes compared to Austria, but the price gap has narrowed in recent years as these countries have increased their prices to be in line with minimum EU requirements
  - Most consumption takes place close to the border and therefore the flows are attributed to cross-border sales
  - Cross-border shopping may have been impacted by border closures at the end of the year which caused the closure of some border shops

*A new pack sampling plan was adopted in Austria in 2015 which was felt to be more representative of the population. The previous collection focused on areas with higher non-domestic consumption and therefore may have over-estimated flows from Slovenia, Czech Republic and Hungary*

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO AUSTRIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Slovenia	0.79	0.85	1.04	0.83	0.68	0.74	0.42
Czech Republic	0.23	0.25	0.47	0.41	0.61	0.47	0.41
Hungary	0.48	0.48	0.99	0.86	0.71	0.56	0.25
Serbia	0.08	0.10	0.08	0.14	0.10	0.03	0.14
Bosnia and Herzegovina	0.11	0.08	0.08	0.07	0.05	0.08	0.10
Duty Free labelled	0.22	0.11	0.11	0.07	0.12	0.13	0.10
Other	0.68	0.69	0.50	0.37	0.37	0.44	0.55
<b>Total inflows</b>	<b>2.59</b>	<b>2.56</b>	<b>3.28</b>	<b>2.76</b>	<b>2.64</b>	<b>2.46</b>	<b>1.97</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM AUSTRIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Germany	0.18	0.33	0.28	0.18	0.62	0.27	0.15
Switzerland						0.02	0.04
Italy	0.00	0.00	0.02	0.01	0.03	0.01	0.03
Other	0.08	0.11	0.07	0.11	0.11	0.09	0.13
<b>Total outflows</b>	<b>0.27</b>	<b>0.45</b>	<b>0.36</b>	<b>0.31</b>	<b>0.75</b>	<b>0.38</b>	<b>0.36</b>

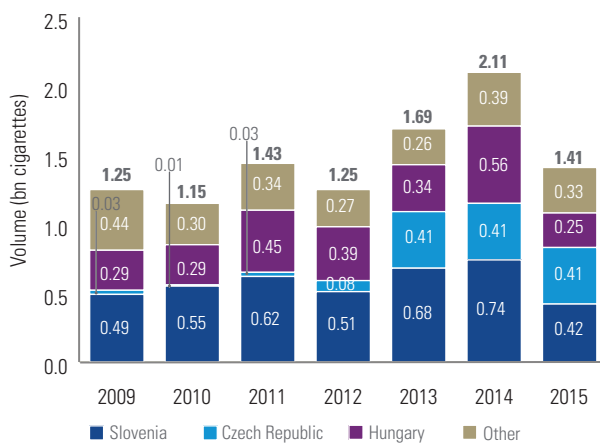
Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014

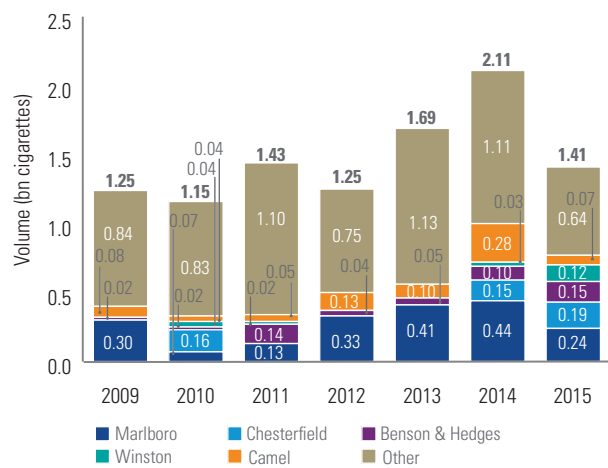
# ND(L) and C&C flows

- Over half of the contraband originated from Bosnia and Herzegovina and Serbia; being outside the EU these countries have much lower minimum excise requirements, with the average price difference between Austria and Serbia measured at €2.85 in 2015. This may explain the inflows of cigarettes from these countries
  - Given the two-pack limit for land border crossings between EU and non-EU countries, the volumes identified in Austria from Bosnia and Herzegovina and Serbia were not supported by visitor numbers and therefore are C&C
- All counterfeit identified was either Marlboro or Chesterfield

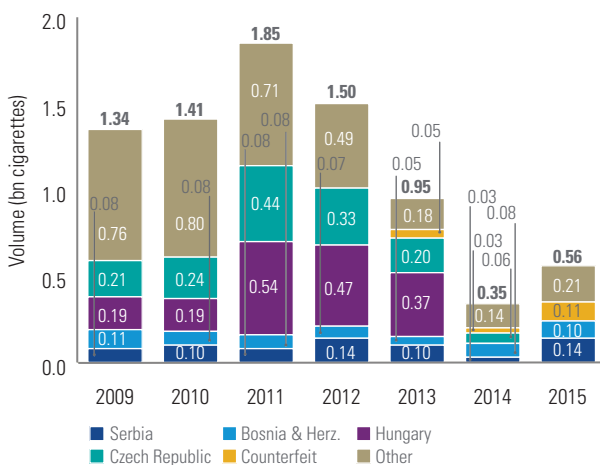
**ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>**



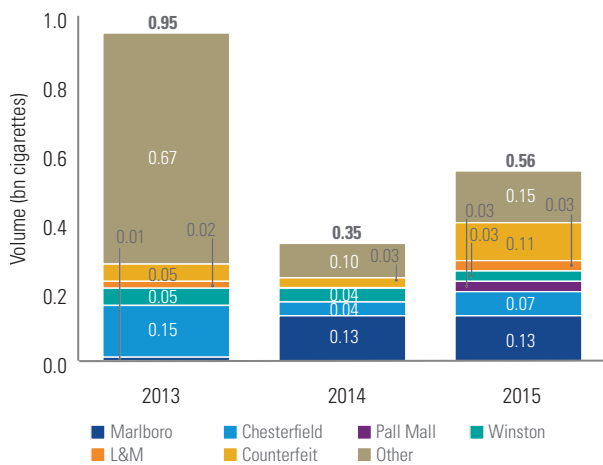
**ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>**



**C&C by country of origin - 2009-2015<sup>(1)(a)</sup>**



**C&C by brand - 2013-2015<sup>(1)(a)</sup>**



Austria



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Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

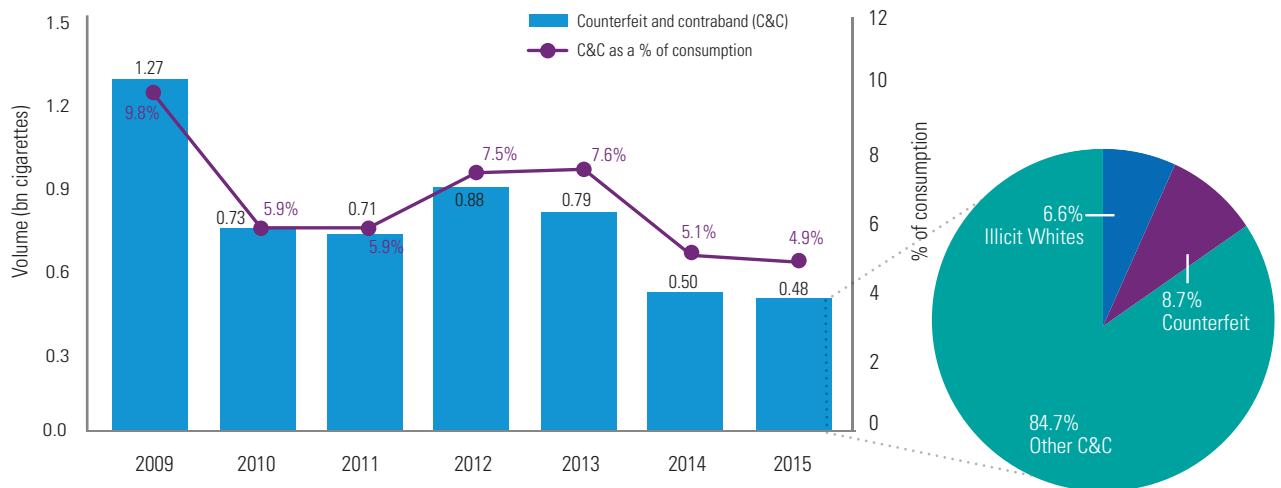
Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

# Belgium

## Overview

- Overall consumption declined by 1% in Belgium due to reduced ND(L) and C&C consumption
- Outflows from Belgium declined, especially to France where lower sales volumes were recorded at border shops

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

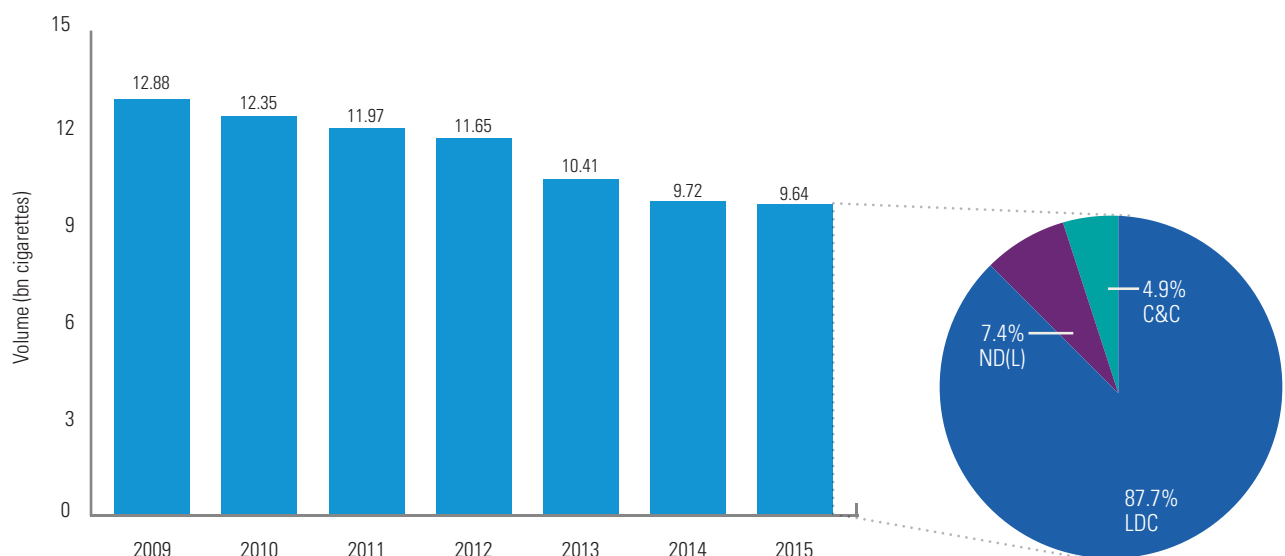


Belgium



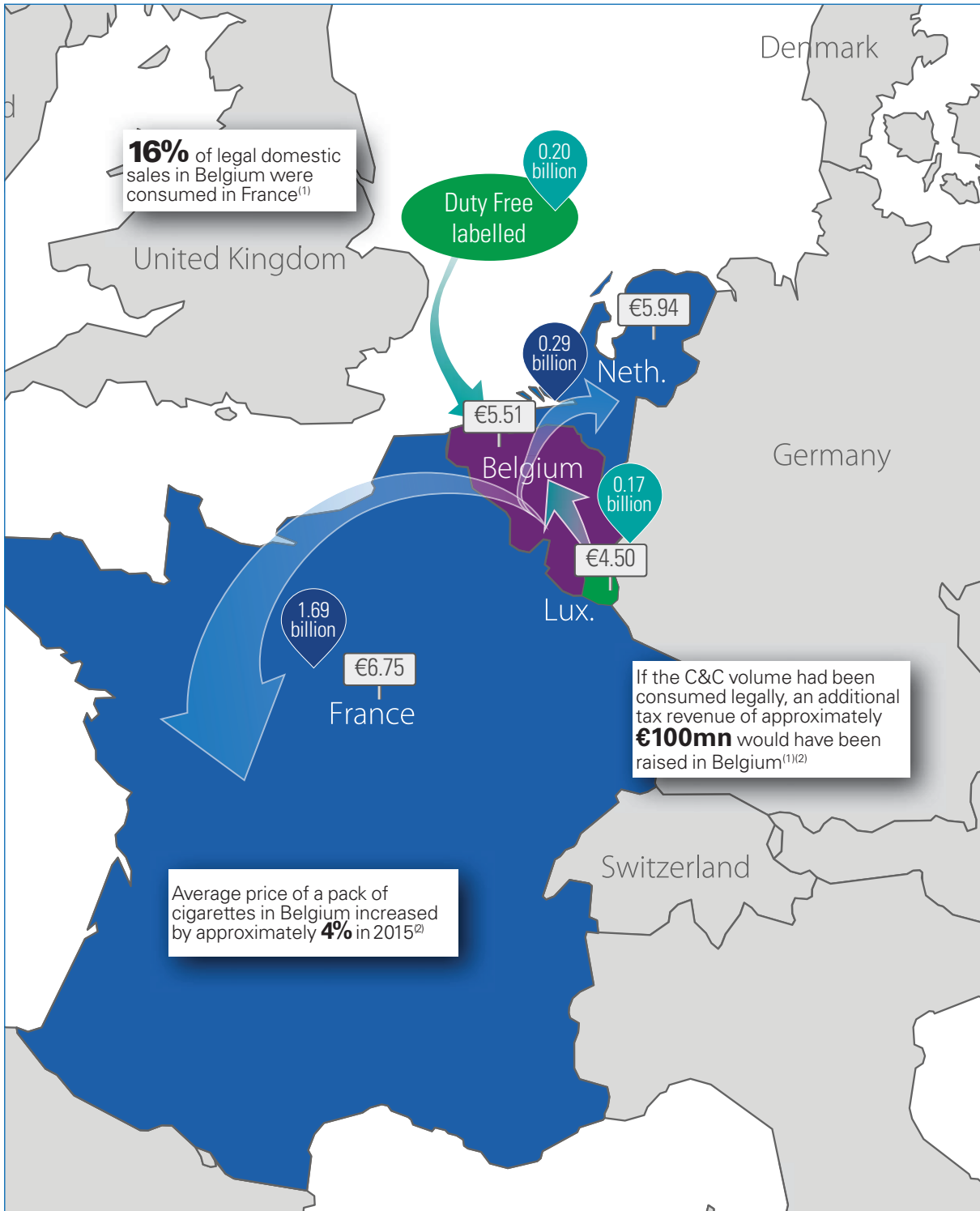
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## Manufactured cigarette consumption - 2009-2015





# Key inflows and outflows



Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow

Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL BELGIUM CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	11.74	11.73	11.86	11.44	11.00	10.92	10.60	(3%)
Outflows	-0.81	-0.85	-1.35	-1.48	-2.48	-2.47	-2.15	(13%)
Legal domestic consumption (LDC)	10.93	10.89	10.50	9.96	8.52	8.45	8.45	(0%)
Non-domestic legal (ND(L))	0.68	0.73	0.76	0.81	1.10	0.78	0.71	(9%)
Counterfeit and contraband (C&C)	1.27	0.73	0.71	0.88	0.79	0.50	0.48	(4%)
Total non-domestic	1.95	1.46	1.46	1.69	1.89	1.27	1.18	(7%)
<b>Total consumption</b>	<b>12.88</b>	<b>12.35</b>	<b>11.97</b>	<b>11.65</b>	<b>10.41</b>	<b>9.72</b>	<b>9.64</b>	<b>(1%)</b>

- Legal domestic sales declined as price rises in Belgium were not matched in France, resulting in a lowering of the price difference between each country and declining outflows to France
  - 35% of consumption in French towns close to the Belgian border consisted of lower priced Belgian labelled cigarettes
  - French border closures in November and December may have also impacted cross-border shopping between France and Belgium
- Aside from Duty Free, the largest inflows came from neighbouring Luxembourg where prices are approximately €1 per pack lower than Belgium and there are high travel volumes between each country

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO BELGIUM							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Duty Free labelled	0.37	0.27	0.18	0.20	0.22	0.20	0.20
Luxembourg	0.12	0.23	0.47	0.51	0.42	0.25	0.17
France	0.16	0.07	0.06	0.09	0.29	0.07	0.10
Netherlands	0.11	0.13	0.06	0.04	0.17	0.08	0.10
Russia	0.08	0.09	0.17	0.12	0.08	0.05	0.07
Bulgaria	0.13	0.05	0.01	0.04	0.04	0.02	0.06
Other	0.97	0.62	0.52	0.69	0.67	0.61	0.48
<b>Total inflows</b>	<b>1.95</b>	<b>1.46</b>	<b>1.46</b>	<b>1.69</b>	<b>1.89</b>	<b>1.27</b>	<b>1.18</b>

## Total outflows by destination country – 2009-2015<sup>(1)(b)</sup>

OUTFLOWS FROM BELGIUM							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
France	0.48	0.43	0.90	1.01	2.00	2.08	1.69
Netherlands	0.15	0.24	0.29	0.32	0.38	0.28	0.29
UK	0.09	0.04	0.08	0.08	0.04	0.03	0.04
Other	0.09	0.15	0.08	0.08	0.06	0.09	0.12
<b>Total outflows</b>	<b>0.81</b>	<b>0.85</b>	<b>1.35</b>	<b>1.48</b>	<b>2.48</b>	<b>2.47</b>	<b>2.15</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

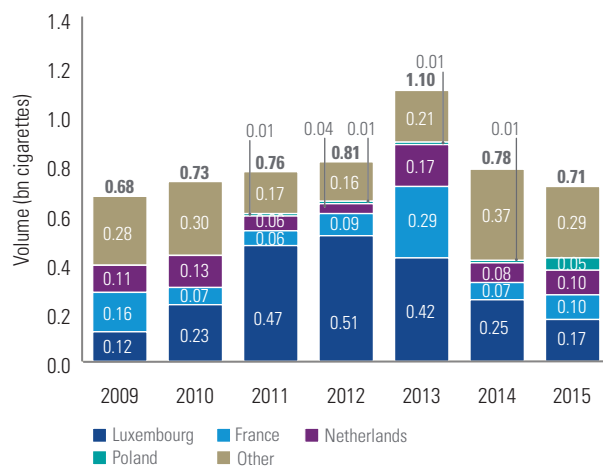
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014



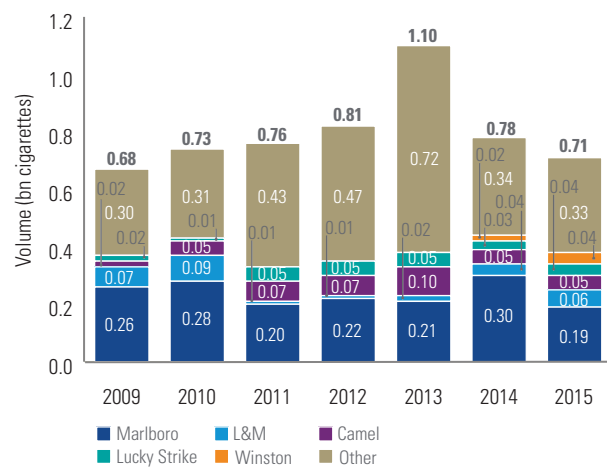
# ND(L) and C&C flows

- Non-domestic legal flows generally come from surrounding countries where, due to the high volumes of border crossings, all the volumes identified in Belgium are considered to be legal<sup>(1)</sup>
- C&C came mainly from both lower-priced countries in the Eastern EU and countries outside of the EU, including Russia and Belarus

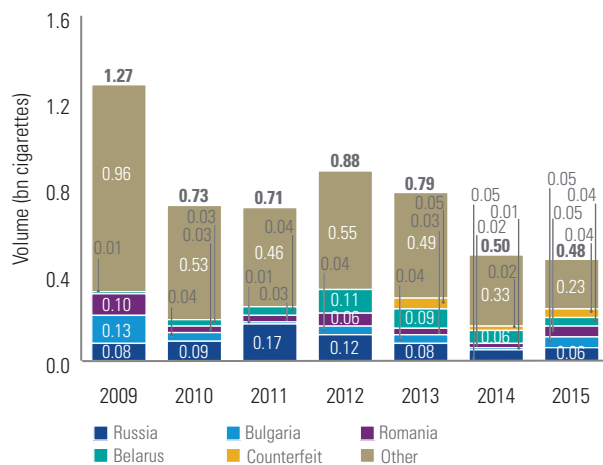
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



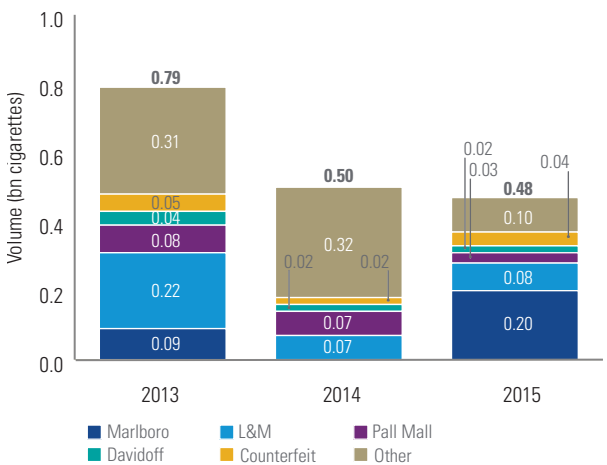
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Belgium  
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Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

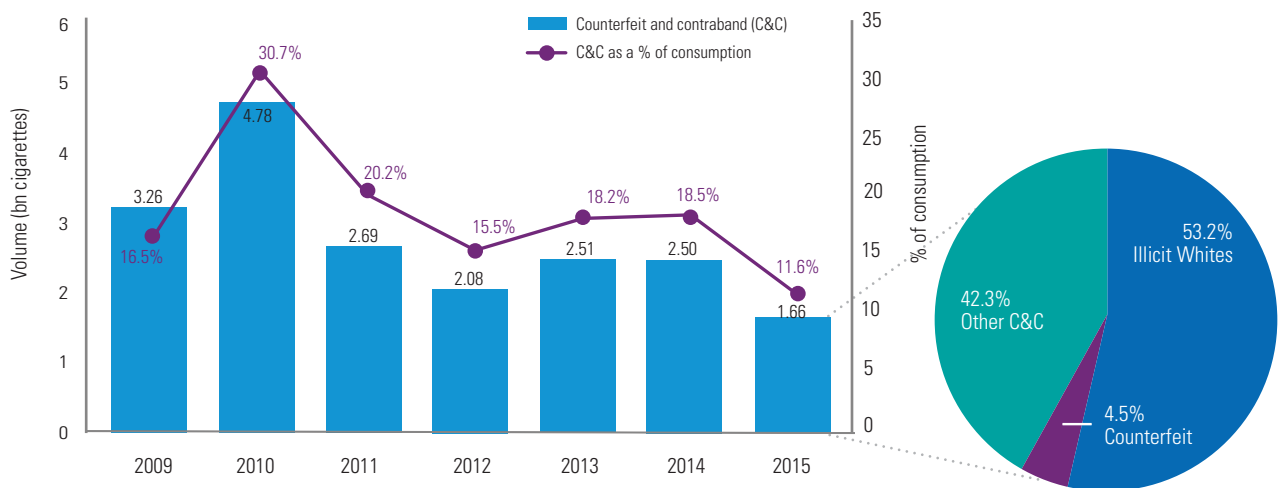
Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

# Bulgaria

## Overview

- C&C volumes declined by 0.8 billion cigarettes in 2015
- A 0.9 billion cigarette decline in inflows was offset by growth in legal domestic consumption
- Historically prevalent C&C brands Don, Turquoise, Diva and Palladium, declined from 39% to 11% of total C&C volume between 2014 and 2015

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

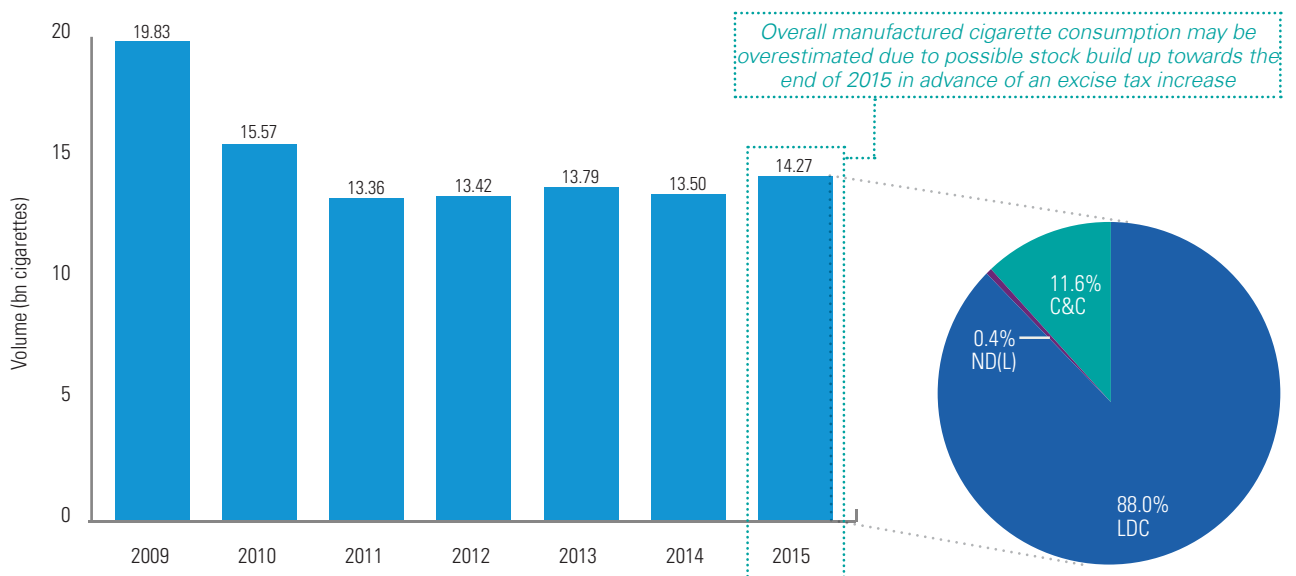


Bulgaria

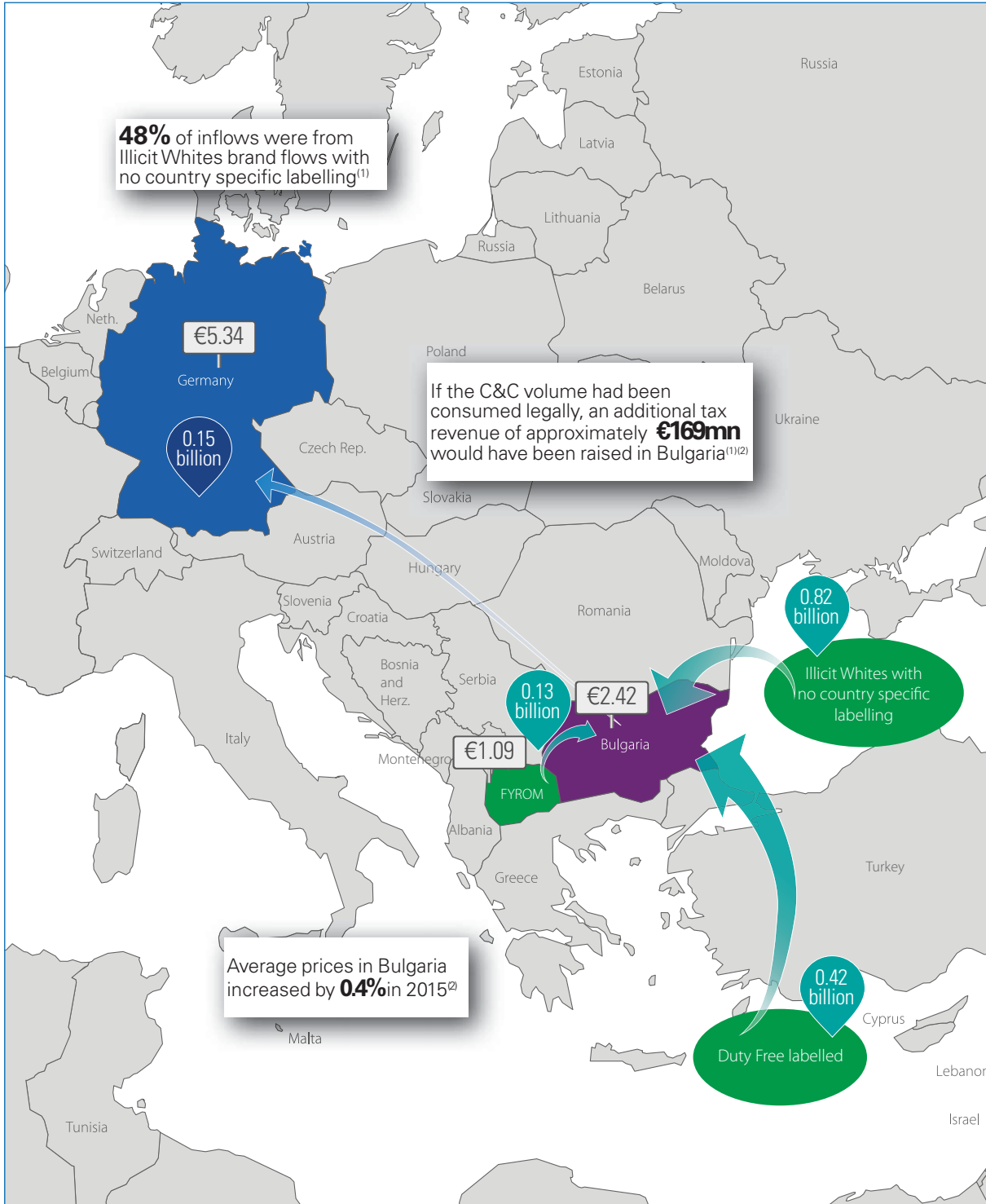


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## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows



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- Main outflow
- Main inflow
- Weighted average price for a pack of 20 cigarettes
- Number of cigarettes

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

Overall manufactured cigarette consumption may be overestimated due to possible stock build up towards the end of 2015 in advance of an excise tax increase

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL BULGARIA CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	16.80	10.91	10.80	11.57	11.50	11.34	13.16	16%
Outflows	-0.47	-0.27	-0.29	-0.38	-0.36	-0.41	-0.61	48%
Legal domestic consumption (LDC)	16.33	10.64	10.51	11.19	11.14	10.93	12.55	15%
Non-domestic legal (ND(L))	0.23	0.15	0.15	0.15	0.15	0.07	0.06	(15%)
Counterfeit and contraband (C&C)	3.26	4.78	2.69	2.08	2.51	2.50	1.66	(34%)
Total non-domestic	3.50	4.93	2.84	2.23	2.66	2.57	1.72	(33%)
<b>Total consumption</b>	<b>19.83</b>	<b>15.57</b>	<b>13.36</b>	<b>13.42</b>	<b>13.79</b>	<b>13.50</b>	<b>14.27</b>	<b>6%</b>

- Adult smoking prevalence remained stable at 38%<sup>(3)</sup>, whilst C&C fell and legal domestic sales grew by 16%
- Lower volumes of Illicit Whites brand flows and Duty Free labelled cigarettes in 2015 caused inflows to decline by one third
- Outflows increased by 0.2 billion, which may have been associated with the lifting of EU restrictions on the free movement of Bulgarian workers in 2014<sup>(4)</sup>

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

98% of counterfeit had Ukrainian labelling

ND INFLOWS TO BULGARIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
IWs with no country-specific labelling	0.32	1.21	0.92	0.45	0.37	1.28	0.82
Duty free labelled	2.03	2.08	1.14	1.24	1.87	0.90	0.42
FYROM	0.00	0.02	0.04	0.07	0.04	0.03	0.13
United Arab Emirates	0.00	0.10	0.00	0.00	0.00	0.08	0.13
Georgia	0.00	0.00	0.00	0.01	0.02	0.02	0.03
Counterfeit					0.00	0.01	0.07
Other	1.15	1.51	0.75	0.46	0.37	0.25	0.12
<b>Total inflows</b>	<b>3.50</b>	<b>4.93</b>	<b>2.84</b>	<b>2.23</b>	<b>2.66</b>	<b>2.57</b>	<b>1.72</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM BULGARIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Germany	0.04	0.03	0.07	0.06	0.08	0.11	0.15
France	0.04	0.02	0.03	0.05	0.09	0.07	0.13
UK	0.09	0.03	0.06	0.08	0.03	0.05	0.08
Other	0.30	0.18	0.13	0.19	0.17	0.19	0.25
<b>Total outflows</b>	<b>0.47</b>	<b>0.27</b>	<b>0.29</b>	<b>0.38</b>	<b>0.36</b>	<b>0.41</b>	<b>0.61</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

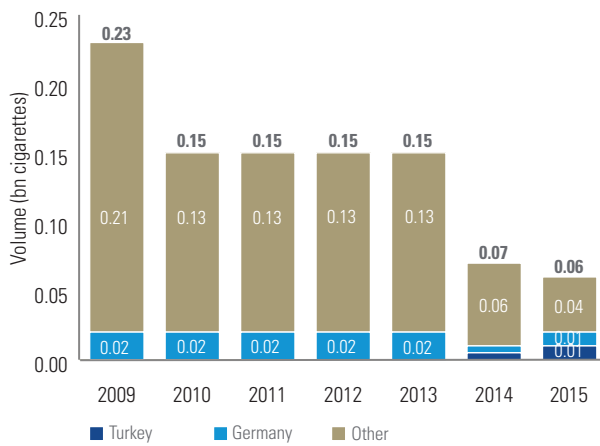
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) Euromonitor, 2015 (4) Deutsche Welle, January 2014 and European Commission memo 14-1, January 2014



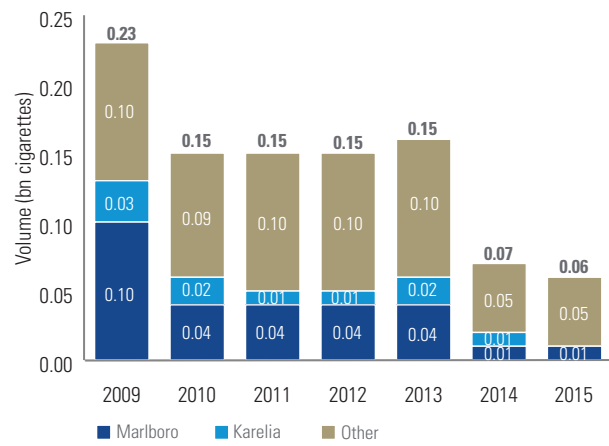
# ND(L) and C&C flows

- C&C declined by 0.8 billion cigarettes between 2014 and 2015 due to decreases in two main sources:
  - Illicit Whites brand flows without an identifiable trademark owner, notably Turquoise and Palladium
  - Duty Free labelled brands, including Diva and Don
- Whilst Duty Free labelled Karelia remained the largest C&C brand flow, flows of MM with Dubai labelling and President, an Illicit Whites brand flow with Duty Free-labelling, increased by 0.07 billion cigarettes and 0.16 billion cigarettes respectively

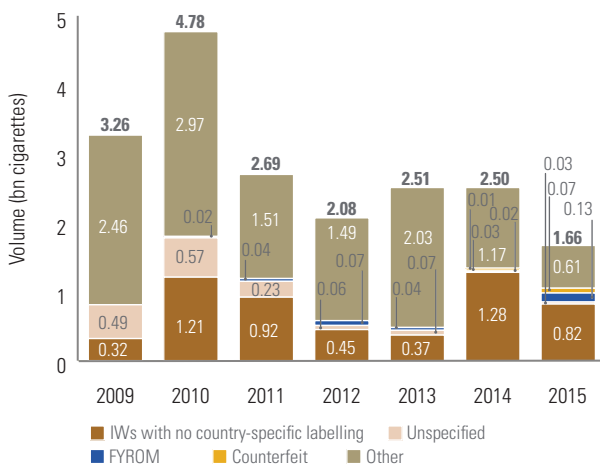
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



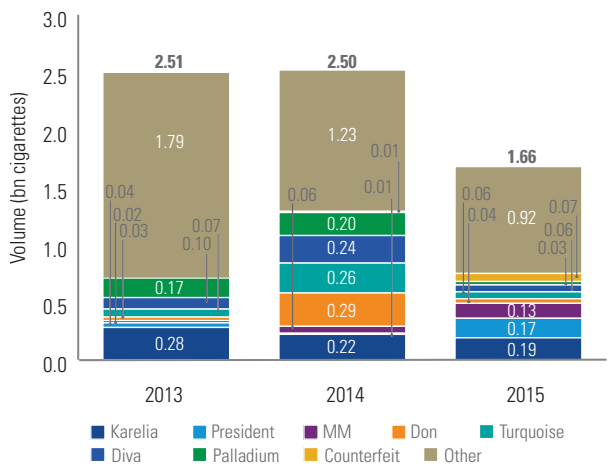
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

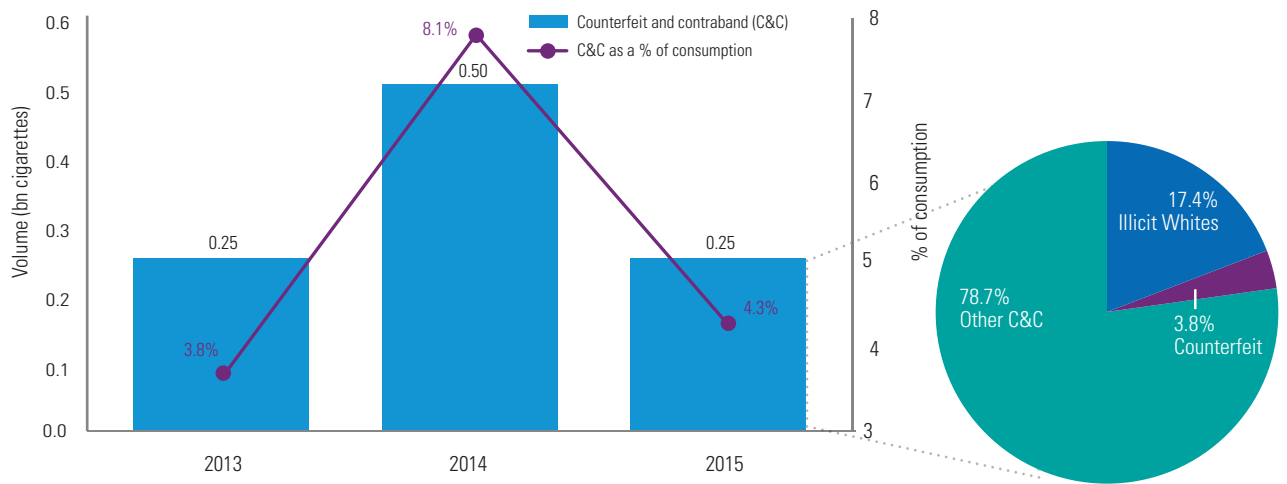


# Croatia

## Overview

- Total consumption fell by 11% due to a decline in all forms of cigarette consumption
- C&C and ND(L) declines came from lower volumes from the neighbouring countries of Bosnia and Herzegovina and Serbia
- The lower inflows from these countries may be explained by increased border security as a result of the migrant crisis
- C&C may have declined as consumption of fine cut tobacco increased

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2013-2015

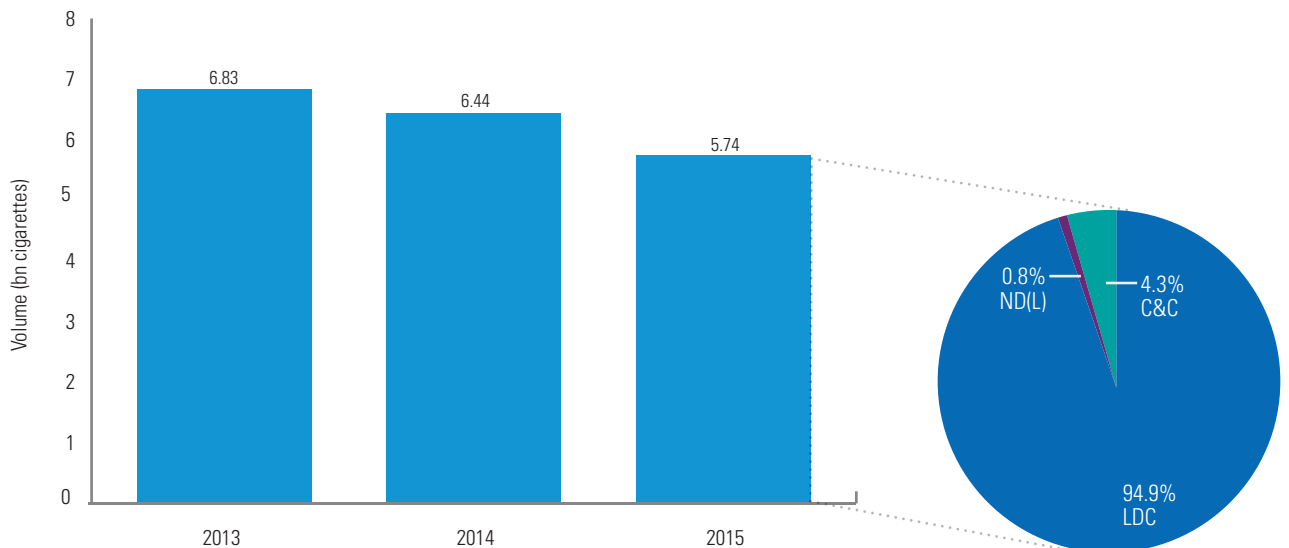


Croatia



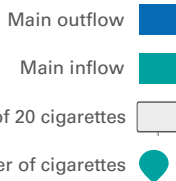
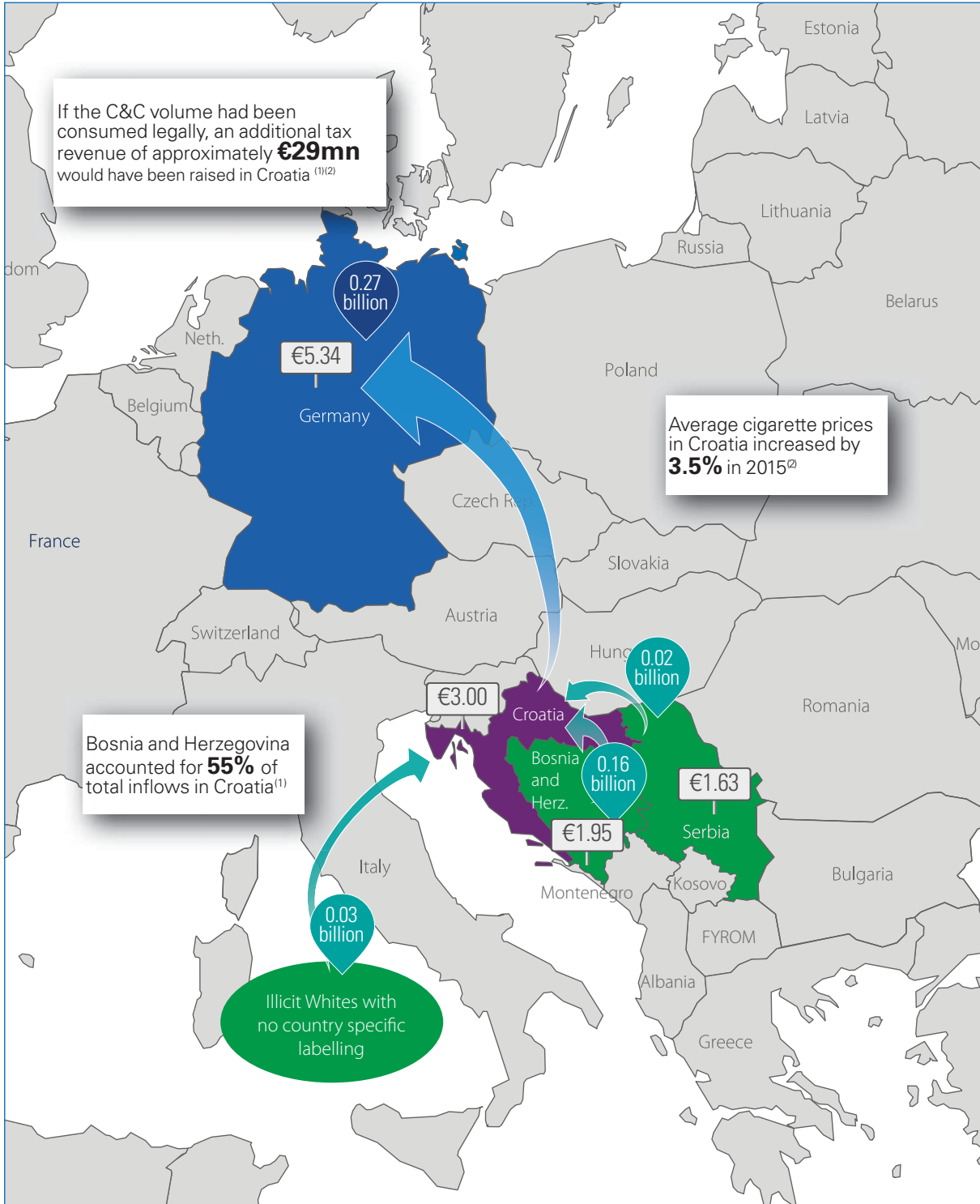
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## Manufactured cigarette consumption - 2013-2015





# Key inflows and outflows



Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers



# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2012-2015<sup>(1)(2)(a)(b)(c)</sup>

TOTAL CROATIA CONSUMPTION					
Billion cigarettes	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	7.22	6.71	6.07	5.86	(3%)
Outflows	-0.18	-0.23	-0.26	-0.42	59%
Legal domestic consumption (LDC)	7.04	6.47	5.81	5.44	(6%)
Non-domestic legal (ND(L))	n/a	0.10	0.13	0.04	(67%)
Counterfeit and contraband (C&C)	n/a	0.25	0.50	0.25	(50%)
Total non-domestic	0.71	0.35	0.64	0.29	(54%)
<b>Total consumption</b>	<b>7.76</b>	<b>6.83</b>	<b>6.44</b>	<b>5.74</b>	<b>(11%)</b>

- Consumption of manufactured cigarettes declined by 11%, mainly due to decreases in C&C and ND(L)
  - Declines in consumption of manufactured cigarettes may have been compensated for by increases in fine cut tobacco (legal and illicit) as overall smoking prevalence remained at 28%<sup>(3)</sup>
  - Inflows, mainly from Bosnia and Herzegovina and Serbia both declined by more than 50%, which may be explained by increased border security during the migrant crisis
  - Outflows to Germany accounted for 65% of total outflows, which is reflected by the two million Germans who travel to Croatia every year, mainly for holidays, and take advantage of the cheaper priced cigarettes which they take home<sup>(2)</sup>

## Total inflows by country of origin - 2012-2015<sup>(1)(d)(e)</sup>

ND INFLOWS TO CROATIA				
Billion cigarettes	2012	2013	2014	2015
Bosnia And Herzegovina	0.46	0.20	0.38	0.16
IWs with no country-specific labelling	n/a	0.00	0.04	0.03
Serbia	0.07	0.05	0.09	0.02
Slovenia	n/a	0.00	0.01	0.01
Duty Free labelled	n/a	0.00	0.00	0.00
Other	0.18	0.10	0.11	0.07
<b>Total inflows</b>	<b>0.71</b>	<b>0.35</b>	<b>0.64</b>	<b>0.29</b>

## Total outflows by destination country – 2012-2015<sup>(1)</sup>

OUTFLOWS FROM CROATIA				
Billion cigarettes	2012	2013	2014	2015
Germany	0.07	0.09	0.14	0.27
Slovenia	0.01	0.03	0.02	0.04
Austria	0.03	0.03	0.03	0.03
Other	0.07	0.09	0.07	0.08
<b>Total outflows</b>	<b>0.18</b>	<b>0.23</b>	<b>0.26</b>	<b>0.42</b>

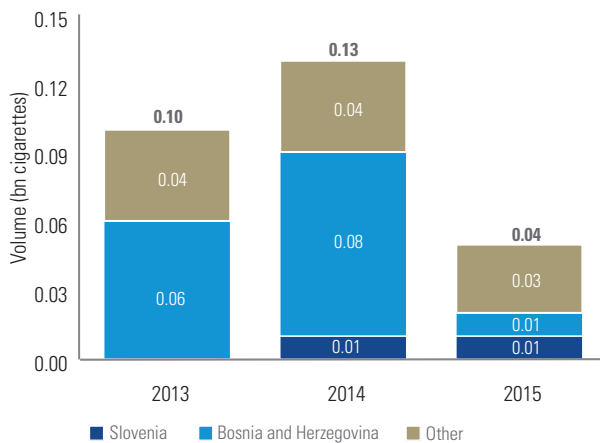
Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) As Croatia was not in the EU in 2012 KPMG has used historic legal domestic sales data but did not report on 2012 volumes. Therefore the volumes reported for 2012 are estimates based on historic data and not generated by the EU flows model (c) Non-domestic incidence for 2012 is not given as no consumer research was undertaken for Croatia before 2013 (d) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (e) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) 2015 Euromonitor

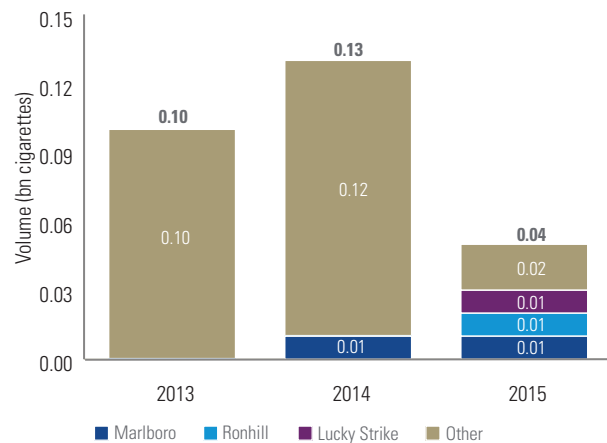
# ND(L) and C&C flows

- ND(L) from Bosnia and Herzegovina declined. This may have been due to a closer observation of the 40-cigarette legal allowance between countries as additional border checks were implemented during the migrant crisis

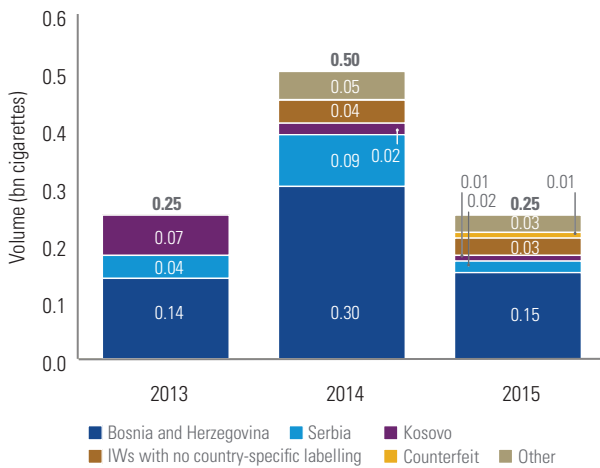
**ND(L) by country of origin - 2013-2015<sup>(1)(a)(b)</sup>**



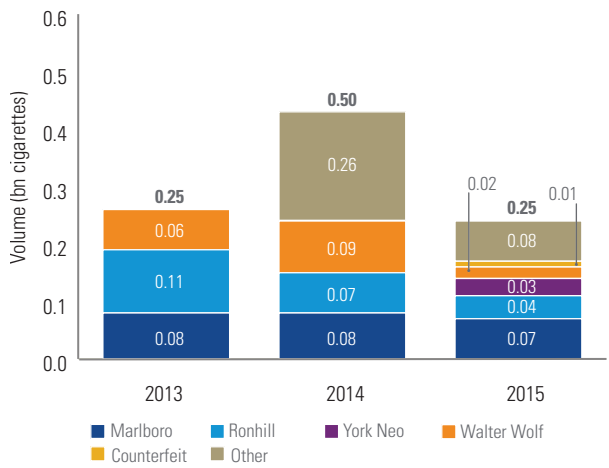
**ND(L) by brand - 2013-2015<sup>(1)(a)(b)</sup>**



**C&C by country of origin - 2013-2015<sup>(1)(a)</sup>**



**C&C by brand - 2013-2015<sup>(1)(a)</sup>**



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

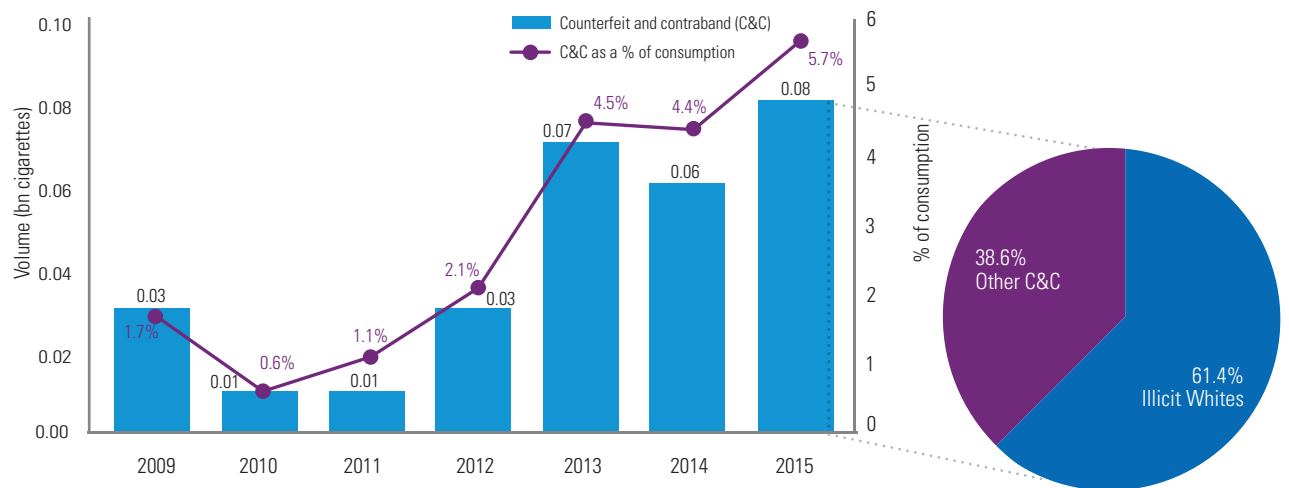


# Cyprus

## Overview

- C&C increased to 5.7% of total consumption in 2015, against a backdrop of continued high levels of unemployment in Cyprus
- Illicit Whites brand flows were the main source of C&C volumes and contributed 61% to C&C volumes
- Outflows were mainly linked to tourist and travel flows, mainly from the UK and Greece

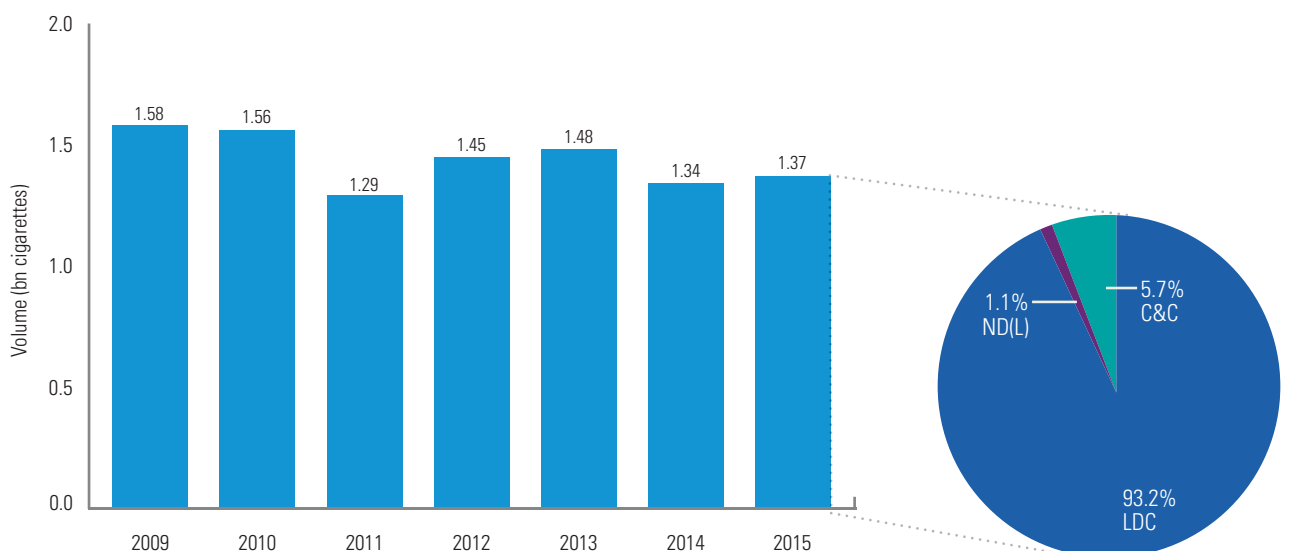
## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015



Cyprus

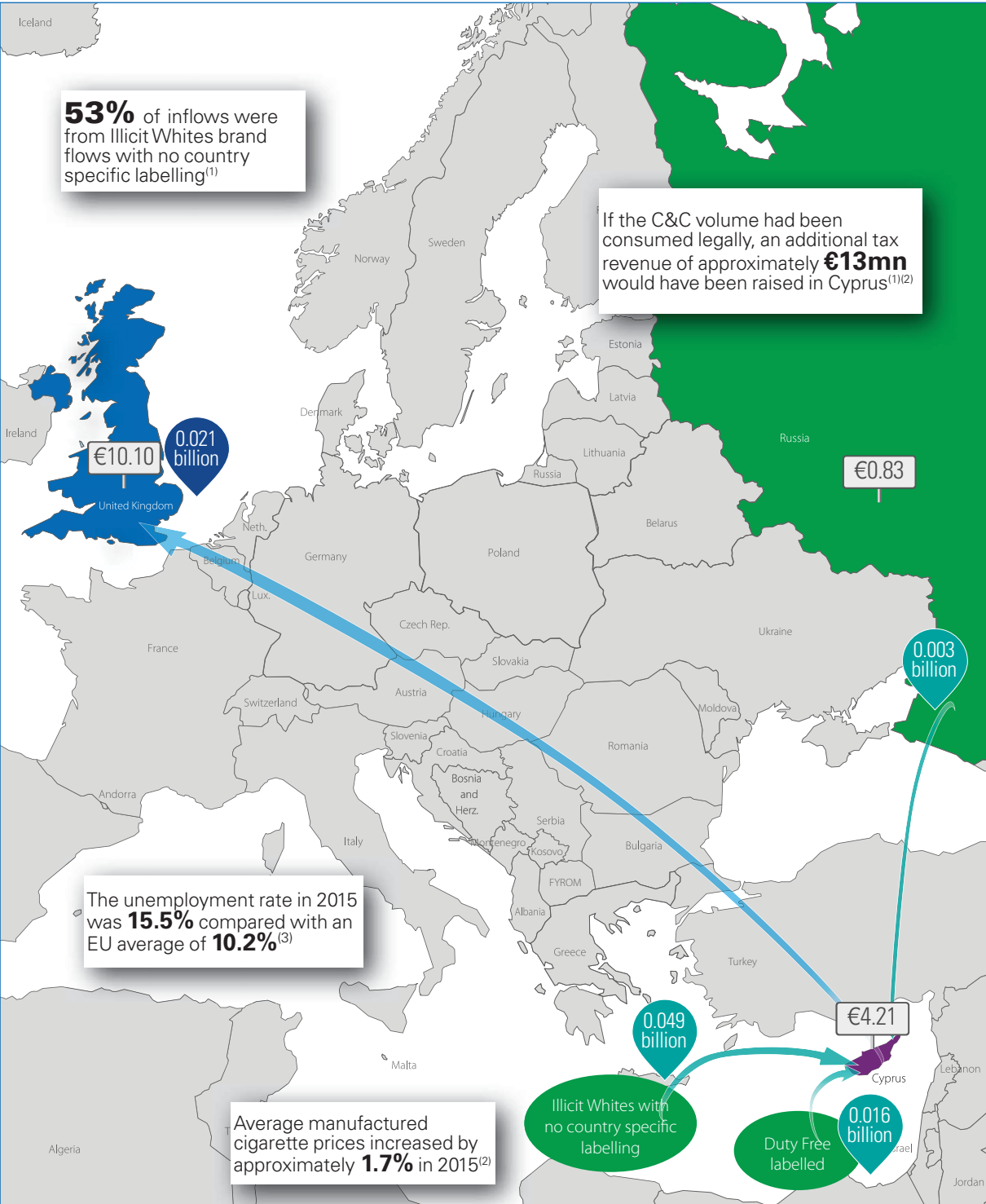


## Manufactured cigarette consumption - 2009-2015



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# Key inflows and outflows



Cyprus



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Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow

Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers (3) European Commission, 2015

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL CYPRUS CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	1.705	1.752	1.505	1.630	1.445	1.305	1.306	0%
Outflows	-0.252	-0.218	-0.239	-0.211	-0.048	-0.032	-0.034	6%
Legal domestic consumption (LDC)	1.453	1.534	1.266	1.420	1.397	1.272	1.272	(0%)
Non-domestic legal (ND(L))	0.105	0.018	0.014	0.013	0.020	0.010	0.015	46%
Counterfeit and contraband (C&C)	0.027	0.009	0.014	0.030	0.066	0.060	0.078	31%
Total non-domestic	0.131	0.027	0.028	0.043	0.087	0.070	0.093	33%
<b>Total consumption</b>	<b>1.584</b>	<b>1.561</b>	<b>1.295</b>	<b>1.450</b>	<b>1.484</b>	<b>1.342</b>	<b>1.365</b>	<b>2%</b>

- While legal domestic consumption remained stable, ND increased by 33% resulting in a minor increase in total consumption
- Inflows rose by 33%, the majority of which came from an increase in Illicit Whites brand flows with no country specific labelling, which increased by 0.027bn
- Outflows from Cyprus are driven by tourist flows. The removal of Cyprus country specific labelling from some duty free product from 2013 may have resulted in the reduction of total outflow levels as the product would now be identifiable as duty free

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO CYPRUS							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
IWs with no country-specific labelling	0.000	0.000	0.000	0.001	0.002	0.022	0.049
Duty Free labelled	0.060	0.009	0.014	0.022	0.040	0.021	0.016
Russia	0.008	0.005	0.000	0.004	0.002	0.003	0.003
Bulgaria	0.000	0.003	0.000	0.000	0.005	0.001	0.003
Unspecified	0.000	0.000	0.002	0.004	0.024	0.004	0.000
Other	0.063	0.009	0.012	0.013	0.015	0.017	0.022
<b>Total inflows</b>	<b>0.131</b>	<b>0.027</b>	<b>0.028</b>	<b>0.043</b>	<b>0.087</b>	<b>0.070</b>	<b>0.093</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM CYPRUS							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
UK	0.214	0.200	0.205	0.193	0.034	0.016	0.021
Greece	0.000	0.003	0.005	0.002	0.004	0.002	0.007
Netherlands	0.000	0.000	0.006	0.004	0.003	0.002	0.002
Other	0.038	0.015	0.024	0.012	0.007	0.012	0.004
<b>Total outflows</b>	<b>0.252</b>	<b>0.218</b>	<b>0.239</b>	<b>0.211</b>	<b>0.048</b>	<b>0.032</b>	<b>0.034</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

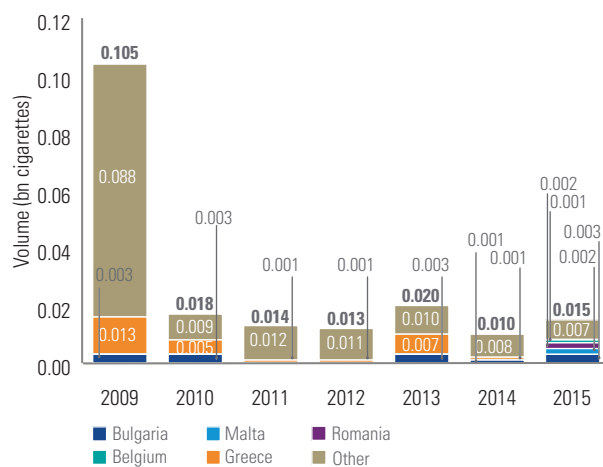
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014



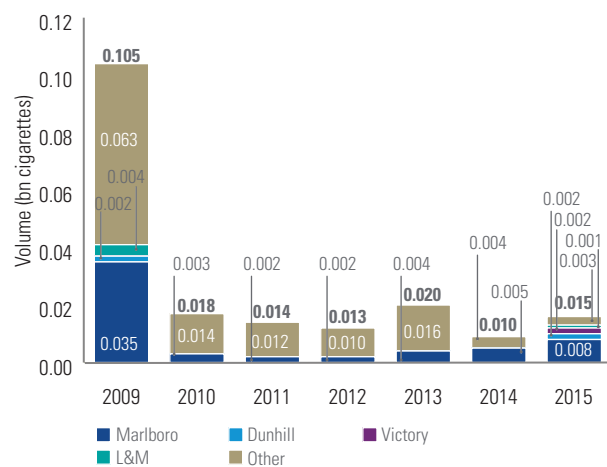
# ND(L) and C&C flows

- ND(L) increased by 46% as a result of increased travel flows, mainly from Bulgaria, Romania and Malta
- Illicit Whites brand flows made up 61% of C&C flows, increasing from 34% in 2014
  - Gaulwaz and Double V One, which are manufactured in North Cyprus, which is not under the control of the Republic of Cyprus, accounted for 75% of Illicit Whites brand flows

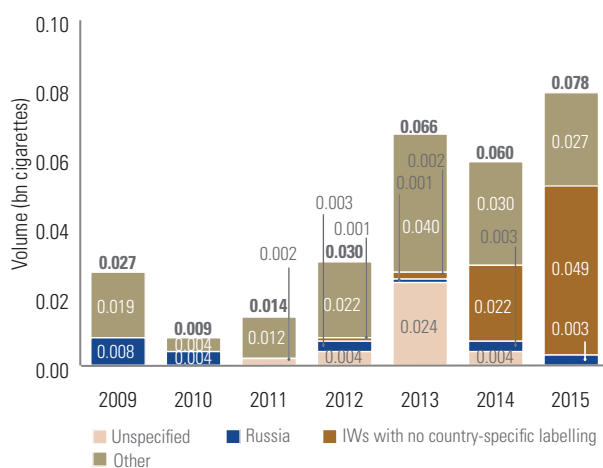
**ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>**



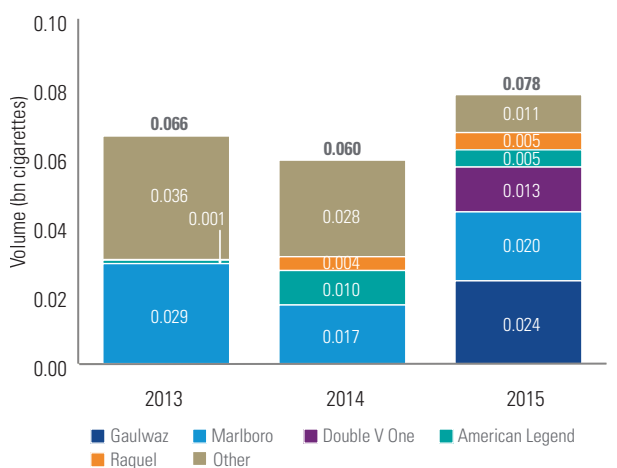
**ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>**



**C&C by country of origin - 2009-2015<sup>(1)(a)</sup>**



**C&C by brand - 2013-2015<sup>(1)(a)</sup>**



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

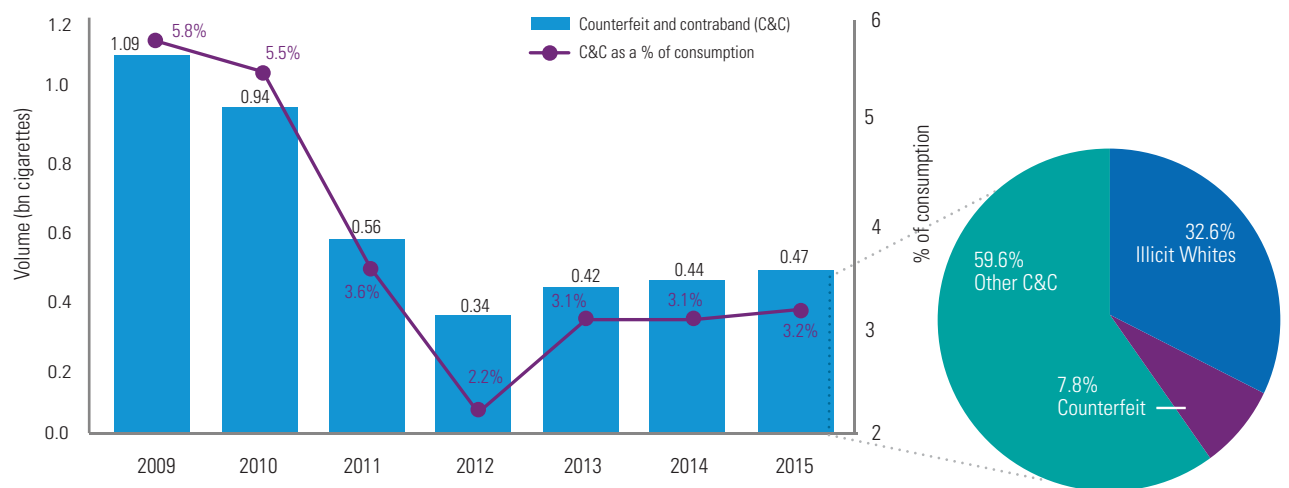


# Czech Republic

## Overview

- C&C volumes in the Czech Republic remained stable at 3.2% of total consumption; one of the lowest levels in the EU
- Consumption increased in the Czech Republic as C&C remained stable and legal domestic sales increased by 1%
- The majority of C&C came from non-EU Eastern European countries where prices are lower compared with the EU

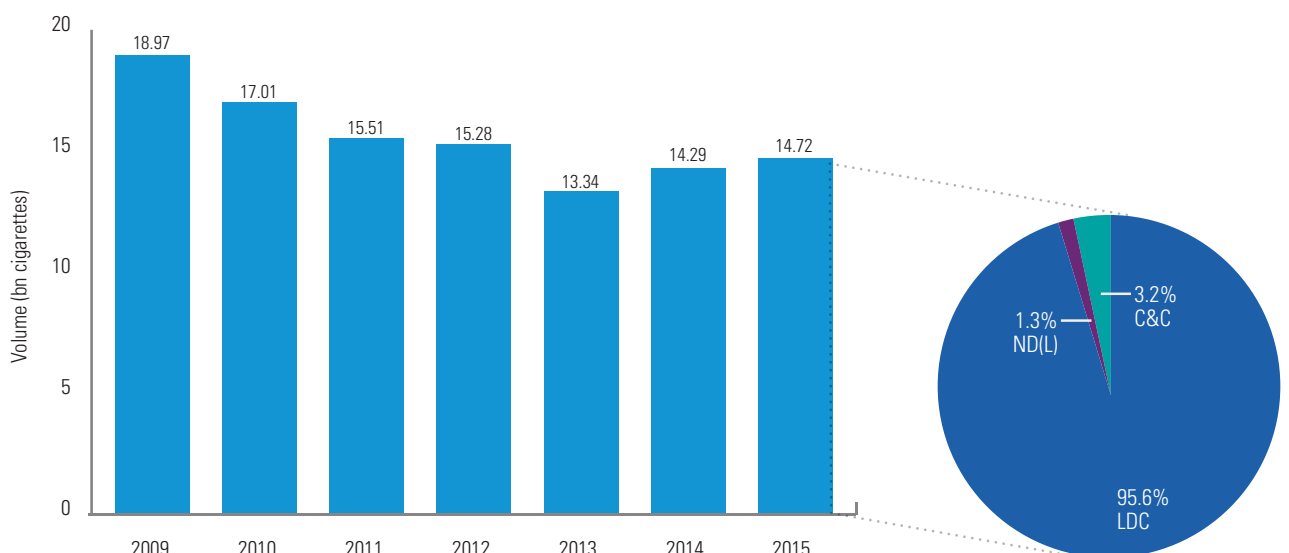
## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015



Czech Republic



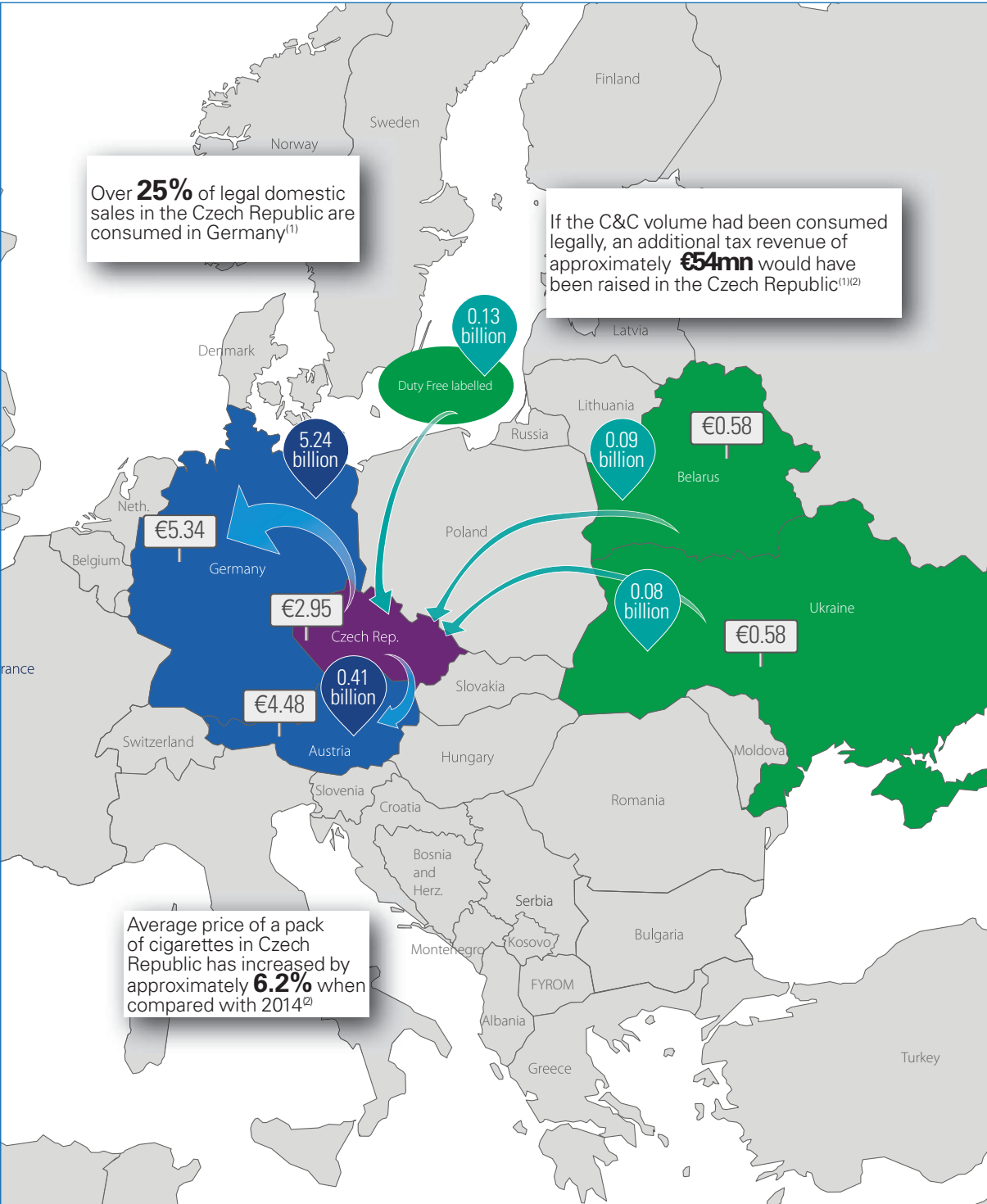
## Manufactured cigarette consumption - 2009-2015



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# Key inflows and outflows



Main outflow ■  
 Main inflow ■  
 Weighted average price for a pack of 20 cigarettes   
 Number of cigarettes ●

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL CZECH REPUBLIC CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	21.65	21.06	21.06	20.46	19.65	19.87	20.13	1%
Outflows	-4.00	-5.21	-6.30	-5.68	-6.99	-6.16	-6.06	(2%)
Legal domestic consumption (LDC)	17.65	15.85	14.76	14.78	12.67	13.71	14.07	3%
Non-domestic legal (ND(L))	0.23	0.21	0.19	0.16	0.26	0.14	0.19	31%
Counterfeit and contraband (C&C)	1.09	0.94	0.56	0.34	0.42	0.44	0.47	7%
Total non-domestic	1.32	1.15	0.75	0.50	0.68	0.58	0.65	13%
<b>Total consumption</b>	<b>18.97</b>	<b>17.01</b>	<b>15.51</b>	<b>15.28</b>	<b>13.34</b>	<b>14.29</b>	<b>14.72</b>	<b>3%</b>

- The main inflow volumes were from Belarus, Ukraine and Duty Free
- The Czech Republic remains a large outflow market as it borders Germany and Austria which have average price differences of €2.39 and €1.53 per pack of 20 respectively<sup>(3)</sup>
- Whilst total outflows declined, the proportion of legally purchased cigarettes increased as travel volumes to the Czech Republic from Germany grew with Germans taking advantage of the weaker Czech Koruna compared to the Euro

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO CZECH REPUBLIC							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Duty Free labelled	0.11	0.20	0.12	0.08	0.09	0.11	0.13
Belarus	0.03	0.04	0.11	0.05	0.10	0.13	0.09
Ukraine	0.71	0.51	0.25	0.16	0.11	0.03	0.08
IWs with no country-specific labelling	0.00	0.01	0.02	0.04	0.06	0.08	0.08
Poland	0.09	0.06	0.03	0.01	0.05	0.05	0.03
Slovakia	0.05	0.03	0.02	0.02	0.02	0.02	0.03
Other	0.32	0.30	0.20	0.15	0.25	0.16	0.20
<b>Total inflows</b>	<b>1.32</b>	<b>1.15</b>	<b>0.75</b>	<b>0.50</b>	<b>0.68</b>	<b>0.58</b>	<b>0.65</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM CZECH REPUBLIC							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Germany	3.53	4.66	5.69	5.01	6.14	5.45	5.24
Austria	0.23	0.25	0.47	0.47	0.61	0.47	0.41
UK	0.07	0.03	0.04	0.06	0.06	0.10	0.18
Other	0.17	0.27	0.10	0.15	0.17	0.14	0.23
<b>Total outflows</b>	<b>4.00</b>	<b>5.21</b>	<b>6.30</b>	<b>5.68</b>	<b>6.99</b>	<b>6.16</b>	<b>6.06</b>

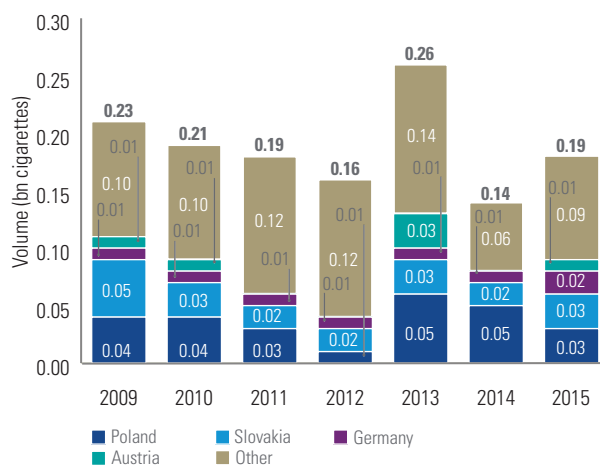
Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) EC Excise Duty tables (Part III - Manufactured Tobacco)

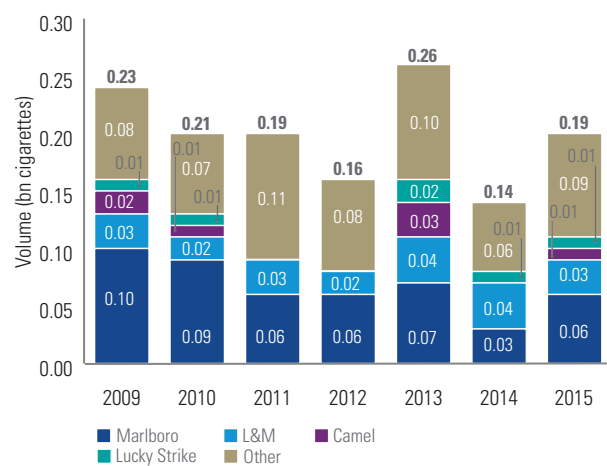
# ND(L) and C&C flows

- ND(L) came from surrounding EU countries and was mainly reflective of visitors to the Czech Republic rather than cross-border shopping as cigarettes in the Czech Republic are cheaper
- C&C was mainly from non-EU countries in Eastern Europe such as Belarus and Ukraine
  - L&M and Marlboro came from Ukrainian and Duty Free flows
  - Fest and NZ came from Belarus
  - Jin Ling is an Illicit Whites brand flow with no country specific labelling

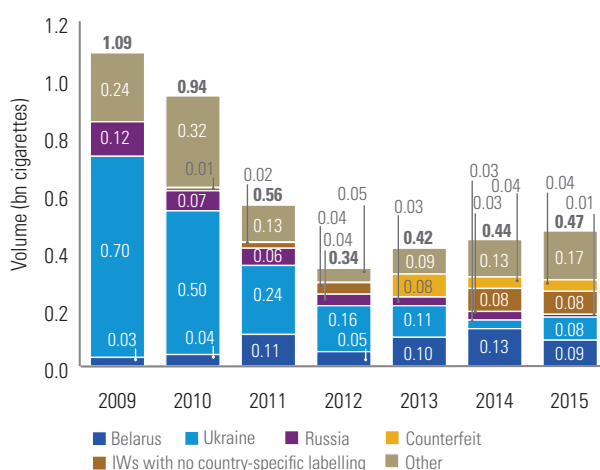
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



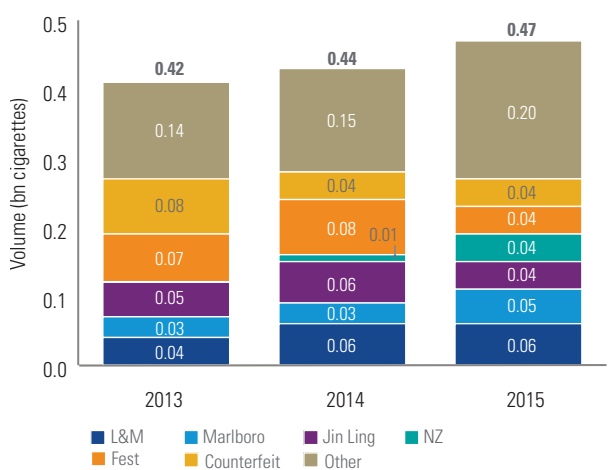
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

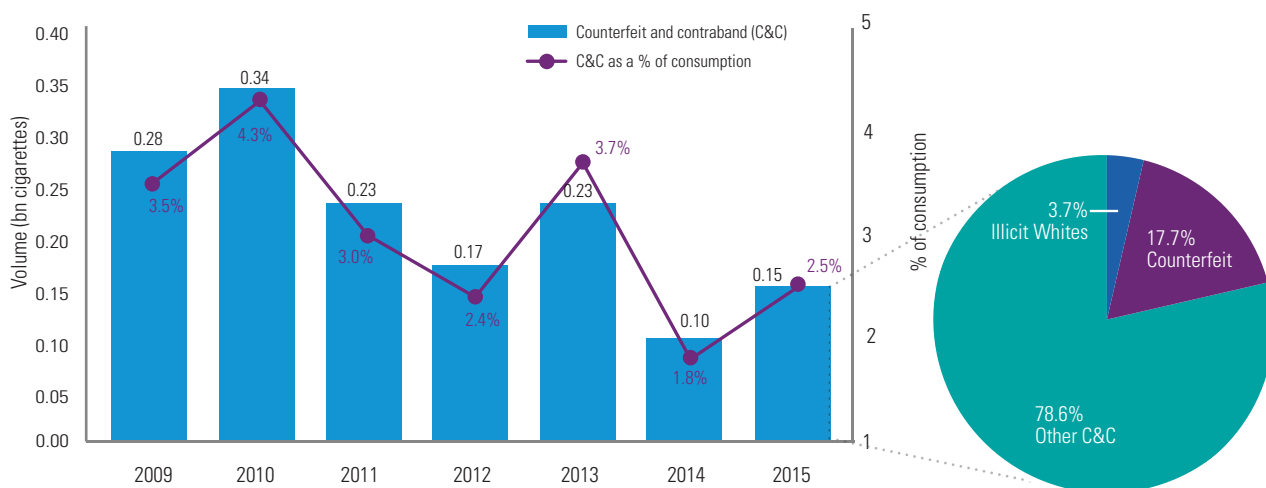


# Denmark

## Overview

- C&C volumes remained among the lowest in the European Union at 2.5% of total consumption and compared favourably to surrounding countries (over 20% in Norway, 10% in Sweden and 6% in Germany)
- Both C&C and ND(L) grew by 0.05 billion and 0.04 billion cigarettes respectively in 2015 while prices remained stable throughout the year

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

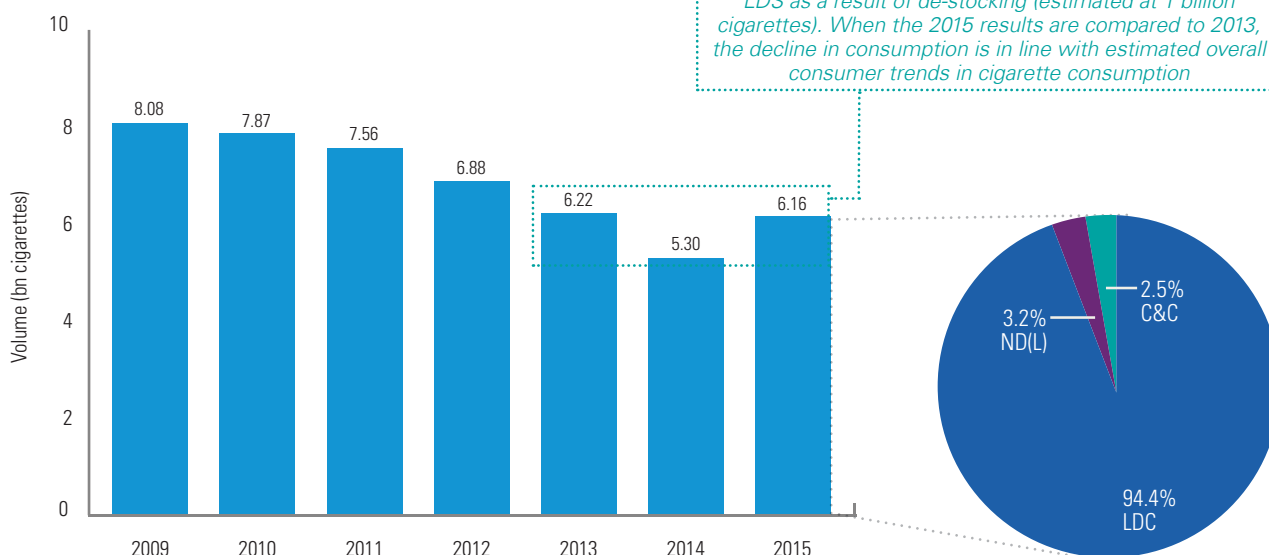


Denmark

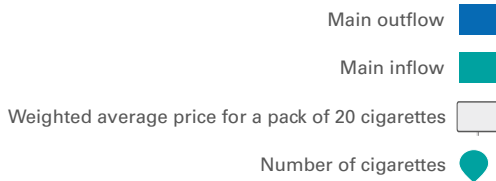
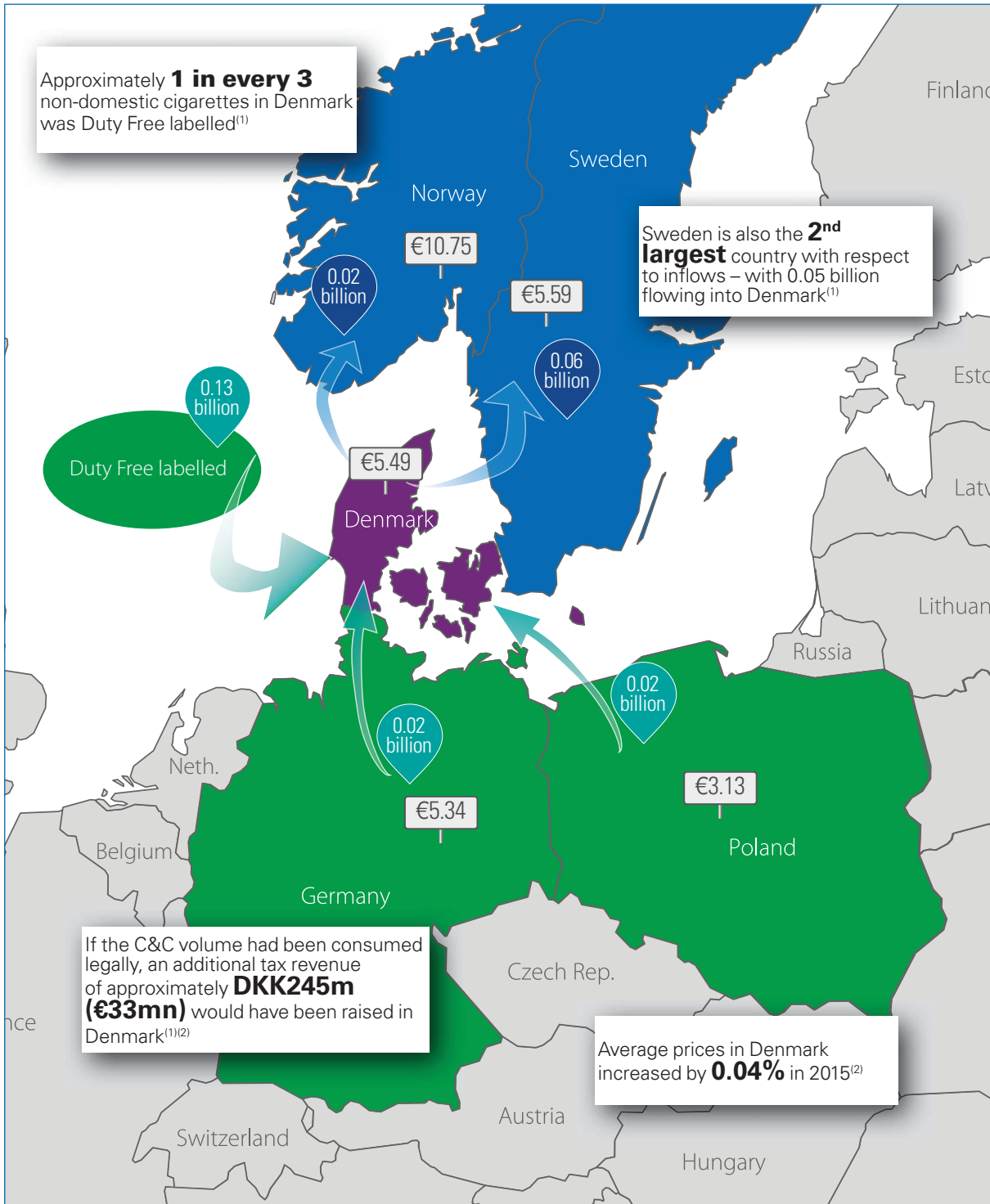


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## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows



Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and data sources provided by manufacturers

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL DENMARK CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	7.75	7.39	7.13	6.64	5.95	5.05	5.98	n/a
Outflows	-0.17	-0.17	-0.10	-0.15	-0.10	-0.10	-0.17	75%
Legal domestic consumption (LDC)	7.58	7.22	7.03	6.48	5.85	4.95	5.81	n/a
Non-domestic legal (ND(L))	0.22	0.31	0.30	0.23	0.14	0.16	0.20	23%
Counterfeit and contraband (C&C)	0.28	0.34	0.23	0.17	0.23	0.10	0.15	52%
Total non-domestic	0.50	0.65	0.53	0.39	0.37	0.25	0.35	37%
<b>Total consumption</b>	<b>8.08</b>	<b>7.87</b>	<b>7.56</b>	<b>6.88</b>	<b>6.22</b>	<b>5.30</b>	<b>6.16</b>	<b>n/a</b>

- Most inflows to Denmark bore Duty Free labelling or came from neighbouring countries
  - High levels of Duty Free inflows may be attributed to the high travel volumes between Denmark and Norway
  - Outflows increased to Sweden as prices increased in Sweden but remained stable in Denmark
  - Despite lower prices and significant amounts of visitors from neighbouring Germany, inflows remained low

*Drop in consumption due to changes in reported LDS, resulting in de-stocking thought to be estimated at 1 billion cigarettes in 2014. When compared to 2013 the decline in consumption is felt to be in line with overall consumer trends in cigarette consumption*

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO DENMARK							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Duty Free labelled	0.21	0.19	0.14	0.13	0.16	0.10	0.13
Sweden	0.05	0.17	0.11	0.04	0.04	0.03	0.05
Germany	0.04	0.03	0.05	0.06	0.02	0.01	0.02
Poland	0.03	0.03	0.03	0.02	0.04	0.02	0.02
IWs with no country-specific labelling	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Other	0.16	0.23	0.20	0.14	0.11	0.10	0.13
<b>Total inflows</b>	<b>0.50</b>	<b>0.65</b>	<b>0.53</b>	<b>0.39</b>	<b>0.37</b>	<b>0.25</b>	<b>0.35</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM DENMARK							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Sweden	0.03	0.05	0.01	0.03	0.01	0.01	0.06
Norway						0.01	0.02
Germany	0.04	0.04	0.03	0.03	0.01	0.01	0.02
Other	0.10	0.08	0.06	0.10	0.08	0.07	0.07
<b>Total outflows</b>	<b>0.17</b>	<b>0.17</b>	<b>0.10</b>	<b>0.15</b>	<b>0.10</b>	<b>0.10</b>	<b>0.17</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

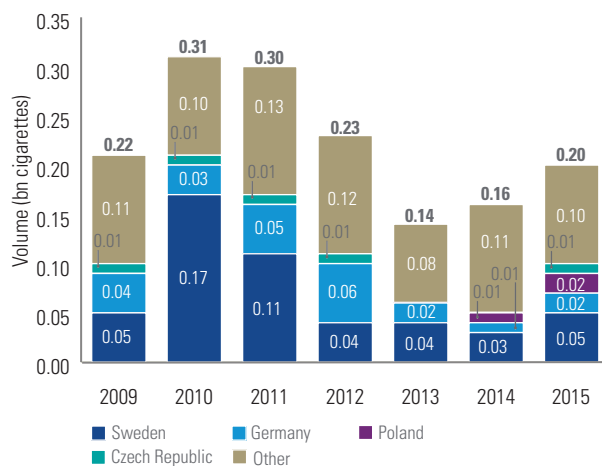
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014



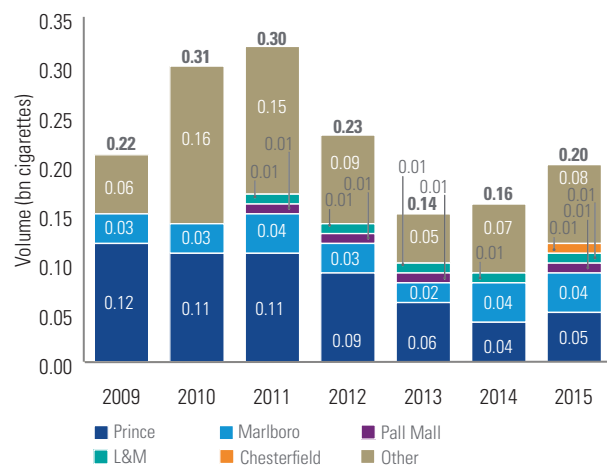
# ND(L) and C&C flows

- Most ND(L) and C&C brands were similar to those sold within Denmark
  - ND(L) continued to increase, supported by travel trends and an increase in cigarettes coming from Sweden to Denmark despite higher prices in Sweden by the end of the year
  - Higher volumes of counterfeit, all Prince and Marlboro, were identified in 2015

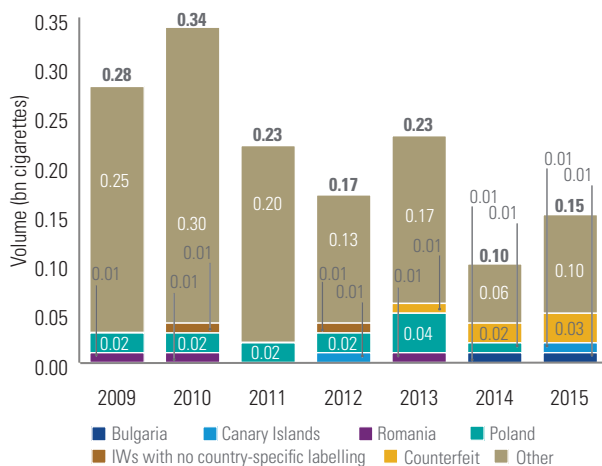
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



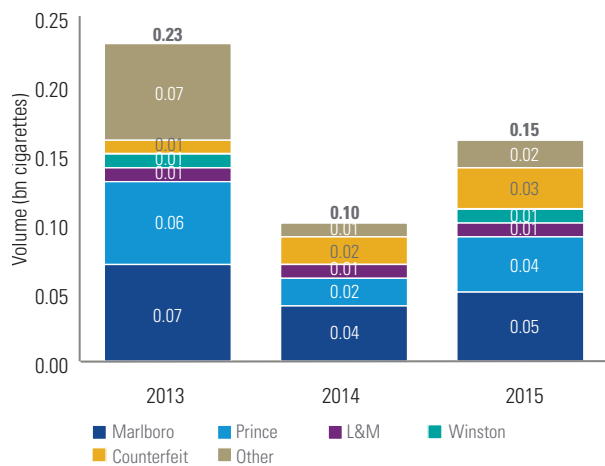
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

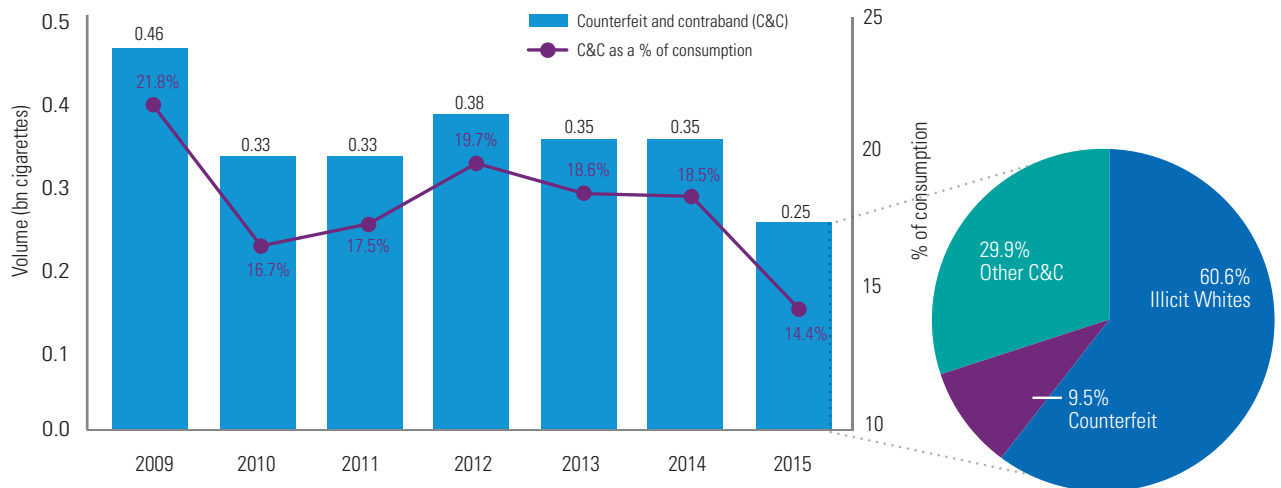


# Estonia

## Overview

- C&C as a percentage of total consumption declined by 4.1 percentage points against a backdrop of increased regulation and law enforcement
- Total consumption continued its long-term trend of decline, driven by the decline in C&C
- ND(L) flows remained flat, due to the low legal limit of 40 cigarettes per month that can be brought from non-EU countries to Estonia

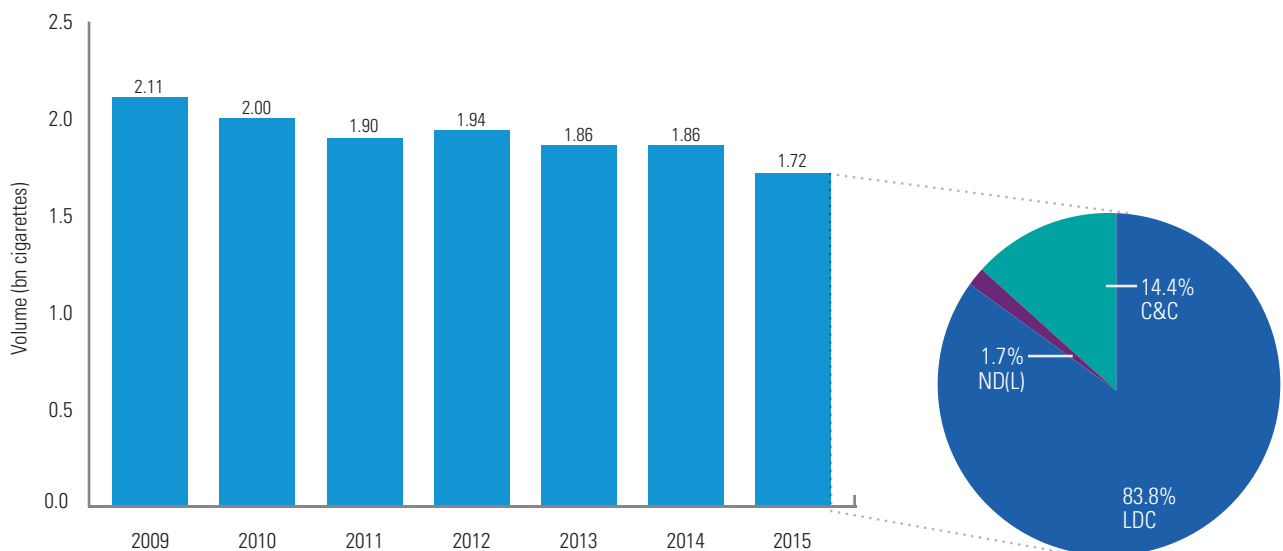
## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015



Estonia



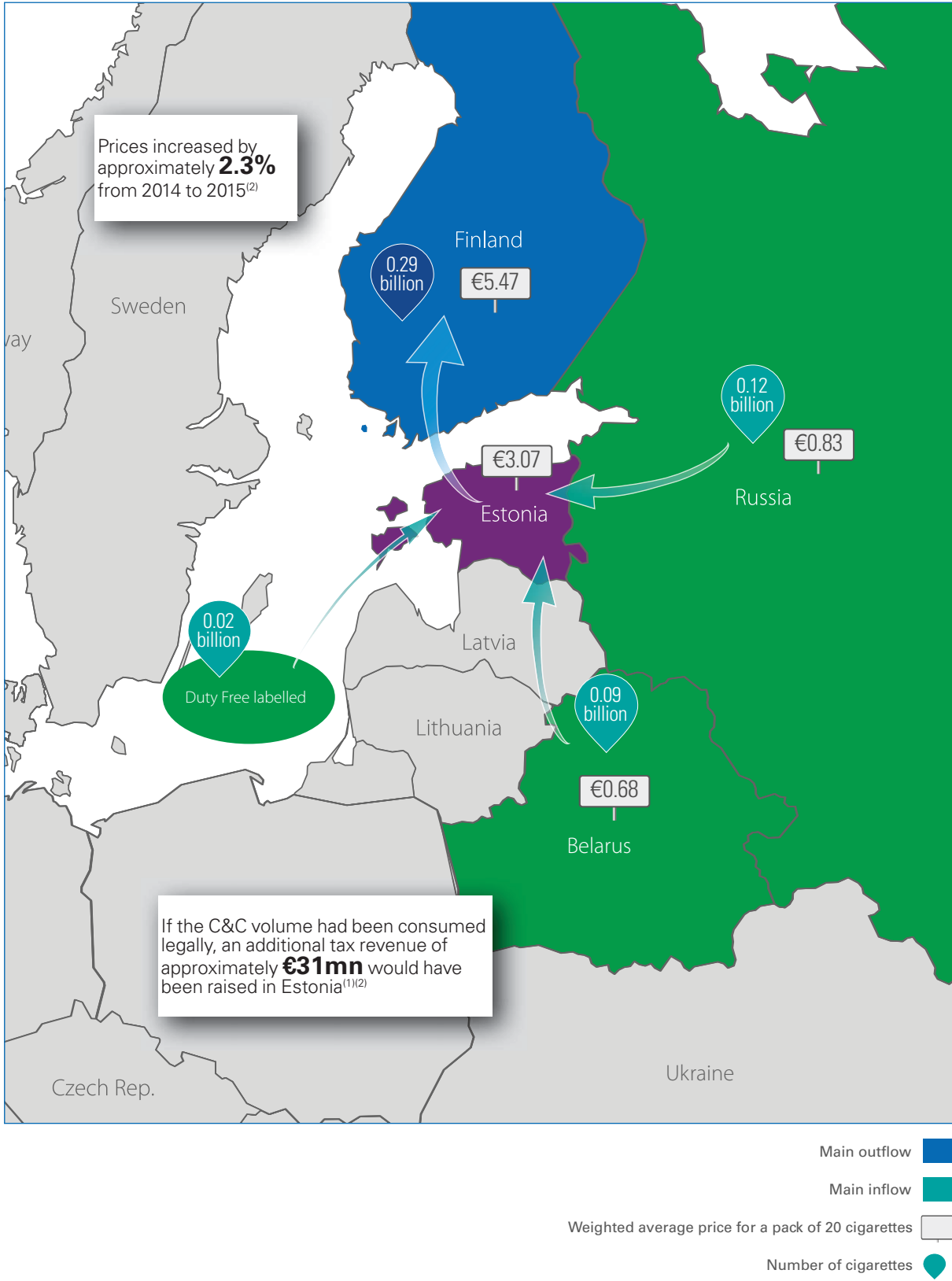
## Manufactured cigarette consumption - 2009-2015



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# Key inflows and outflows



Estonia

Project SUN

Notes: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow (b) Additional tax revenue calculation includes both VAT and Excise duty (c) Price on tax stickers does not always reflect actual selling price. Selling price is sometimes lower  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL ESTONIA CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	1.89	1.85	1.77	1.71	1.78	1.83	1.80	(2%)
Outflows	-0.33	-0.24	-0.24	-0.26	-0.34	-0.33	-0.35	6%
Legal domestic consumption (LDC)	1.55	1.61	1.53	1.45	1.44	1.50	1.45	(3%)
Non-domestic legal (ND(L))	0.10	0.06	0.04	0.10	0.07	0.02	0.03	37%
Counterfeit and contraband (C&C)	0.46	0.33	0.33	0.38	0.35	0.35	0.25	(28%)
Total non-domestic	0.56	0.39	0.37	0.49	0.41	0.37	0.28	(24%)
<b>Total consumption</b>	<b>2.11</b>	<b>2.00</b>	<b>1.90</b>	<b>1.94</b>	<b>1.86</b>	<b>1.86</b>	<b>1.72</b>	<b>(7%)</b>

- Inflows experienced an accelerated decline, driven by decreasing flows from Russia and Belarus
- Flows from Russia were 29% lower in 2015, reflecting the increased border security, reduced traveller flows and EU sanctions resulting in lower goods vehicle crossings<sup>(2)</sup>
- 83% of outflows were to Finland, reflecting the 2.5 million Finnish visitors to Estonia, many of whom take advantage of the 44% average price difference<sup>(3)</sup>

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO ESTONIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Russia	0.51	0.36	0.30	0.38	0.25	0.17	0.12
Belarus	0.00	0.00	0.03	0.05	0.11	0.12	0.09
Duty Free labelled	0.02	0.01	0.02	0.04	0.03	0.03	0.02
Finland	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Latvia	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Other	0.03	0.01	0.01	0.01	0.02	0.04	0.03
<b>Total inflows</b>	<b>0.56</b>	<b>0.39</b>	<b>0.37</b>	<b>0.49</b>	<b>0.41</b>	<b>0.37</b>	<b>0.28</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM ESTONIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Finland	0.27	0.21	0.20	0.21	0.32	0.29	0.29
France	0.03	0.01	0.00	0.01	0.00	0.01	0.03
Norway						0.01	0.01
Sweden	0.01	0.01	0.00	0.00	0.00	0.01	0.00
Netherlands	0.00	0.00	0.01	0.01	0.00	0.00	0.00
Other	0.03	0.01	0.02	0.03	0.01	0.02	0.01
<b>Total outflows</b>	<b>0.33</b>	<b>0.24</b>	<b>0.24</b>	<b>0.26</b>	<b>0.34</b>	<b>0.33</b>	<b>0.35</b>

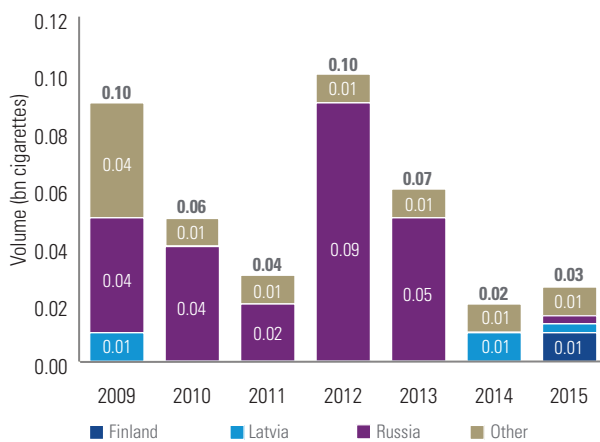
Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) Finnish Statistical Office

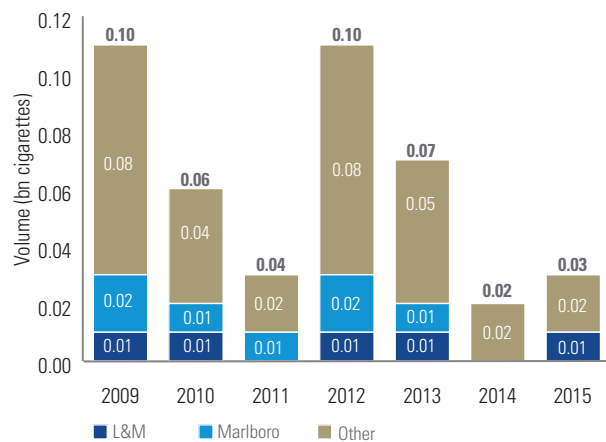
# ND(L) and C&C flows

- Reduced C&C volumes were seen across all C&C brands, with Illicit Whites brand flows of Fest and Bayron retaining the largest share of the C&C market despite their decline in volume
- ND(L) flows remained small due to limited number of visits by Estonian residents to Russia (310,000 in 2015 vs 430,000 in 2013<sup>(1)</sup>) and the low legal limit of 40 cigarettes per month that can be brought from non-EU countries to Estonia

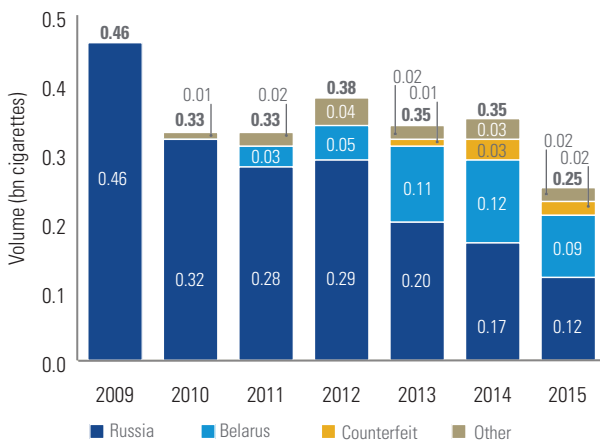
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



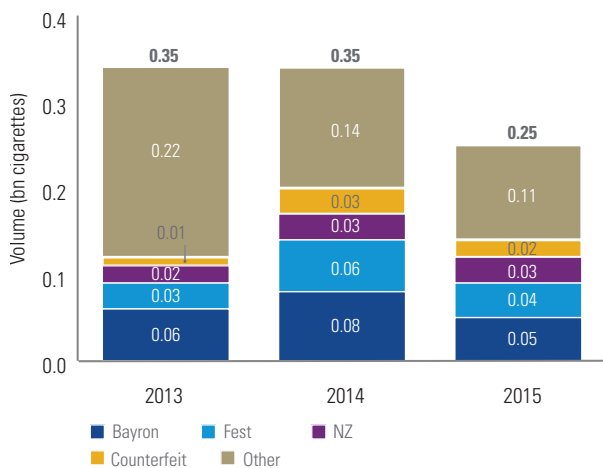
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Estonia

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Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

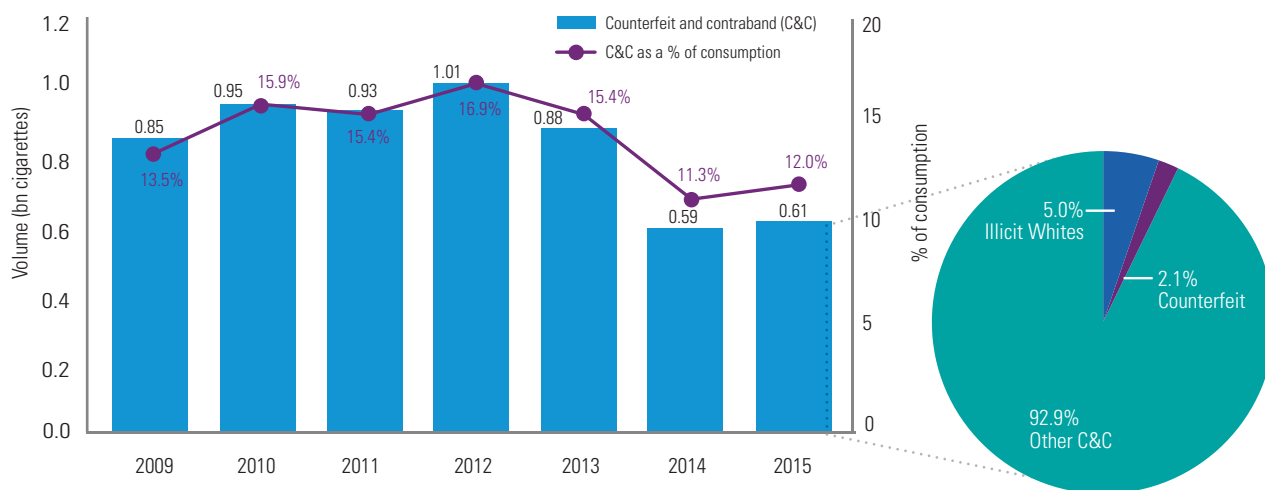
Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

# Finland

## Overview

- Declining legal domestic consumption meant that total consumption declined despite increasing non-domestic consumption
- C&C remained at the low values first recorded in 2014 as flows from Russia continued to decline with EU sanctions resulting in less travel between each country
- Both C&C and ND(L) from Estonia, the largest source country, remained stable

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

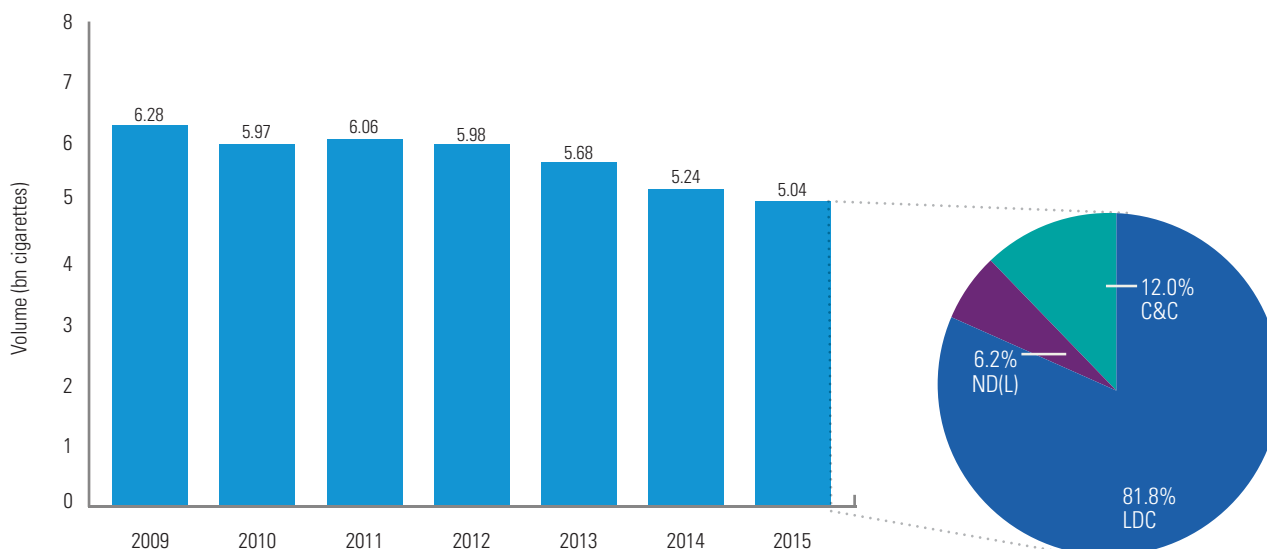


Finland

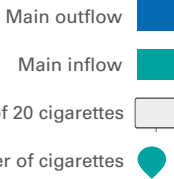
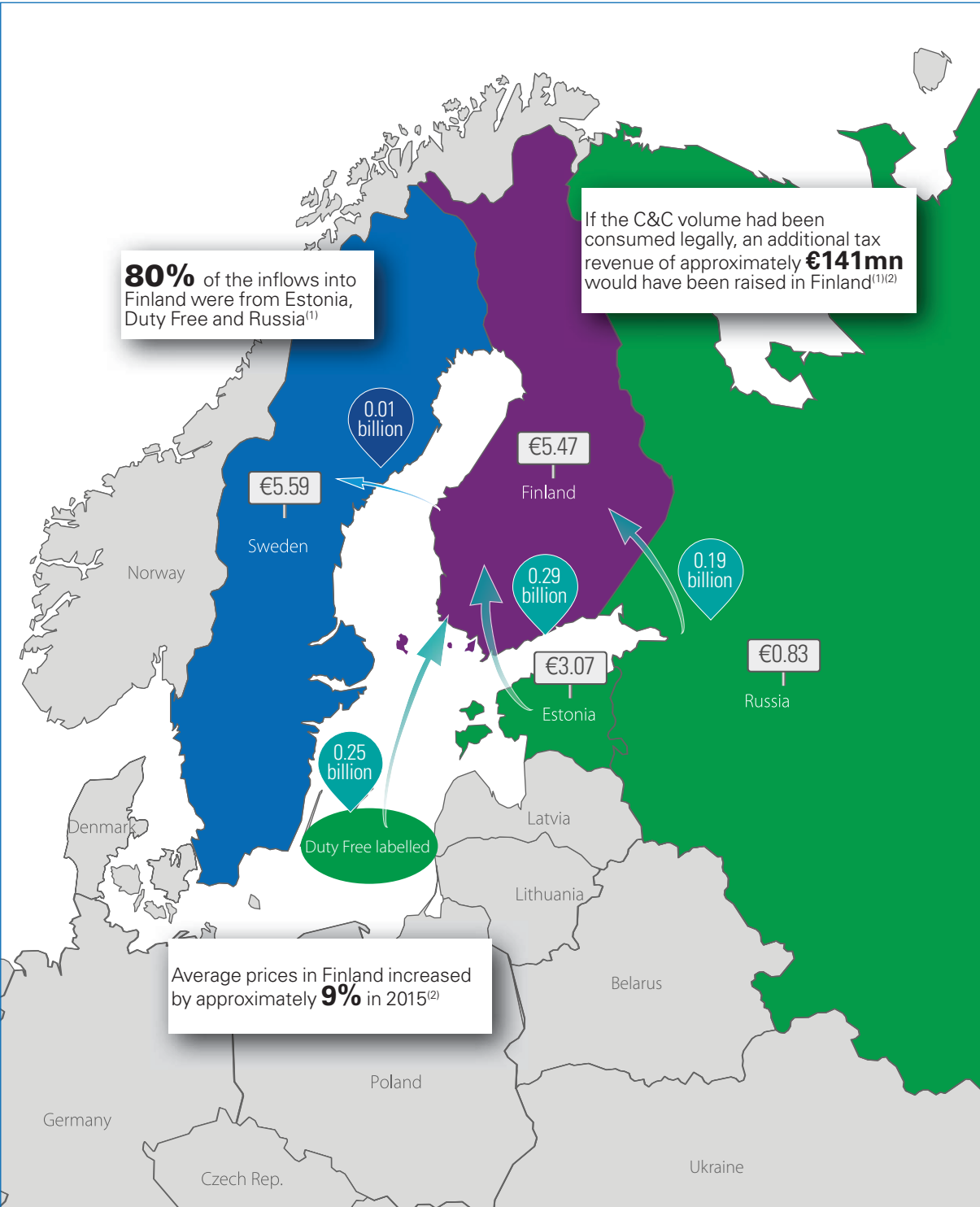


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## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows



Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL FINLAND CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	4.88	4.68	4.76	4.65	4.49	4.43	4.20	(5%)
Outflows	-0.04	-0.01	-0.04	-0.04	-0.02	-0.05	-0.07	58%
Legal domestic consumption (LDC)	4.85	4.67	4.72	4.61	4.47	4.39	4.12	(6%)
Non-domestic legal (ND(L))	0.59	0.36	0.40	0.36	0.33	0.26	0.31	18%
Counterfeit and contraband (C&C)	0.85	0.95	0.93	1.01	0.88	0.59	0.61	2%
Total non-domestic	1.43	1.31	1.34	1.37	1.20	0.86	0.92	7%
<b>Total consumption</b>	<b>6.28</b>	<b>5.97</b>	<b>6.06</b>	<b>5.98</b>	<b>5.68</b>	<b>5.24</b>	<b>5.04</b>	<b>(4%)</b>

- Total non-domestic consumption increased in Finland. This was mainly as a result of increased travel which is reflected in the growth of ND(L)
- The largest inflows came from Estonia; Finland's largest travel destination with prices at approximately 60% of the cost of cigarettes in Finland<sup>(3)(4)</sup>
- Historically, the largest inflows came from Russia. However, these flows are now 20% lower than in 2014, against a backdrop of increased border security

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO FINLAND							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Estonia	0.27	0.21	0.20	0.21	0.32	0.29	0.29
Duty Free labelled	0.20	0.28	0.25	0.20	0.24	0.21	0.25
Russia	0.83	0.68	0.79	0.82	0.43	0.24	0.19
Sweden	0.01	0.01	0.00	0.01	0.01	0.00	0.02
Germany	0.01	0.01	0.01	0.00	0.01	0.00	0.01
Canary Islands	0.00	0.00	0.00	0.01	0.02	0.01	0.01
Other	0.12	0.11	0.08	0.12	0.17	0.09	0.14
<b>Total inflows</b>	<b>1.43</b>	<b>1.31</b>	<b>1.34</b>	<b>1.37</b>	<b>1.20</b>	<b>0.86</b>	<b>0.92</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM FINLAND							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Sweden	0.00	0.01	0.00	0.00	0.00	0.00	0.01
UK	0.02	0.00	0.00	0.01	0.00	0.01	0.01
Estonia	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Other	0.01	0.01	0.03	0.03	0.01	0.03	0.04
<b>Total outflows</b>	<b>0.04</b>	<b>0.01</b>	<b>0.04</b>	<b>0.04</b>	<b>0.02</b>	<b>0.05</b>	<b>0.07</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) EC Excise Duty tables (Part III - Manufactured Tobacco) (4) Finnish Statistical Office

Finland

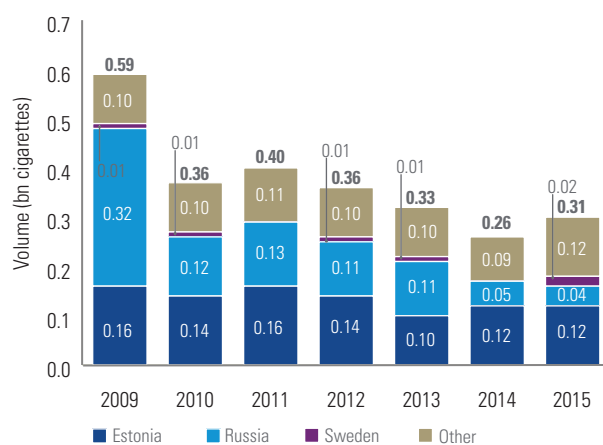


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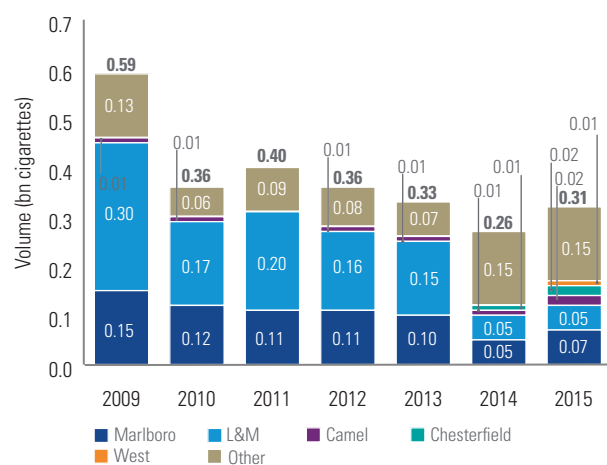
# ND(L) and C&C flows

- The increased border security with Russia has resulted in a reduction of C&C from Russia, with the largest proportion of C&C in Finland now coming from Estonia
- The largest ND(L) volume is from Estonia, reflective of the 2.5 million trips made in 2015 from Finland to Estonia<sup>(2)</sup>
- Overall trips to Russia declined significantly in 2014, but day-trips also declined in 2015, resulting in lower numbers of visitors<sup>(3)</sup>. These trends can be seen in C&C and ND(L) trends

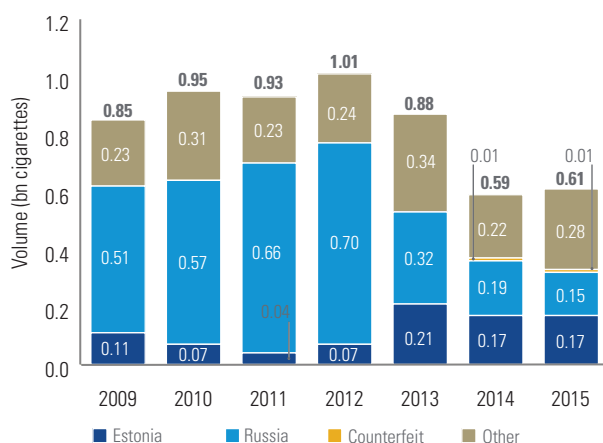
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



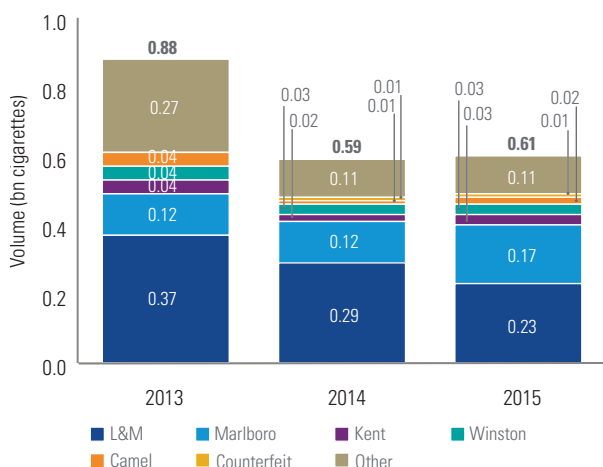
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers (2) Finnish Statistical Office

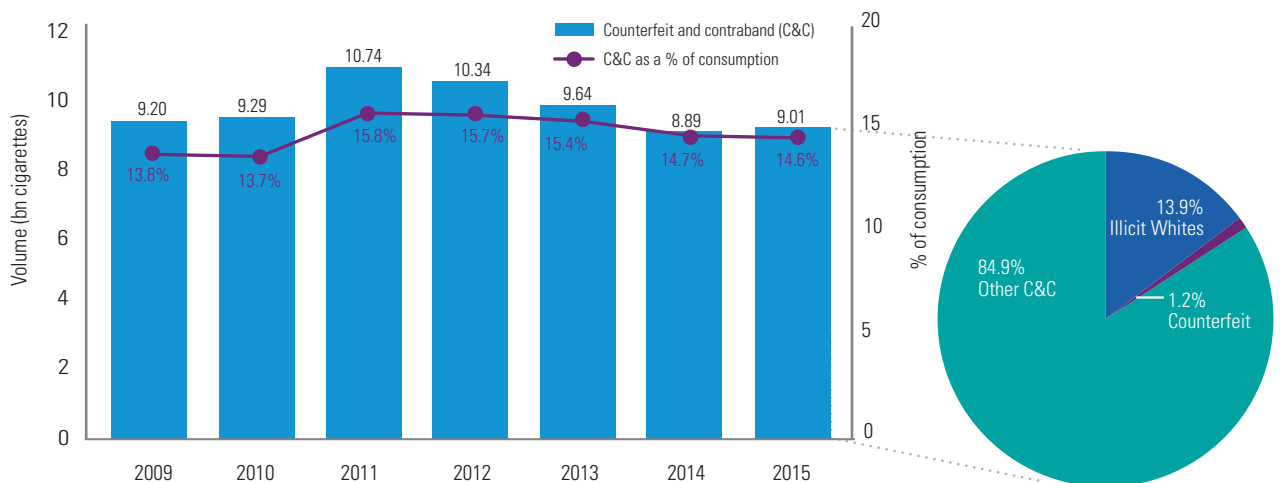


# France

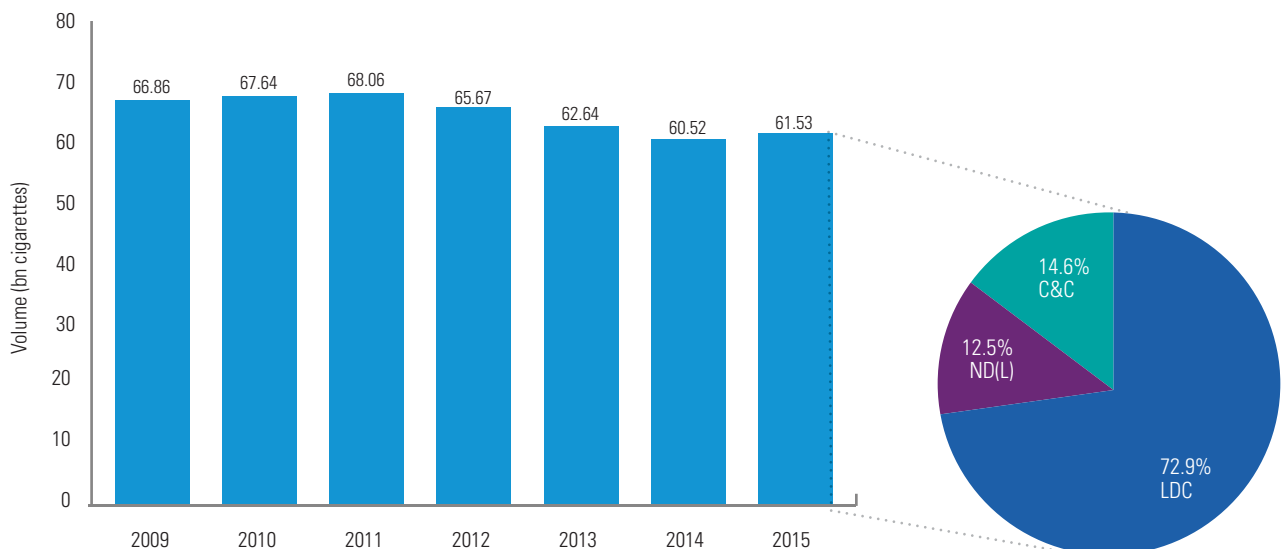
## Overview

- C&C volumes remained the highest in the EU in 2015, continuing its 5-year trend in accounting for approximately 15% of total consumption in France
- Legal domestic sales remained stable against a background of limited price increases and a stable economic environment, whilst sales of electronic cigarettes also declined
- Illicit Whites grew by 0.8 billion cigarettes to account for 14% of C&C, up from 5% in 2014
- C&C flows from Algeria grew by 5% to account for 31% of C&C
- As France has higher prices than all of its neighbouring countries, ND(L) volumes are high in comparison to other EU countries, especially in regions close to the border

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015



## Manufactured cigarette consumption - 2009-2015



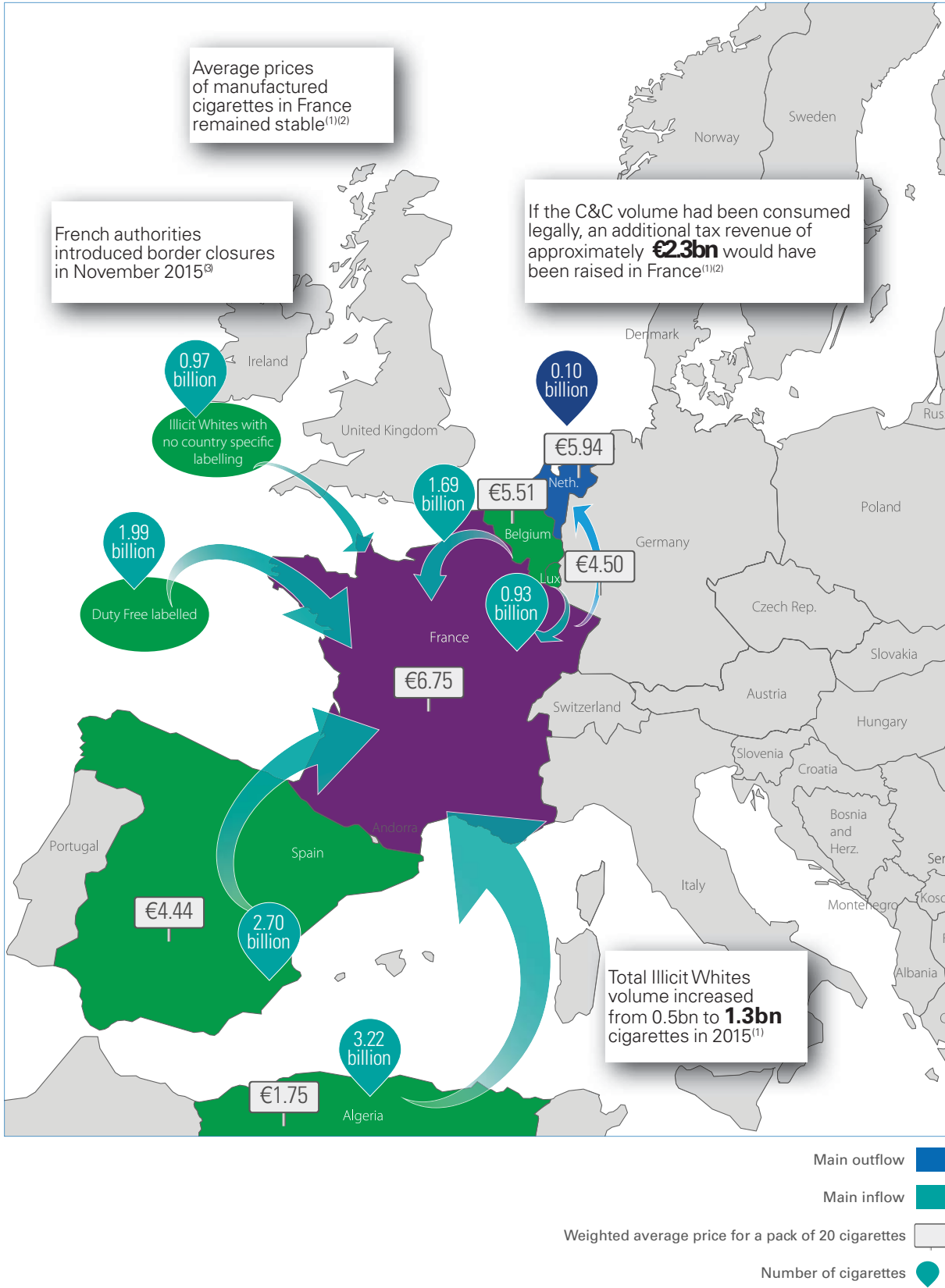
France



Project SUN



# Key inflows and outflows



France  
Project SUN

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers (3) France takes unprecedented step to close borders in response to Paris attacks, Business Inside UK., November 2015

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)(b)</sup>

TOTAL FRANCE CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	54.99	54.80	54.11	51.46	47.53	45.08	45.46	1%
Outflows	-0.61	-0.68	-0.42	-0.63	-0.66	-0.47	-0.60	28%
Legal domestic consumption (LDC)	54.38	54.11	53.69	50.83	46.87	44.61	44.85	1%
Non-domestic legal (ND(L))	3.29	4.24	3.63	4.50	6.13	7.02	7.67	9%
Counterfeit and contraband (C&C)	9.20	9.29	10.74	10.34	9.64	8.89	9.01	1%
Total non-domestic	12.49	13.53	14.37	14.84	15.77	15.91	16.68	5%
<b>Total consumption</b>	<b>66.86</b>	<b>67.64</b>	<b>68.06</b>	<b>65.67</b>	<b>62.64</b>	<b>60.52</b>	<b>61.53</b>	<b>2%</b>

- Legal domestic sales remained stable, underpinned by economic stability and limited price increases, whilst sales of electronic cigarettes declined by 10% in 2015<sup>(3)</sup>
- Inflows from Spain remained flat, as an 8.5%<sup>(4)</sup> increase in tourists was offset by lower border sales
- Belgian and Luxembourg flows fell by 18%, which may have been linked to a narrowing price gap with France, coinciding with the removal of the automatic tax increase mechanism in France in December 2014. French average prices remained flat at €6.75, while Belgian prices increased 3.89% to €5.51 and Luxembourg prices rose 3% to €4.50
- Border closures at the end of 2015 may have had an impact on border shopping with neighbouring countries
- Outflows reflected consumption of domestic product abroad by French tourists, as prices in France were higher than the outflow countries

## Total inflows by country of origin - 2009-2015<sup>(1)(c)(d)</sup>

ND INFLOWS TO FRANCE								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
Algeria	0.80	1.00	1.12	1.08	2.00	2.68	3.22	
Spain	2.40	2.08	1.57	2.33	1.84	2.70	2.70	
Duty Free labelled	2.14	3.63	3.90	3.11	2.59	2.68	1.99	
Belgium	0.48	0.43	0.90	1.01	2.00	2.08	1.69	
IWs with no country-specific labelling	1.93	0.92	1.21	0.75	0.78	0.29	0.97	
Luxembourg	0.58	0.52	0.73	1.11	1.08	1.11	0.93	
Other	4.17	4.94	4.95	5.44	5.47	4.37	5.17	
<b>Total inflows</b>	<b>12.49</b>	<b>13.53</b>	<b>14.37</b>	<b>14.84</b>	<b>15.77</b>	<b>15.91</b>	<b>16.68</b>	

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM FRANCE								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
Belgium	0.16	0.07	0.06	0.09	0.29	0.07	0.10	
Netherlands	0.08	0.35	0.13	0.16	0.14	0.13	0.10	
Italy	0.04	0.10	0.08	0.14	0.07	0.05	0.10	
Switzerland						0.04	0.09	
Germany	0.02	0.02	0.02	0.01	0.02	0.04	0.06	
Other	0.30	0.14	0.12	0.22	0.15	0.13	0.15	
<b>Total outflows</b>	<b>0.61</b>	<b>0.68</b>	<b>0.42</b>	<b>0.63</b>	<b>0.66</b>	<b>0.47</b>	<b>0.60</b>	

Note: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used; (b) In 2014, KPMG changed its approach to analysing ND(L) by reviewing border crossings and regional sales data provided by manufacturers. In prior year, a consumer survey approach was used. KPMG updated some of those data sources in 2015. Detail surrounding methodology changes is provided in the appendix; (c) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix (d) The Duty Free labelled inflow excludes Illicit Whites which have Duty Free labelling

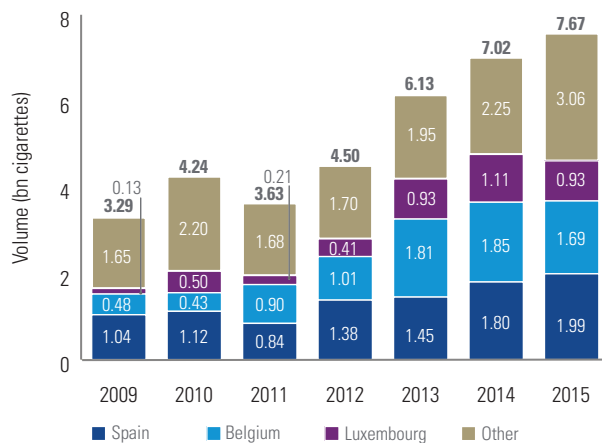
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) Tabagisme et arrêt du tabac en 2015, OFDT, February 2016 (4) National Institute of Statistics, Spain



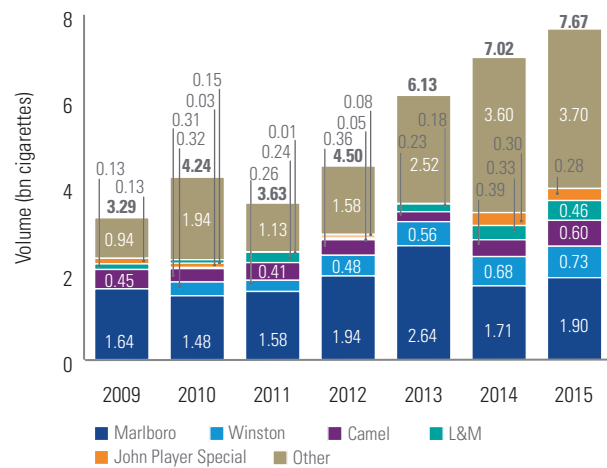
# ND(L) and C&C flows

- Flows from Algeria accounted for 31% of total C&C, with 95% of the product identified as Marlboro. Travel volumes and the limit of 200 cigarettes per trip do not support the volume identified, resulting in 88% of product identified as contraband
- Flows of American Legend, predominantly identified in Marseille, increased by 0.62 billion cigarettes and accounted for 89% of Illicit Whites with no country specific labelling
- C&C flows from Romania and Senegal also increased by 30%
- Approximately 630 tonnes of illicit tobacco product was seized in 2015 which was a 50% increase from 2014, reflecting increased customs activity in France<sup>(2)</sup>

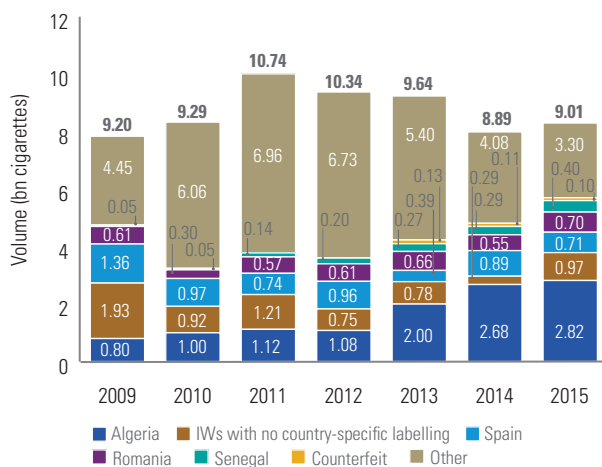
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



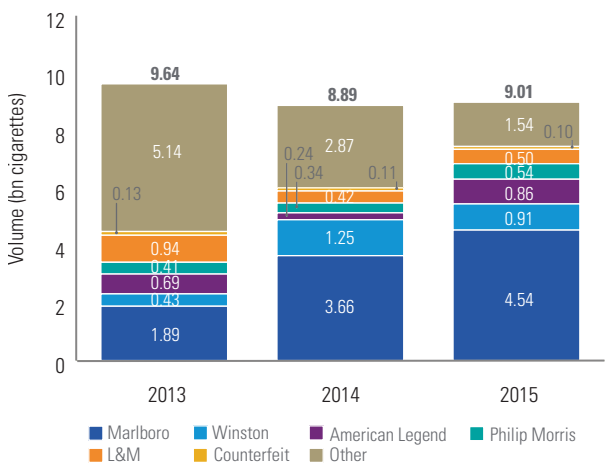
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows; (b) In 2014, KPMG changed its approach to analysing ND(L) by reviewing border crossings and regional sales data provided by manufacturers. In prior years, a consumer survey approach was used. KPMG updated some of those data sources in 2015. Detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers  
(2) Tabagisme et arrêt du tabac en 2015, OFDT, February 2016

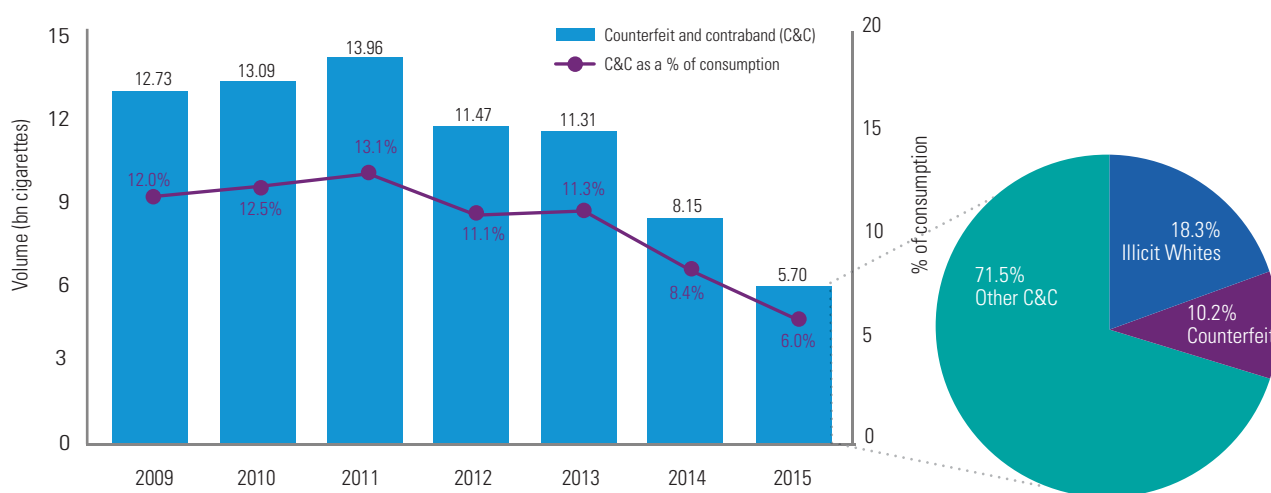


# Germany

## Overview

- Whilst overall consumption declined by 1.8 billion cigarettes the largest decline in volume terms came from C&C, which fell by 2.5 billion
- There was a shift towards legal forms of consumption as C&C fell from 8.4% to 6.0% of total consumption
- C&C declined from the lower priced countries of Poland, Czech Republic and Belarus and may have been influenced by industry-led initiatives to counter the illicit trade in tobacco products, law enforcement activities, the introduction of border controls by the German government in response to high levels of migration and improved economic conditions in 2015<sup>(1)(2)</sup>
- Inflows of cigarettes with Czech Republic labelling overtook those with Polish labelling as travel volumes from Germany increased and the price gap between Germany and the Czech Republic widened<sup>(3)(4)</sup>

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015<sup>(a)</sup>

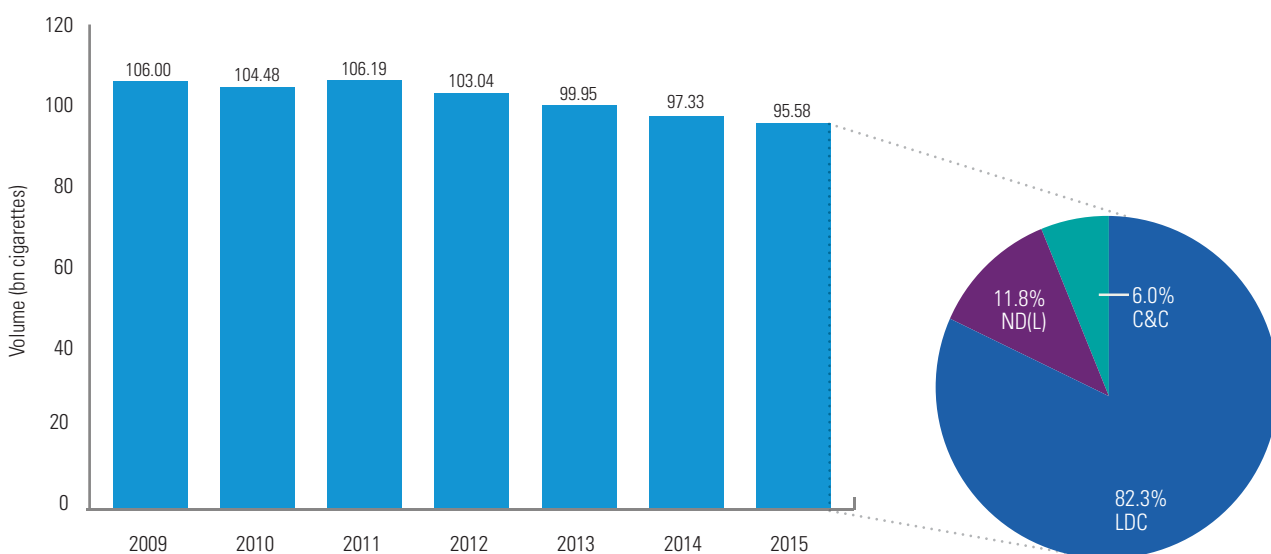


Germany



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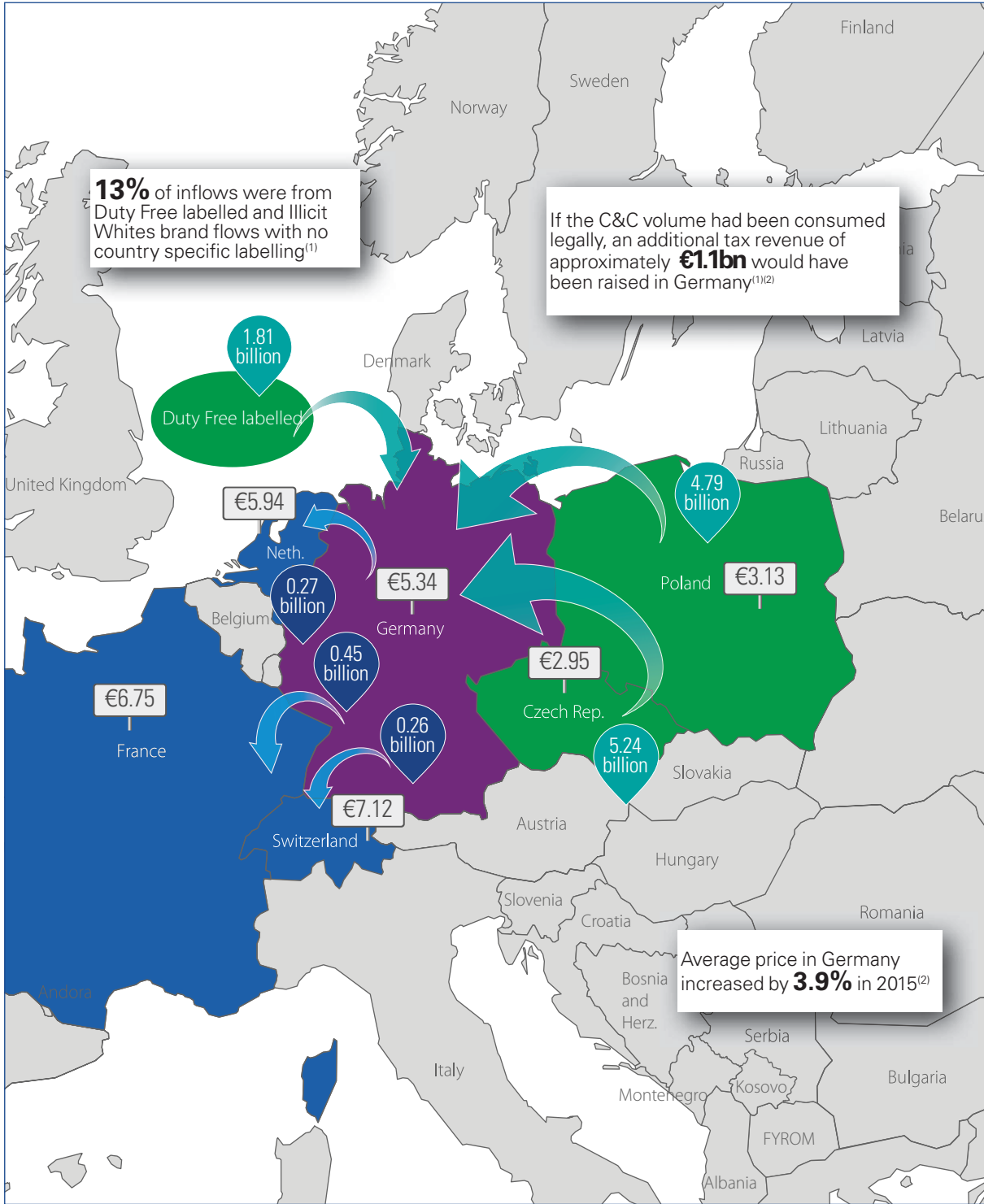
## Manufactured cigarette consumption - 2009-2015



Note: (a) In 2014 and 2015 a refined pack collection methodology was implemented. This technical change accounted for approximately two thirds of the decline in C&C volume between 2013-2014 and approximately one fifth of the decline in C&C volume between 2014-2015. The revised approach is explained in the appendix

Sources: (1) European Commission Press Release, IP-15-5900, 2015 (2) Personal Disposable Income 2014-15, Economics Intelligence Unit; Die Welt, Natuerlich rauche ich Rattenkot, December 2015; WAZ, Kampf gegen die Zigarettens-Mafia, December 2015; OECD, Illicit Trade: Converging Criminal Networks, 2016 (3) KPMG analysis of UNWTO Factbook 2009-2014 (4) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Key inflows and outflows



Germany  
Project SUN



- Main outflow ■
- Main inflow ■
- Weighted average price for a pack of 20 cigarettes
- Number of cigarettes ●

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model and data sources provided by manufacturers (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)(b)</sup>

TOTAL GERMANY CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	85.49	83.91	84.47	83.44	79.63	80.35	80.04	(0%)
Outflows	-0.84	-0.95	-0.86	-1.37	-1.42	-1.49	-1.42	(5%)
Legal domestic consumption (LDC)	84.65	82.96	83.60	82.07	78.21	78.86	78.62	(0%)
Non-domestic legal (ND(L))	8.62	8.43	8.62	9.50	10.43	10.32	11.26	9%
Counterfeit and contraband (C&C)	12.73	13.09	13.96	11.47	11.31	8.15	5.70	(30%)
Total non-domestic	21.35	21.52	22.58	20.98	21.73	18.47	16.96	(8%)
<b>Total consumption</b>	<b>106.00</b>	<b>104.48</b>	<b>106.19</b>	<b>103.04</b>	<b>99.95</b>	<b>97.33</b>	<b>95.58</b>	<b>(2%)</b>

- Whilst legal domestic consumption remained stable total consumption fell by 1.8 billion; the largest decline in volume terms came from the 2.5 billion reduction in C&C, whilst ND(L) increased by 0.9 billion
  - Inflows may have been influenced by industry-led initiatives to counter the illicit trade in tobacco products, law enforcement activities and the introduction of German border controls in response to the high levels of migration during 2015<sup>(3)</sup>
- The Czech Republic overtook Poland to become the highest inflow country, possibly reflecting the fact that prices increased more quickly in Poland over the past 3 years, relative to the Czech Republic
  - Czech Republic average price increased by 9% over 3 years to €2.95, whereas the Polish average price increased 18% over 3 years to €3.13<sup>(4)</sup>

*Czech Republic overtook Poland in 2015 to become the highest inflow country*

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)(d)</sup>

ND INFLOWS TO GERMANY								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
Czech Republic	3.53	4.66	5.69	5.01	6.14	5.45	5.24	
Poland	7.54	7.49	8.64	8.54	7.54	5.67	4.79	
Duty Free labelled	1.60	1.68	1.53	1.67	1.92	1.84	1.81	
Belarus	0.18	0.43	0.61	0.64	0.96	0.98	0.72	
IWs with no country-specific labelling	0.12	0.02	0.05	0.03	0.08	0.27	0.36	
Luxembourg	0.80	0.38	0.41	0.46	0.45	0.48	0.31	
Other	7.58	6.86	5.66	4.63	4.64	3.79	3.72	
<b>Total inflows</b>	<b>21.35</b>	<b>21.52</b>	<b>22.58</b>	<b>20.98</b>	<b>21.73</b>	<b>18.47</b>	<b>16.96</b>	

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM GERMANY								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
France	0.24	0.22	0.21	0.52	0.62	0.47	0.45	
Netherlands	0.13	0.35	0.25	0.33	0.33	0.36	0.27	
Switzerland						0.17	0.26	
Other	0.47	0.37	0.41	0.52	0.46	0.50	0.44	
<b>Total outflows</b>	<b>0.84</b>	<b>0.95</b>	<b>0.86</b>	<b>1.37</b>	<b>1.42</b>	<b>1.49</b>	<b>1.42</b>	

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) In 2014 and 2015 a refined pack collection methodology was implemented. This technical change accounted for approximately two thirds of the decline in C&C volume between 2013-2014 and approximately one fifth of the decline in C&C volume between 2014-2015. The revised approach is explained in the appendix (c) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (d) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

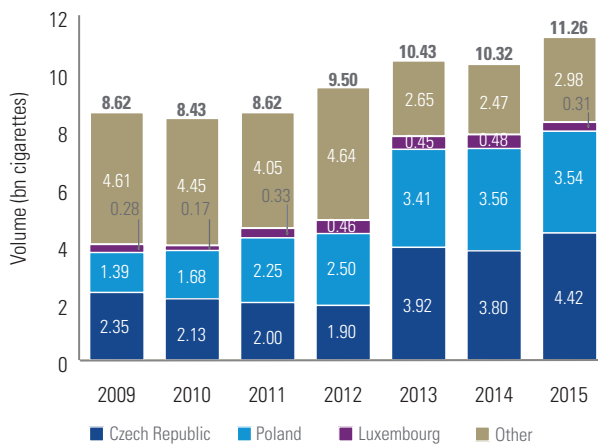
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers; Switzerland was included in the study for the first time in 2014 (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) European Commission Press Release, IP-15-5900, 2015; Die Welt, Natuerlich rauche ich Rattenkot, December 2015; WAZ, Kampf gegen die Zigaretten-Mafia, December 2015; OECD, Illicit Trade: Converging Criminal Networks, 2016 (4) EC Excise Duty tables (Part III – Manufactured Tobacco), January 2016 and January 2013



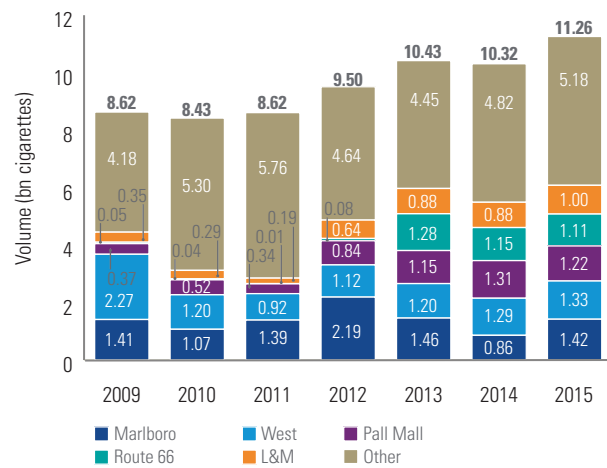
# ND(L) and C&C flows

- ND(L) increased by 0.9 billion cigarettes, due largely to increased ND(L) from the Czech Republic
  - An estimated 6.9% increase in border crossings and a widening price gap between the Czech Republic and Germany between 2014 and 2015 support the increase in ND(L)<sup>(1)</sup>
- Flows from Luxembourg to Germany are assumed to be 100% legal as the number of border crossings between these countries supported the overall volume identified
- C&C declined by 2.5 billion cigarettes largely as a result of reduced flows of cigarettes from lower priced countries Czech Republic, Poland and Belarus

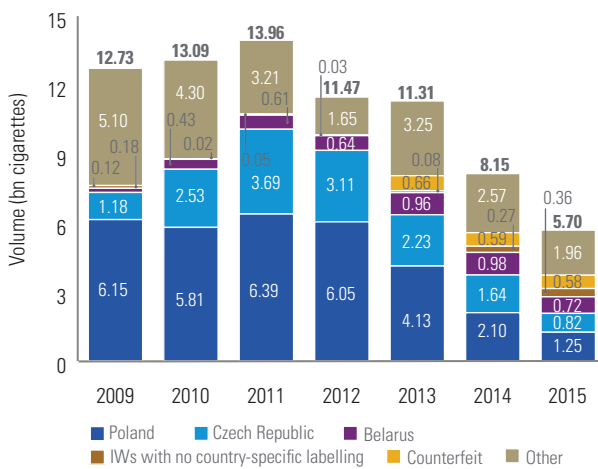
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



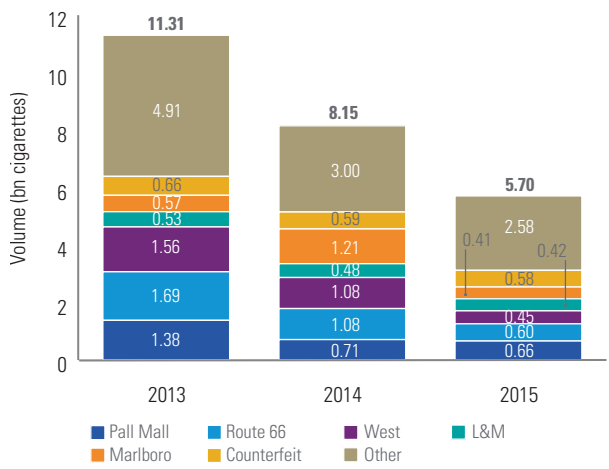
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

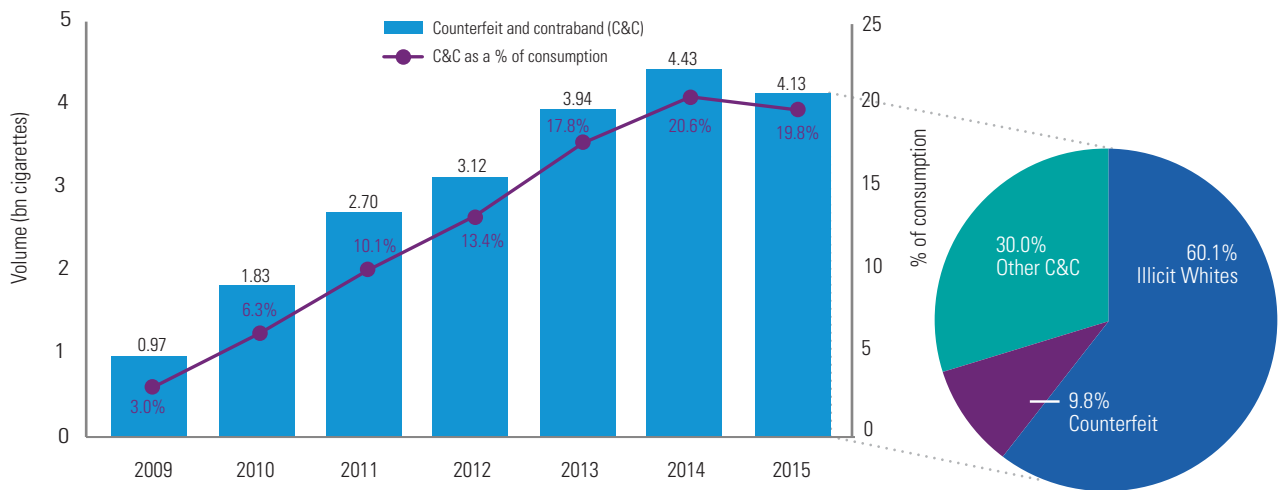


# Greece

## Overview

- Whilst Greece continued to have the 2nd highest rate of C&C consumption in the EU, at 20% of total consumption, the volume of C&C fell, against a backdrop of increased enforcement activity
- Economic and political uncertainty, including the capital controls which reduced cash withdrawal limits, may have had an impact on the level of legal domestic cigarette consumption in Greece in 2015
- Illicit Whites brand flows remained the main source of C&C in Greece, accounting for 60% of the volume

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

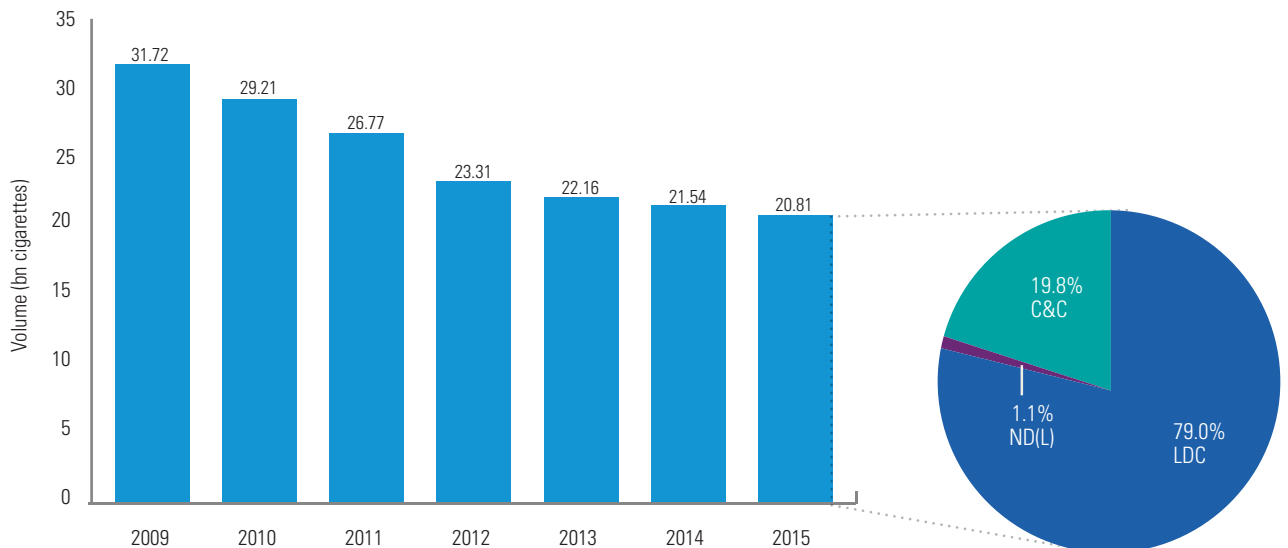


Greece



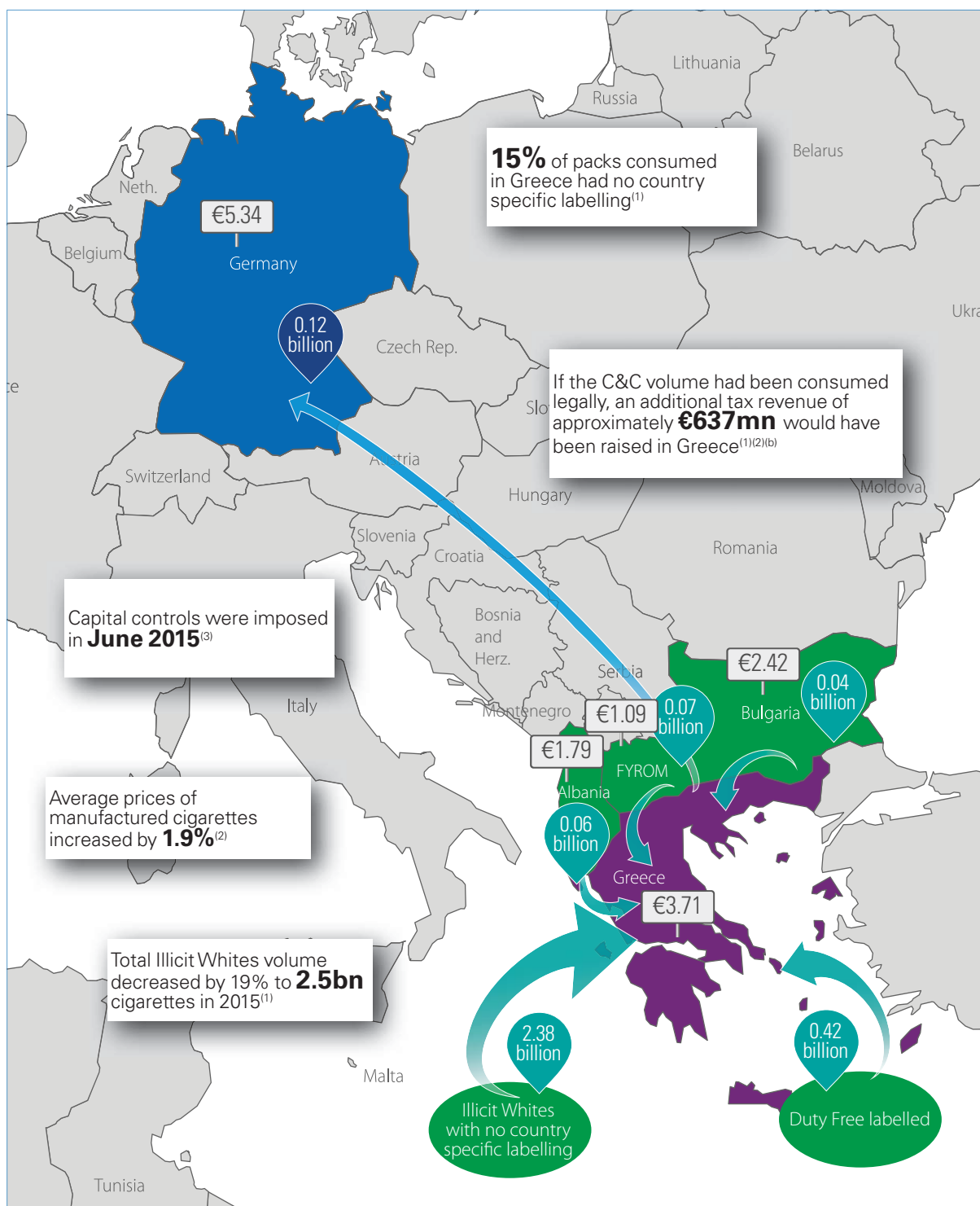
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## Manufactured cigarette consumption - 2009-2015





# Key inflows and outflows



Main outflow

Main inflow

Weighted average price for a pack of 20 cigarettes

Number of cigarettes

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow. (b) Analysis of tax revenues lost due to illicit bulk tobacco has not been included in this report

Source: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers (3) Greece Imposes Capital Controls as Fears of Grexit Grow, Bloomberg, June 2015

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(3)(a)</sup>

TOTAL GREECE CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	30.97	27.78	24.24	20.45	18.46	17.27	16.79	(3%)
Outflows	-0.85	-0.66	-0.50	-0.50	-0.47	-0.33	-0.34	2%
Legal domestic consumption (LDC)	30.11	27.12	23.75	19.94	17.99	16.93	16.45	(3%)
Non-domestic legal (ND(L))	0.64	0.26	0.32	0.25	0.23	0.18	0.24	32%
Counterfeit and contraband (C&C)	0.97	1.83	2.70	3.12	3.94	4.43	4.13	(7%)
Total non-domestic	1.61	2.09	3.02	3.37	4.17	4.61	4.37	(5%)
<b>Total consumption</b>	<b>31.72</b>	<b>29.21</b>	<b>26.77</b>	<b>23.31</b>	<b>22.16</b>	<b>21.54</b>	<b>20.81</b>	<b>(3%)</b>

- Legal domestic sales continued their long term decline, falling 3% against a backdrop of political and economic uncertainty in 2015, with capital controls in the second half of the year potentially impacting consumer spending
- Whilst flows of cigarettes with no country specific labelling decreased by 0.53 billion, they accounted for 72% of total inflows
- Seizures increased by 48% in 2015, which is reflective of the increased monitoring by Greek authorities<sup>(3)</sup>
- Outflows from Greece were mainly driven by the 26 million tourists visiting in 2015

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO GREECE								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
IWs with no country-specific labelling	0.22	0.39	1.01	2.50	2.72	2.65	2.38	
Unspecified	0.27	0.32	0.40	0.05	0.64	1.00	0.74	
Duty Free labelled	0.66	0.81	0.92	0.33	0.48	0.59	0.42	
FYROM	0.00	0.01	0.01	0.02	0.02	0.05	0.07	
Albania	0.03	0.07	0.06	0.08	0.08	0.08	0.06	
Other	0.43	0.50	0.63	0.38	0.22	0.24	0.69	
<b>Total inflows</b>	<b>1.61</b>	<b>2.09</b>	<b>3.02</b>	<b>3.37</b>	<b>4.17</b>	<b>4.61</b>	<b>4.36</b>	

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM GREECE								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
Germany	0.26	0.19	0.17	0.18	0.15	0.11	0.12	
UK	0.28	0.16	0.12	0.16	0.11	0.08	0.05	
France	0.09	0.12	0.04	0.07	0.12	0.02	0.03	
Belgium	0.01	0.00	0.00	0.01	0.00	0.03	0.03	
Italy	0.08	0.08	0.05	0.02	0.02	0.03	0.02	
Other	0.13	0.10	0.10	0.07	0.06	0.07	0.09	
<b>Total outflows</b>	<b>0.85</b>	<b>0.66</b>	<b>0.50</b>	<b>0.50</b>	<b>0.47</b>	<b>0.33</b>	<b>0.34</b>	

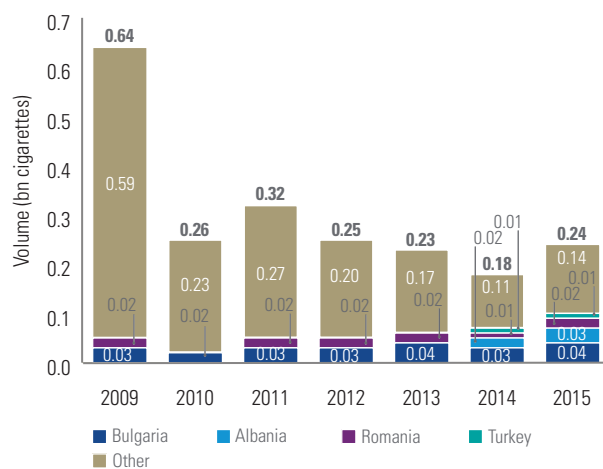
Note: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used; (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) Greek Department of Customs, Audit and Violations

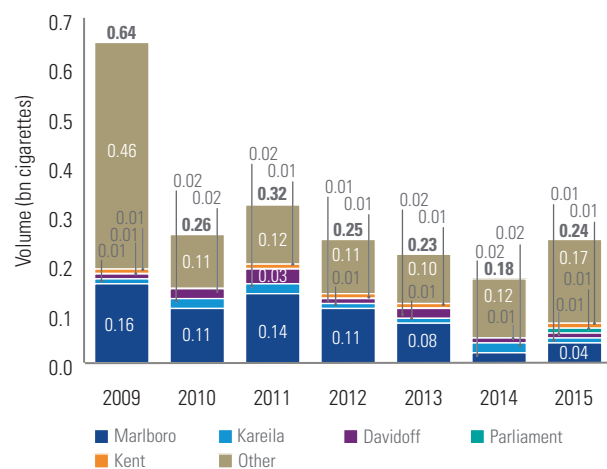
# ND(L) and C&C flows

- Illicit White brand flows with no country specific labelling declined by 0.27 billion cigarettes, driven by declines in 777, Gold Mount and Royal brands
  - Flows of Gold Mount and 777 originated from UAE based Free Trade Zones<sup>(2)</sup>
- The Cooper and GR C&C identified had no country specific labelling
- Counterfeit product increased from 0.03 to 0.41, consisting mainly of Assos and Marlboro with duty free labelling

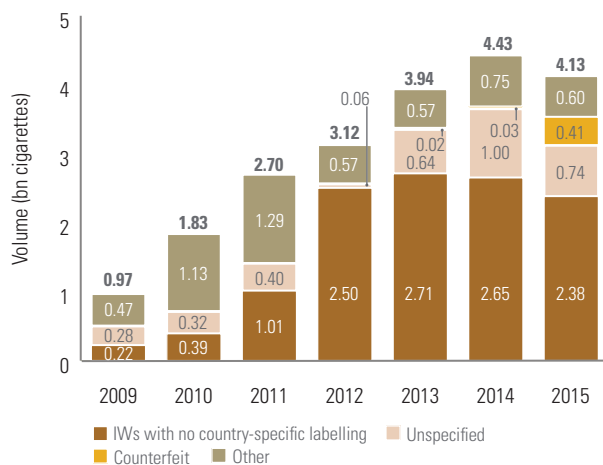
**ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>**



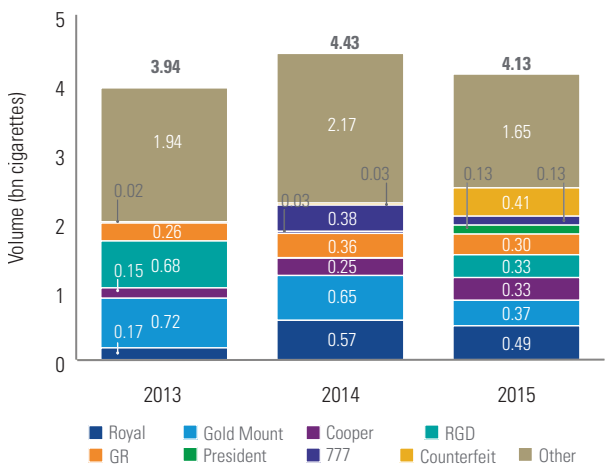
**ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>**



**C&C by country of origin - 2009-2015<sup>(1)(a)</sup>**



**C&C by brand - 2013-2015<sup>(1)(a)</sup>**



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers (2) KPMG analysis of manufacturers operating in Free Trade Zone

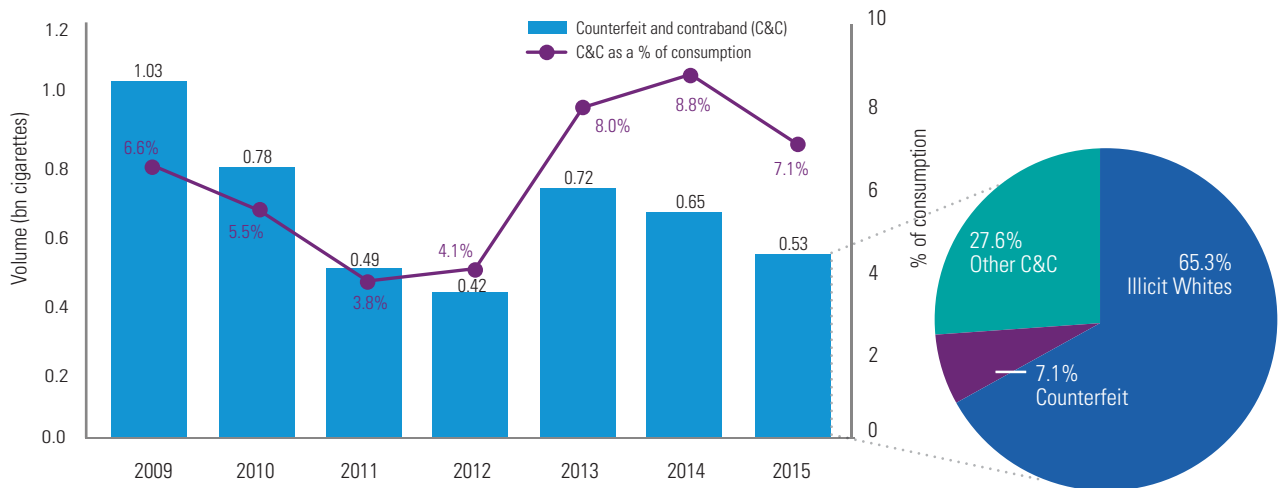


# Hungary

## Overview

- C&C represented 7.1% of total consumption; primarily due to flows of Illicit Whites
- 65% of C&C flows came from Illicit Whites brand flows from Belarus and with no country specific labelling

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

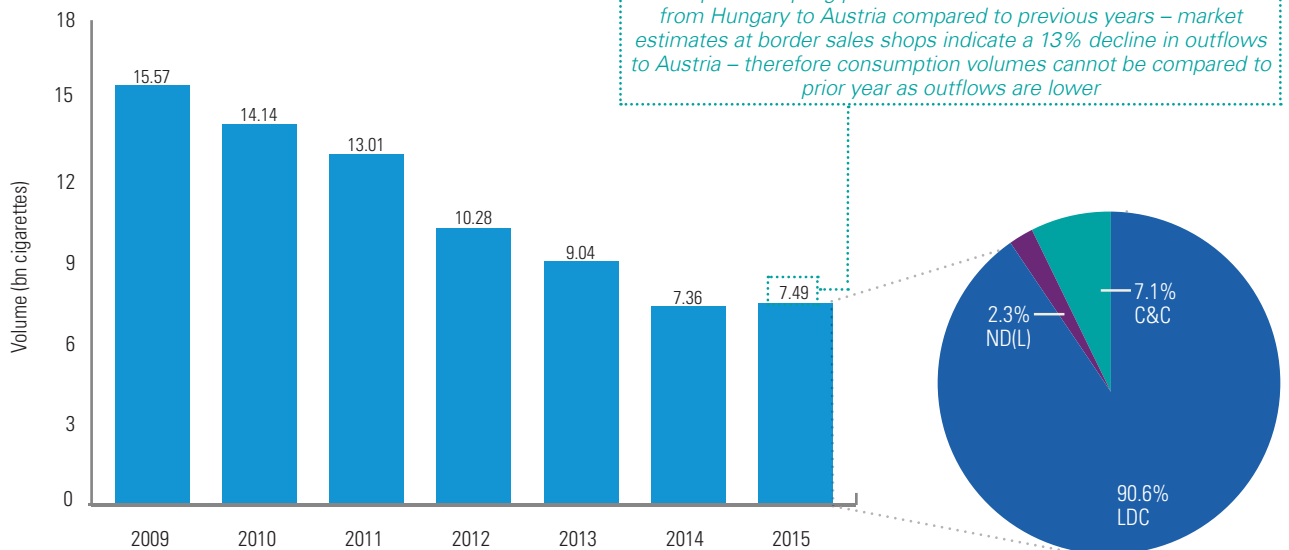


Hungary

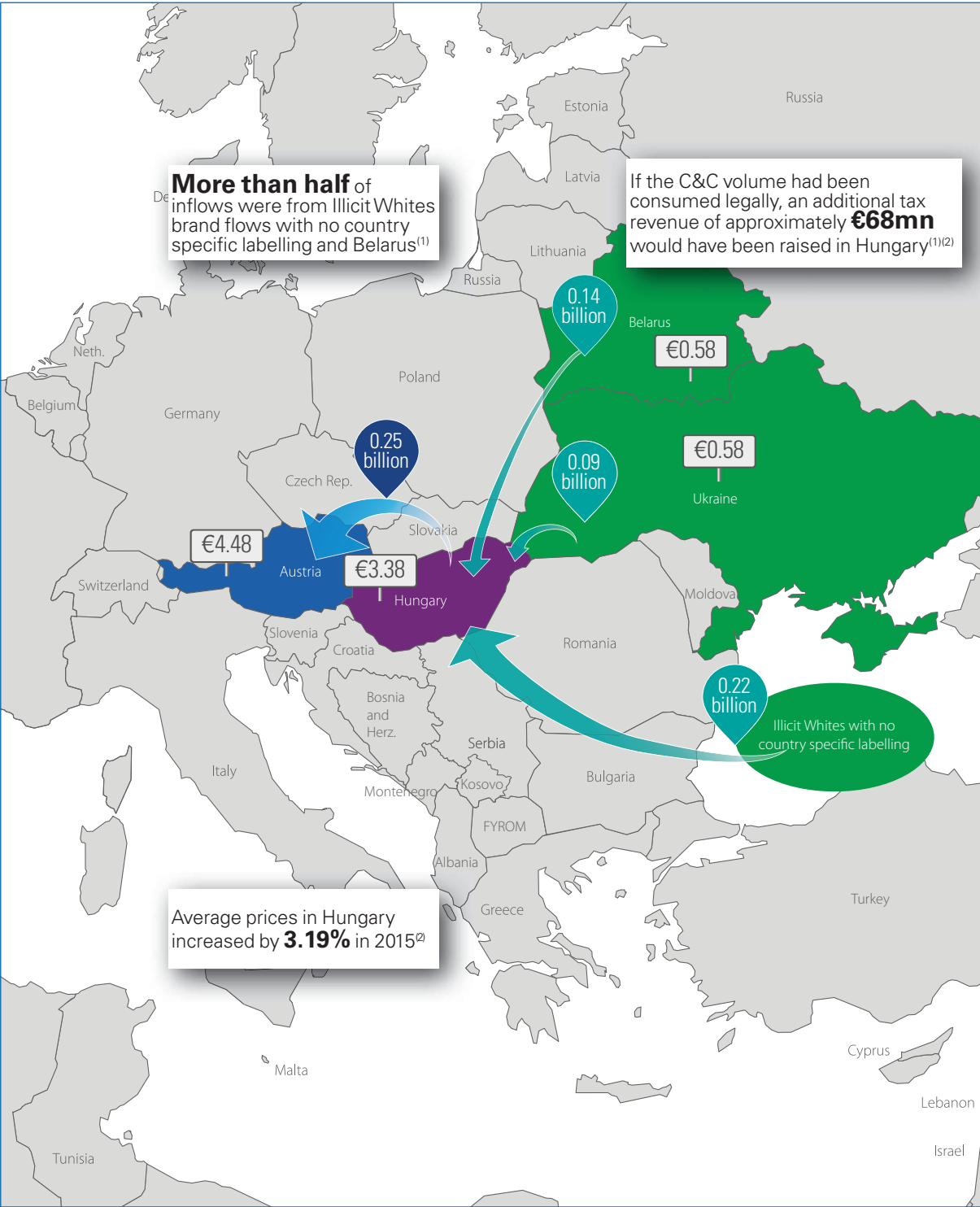


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## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows



**More than half** of inflows were from Illicit Whites brand flows with no country specific labelling and Belarus<sup>(1)</sup>

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€68mn** would have been raised in Hungary<sup>(1)(2)</sup>

Average prices in Hungary increased by **3.19%** in 2015<sup>(2)</sup>

- Main outflow ■
- Main inflow ■
- Weighted average price for a pack of 20 cigarettes
- Number of cigarettes ●

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow

Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL HUNGARY CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	15.30	14.18	13.94	11.21	9.36	7.47	7.34	(2%)
Outflows	-0.93	-0.87	-1.50	-1.41	-1.13	-0.87	-0.56	n/a
Legal domestic consumption (LDC)	14.36	13.31	12.44	9.80	8.24	6.60	6.78	3%
Non-domestic legal (ND(L))	0.18	0.05	0.08	0.06	0.08	0.11	0.17	51%
Counterfeit and contraband (C&C)	1.03	0.78	0.49	0.42	0.72	0.65	0.53	(18%)
Total non-domestic	1.21	0.83	0.57	0.48	0.80	0.76	0.71	(8%)
<b>Total consumption</b>	<b>15.57</b>	<b>14.14</b>	<b>13.01</b>	<b>10.28</b>	<b>9.04</b>	<b>7.36</b>	<b>7.49</b>	<b>n/a</b>

- Consumption of manufactured cigarettes stabilised after a decline of 15% (CAGR) between 2009 and 2015
- Over 50% of inflows came from Belarus and brands with no country specific labelling
- Inflows may have reduced further given the border closures during the migrant crisis towards the end of 2015<sup>(b)</sup>
- An 18% decline in C&C was partially offset by a 51% increase in ND(L) flows

A new pack sampling plan in Austria has resulted in lower outflows from Hungary to Austria compared to previous years – market estimates at border sales shops indicate a 13% decline in outflows to Austria – therefore it cannot be compared to prior year

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO HUNGARY							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
IWs with no country-specific labelling	0.04	0.02	0.00	0.01	0.15	0.23	0.22
Belarus	0.00	0.00	0.00	0.07	0.35	0.31	0.14
Ukraine	0.81	0.46	0.25	0.13	0.07	0.04	0.09
Duty Free labelled	0.11	0.01	0.01	0.02	0.02	0.03	0.03
Austria	0.00	0.00	0.00	0.01	0.02	0.02	0.02
Other	0.25	0.33	0.30	0.23	0.20	0.13	0.20
<b>Total inflows</b>	<b>1.21</b>	<b>0.83</b>	<b>0.57</b>	<b>0.48</b>	<b>0.80</b>	<b>0.76</b>	<b>0.70</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM HUNGARY							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Austria	0.48	0.48	0.99	0.99	0.71	0.56	0.25
Germany	0.16	0.17	0.21	0.20	0.22	0.11	0.12
UK	0.10	0.02	0.09	0.12	0.03	0.08	0.08
Other	0.19	0.20	0.21	0.10	0.16	0.12	0.11
<b>Total outflows</b>	<b>0.93</b>	<b>0.87</b>	<b>1.50</b>	<b>1.41</b>	<b>1.13</b>	<b>0.87</b>	<b>0.56</b>

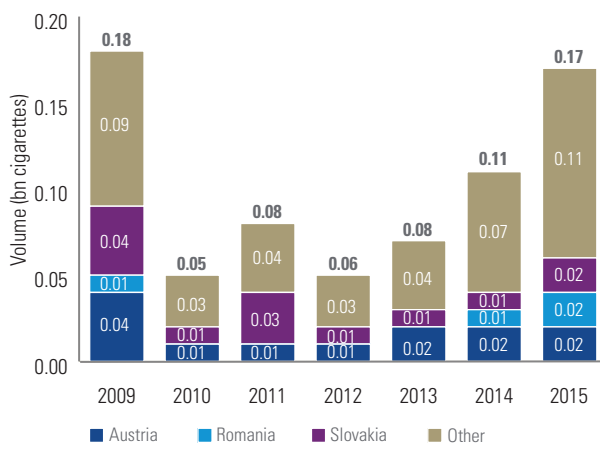
Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014

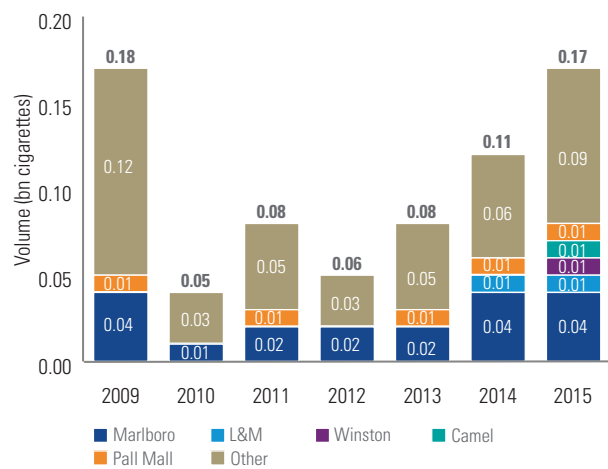
# ND(L) and C&C flows

- ND(L) is reflective of increasing travel flows between neighbouring EU countries
- Over 40% of C&C identified had no country specific labelling and therefore was not produced for legal distribution
- The largest C&C brand, Fest, had Belarusian labelling and Compliment had Duty Free labelling without any legal distribution channels in Hungary

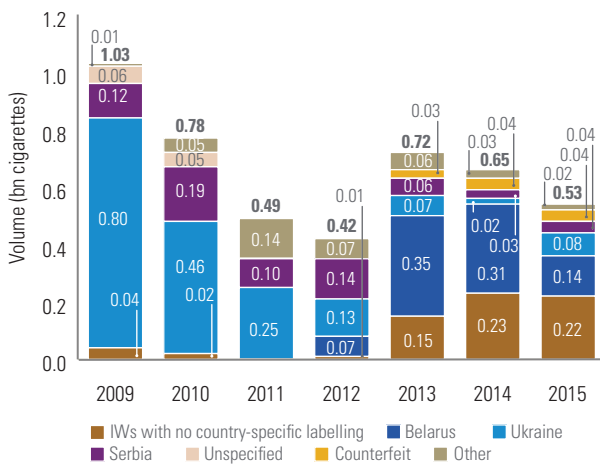
**ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>**



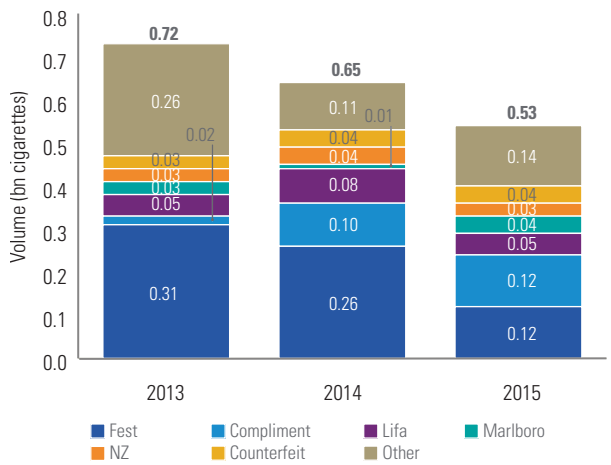
**ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>**



**C&C by country of origin - 2009-2015<sup>(1)(a)(c)</sup>**



**C&C by brand - 2013-2015<sup>(1)(a)</sup>**



Hungary



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Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) There are some unspecified flows with no country specific labelling

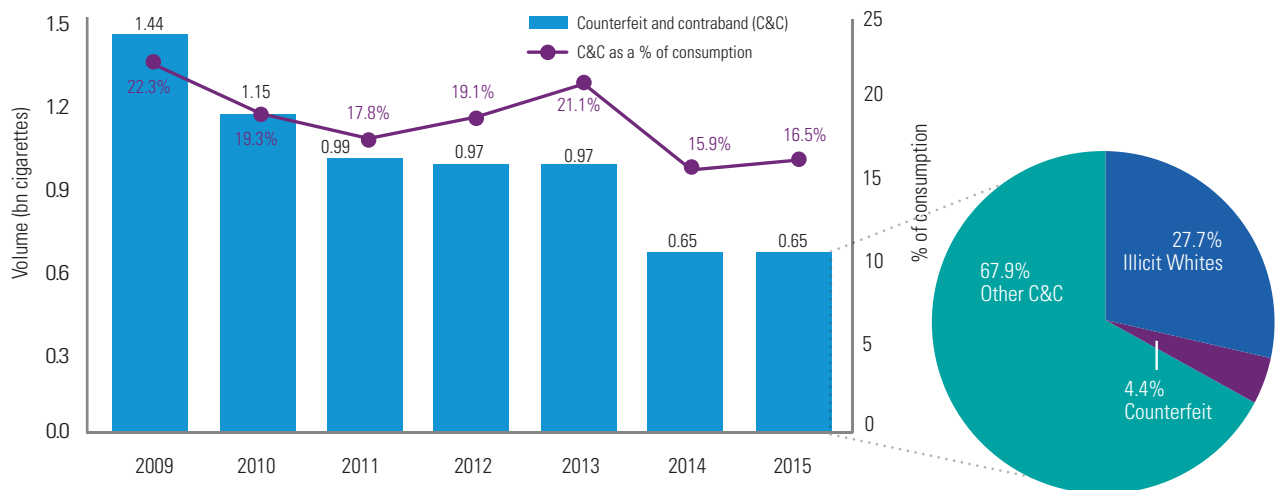
Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

# Ireland

## Overview

- Ireland continued to have one of the highest C&C rates (as a proportion of consumption) in the EU
- 28% of C&C was Illicit Whites brand flows, increasing from 21% compared to the previous year
- The remaining other C&C flows are mainly contraband from Eastern European countries. Despite a large migrant population from Eastern Europe, total visitor flows between these countries and Ireland are too low to legally support the volume of cigarettes identified in Ireland

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

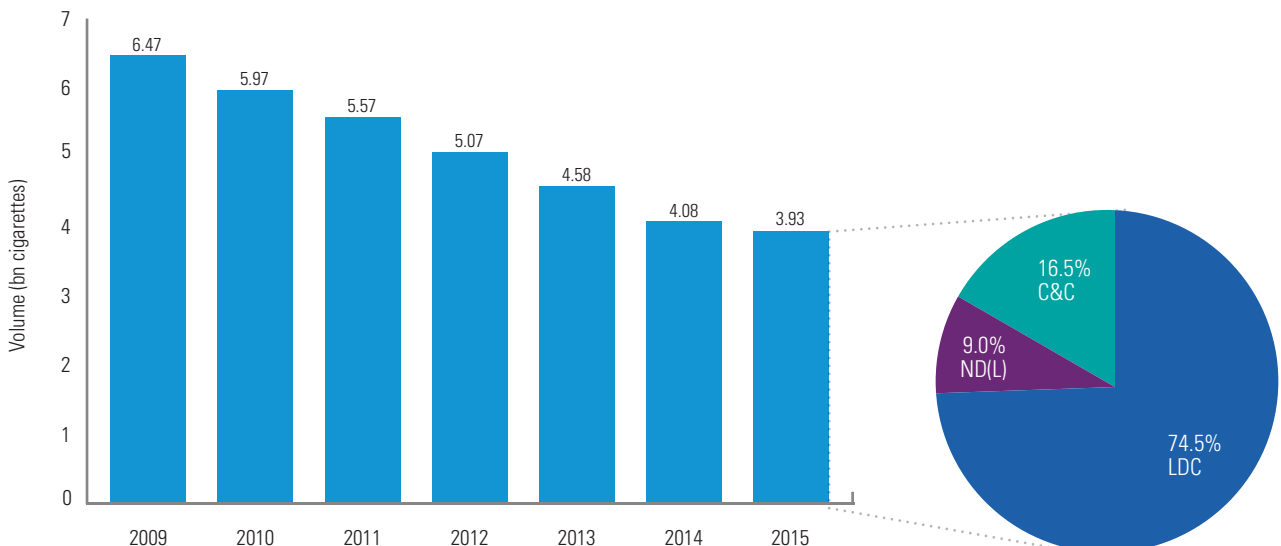


Ireland



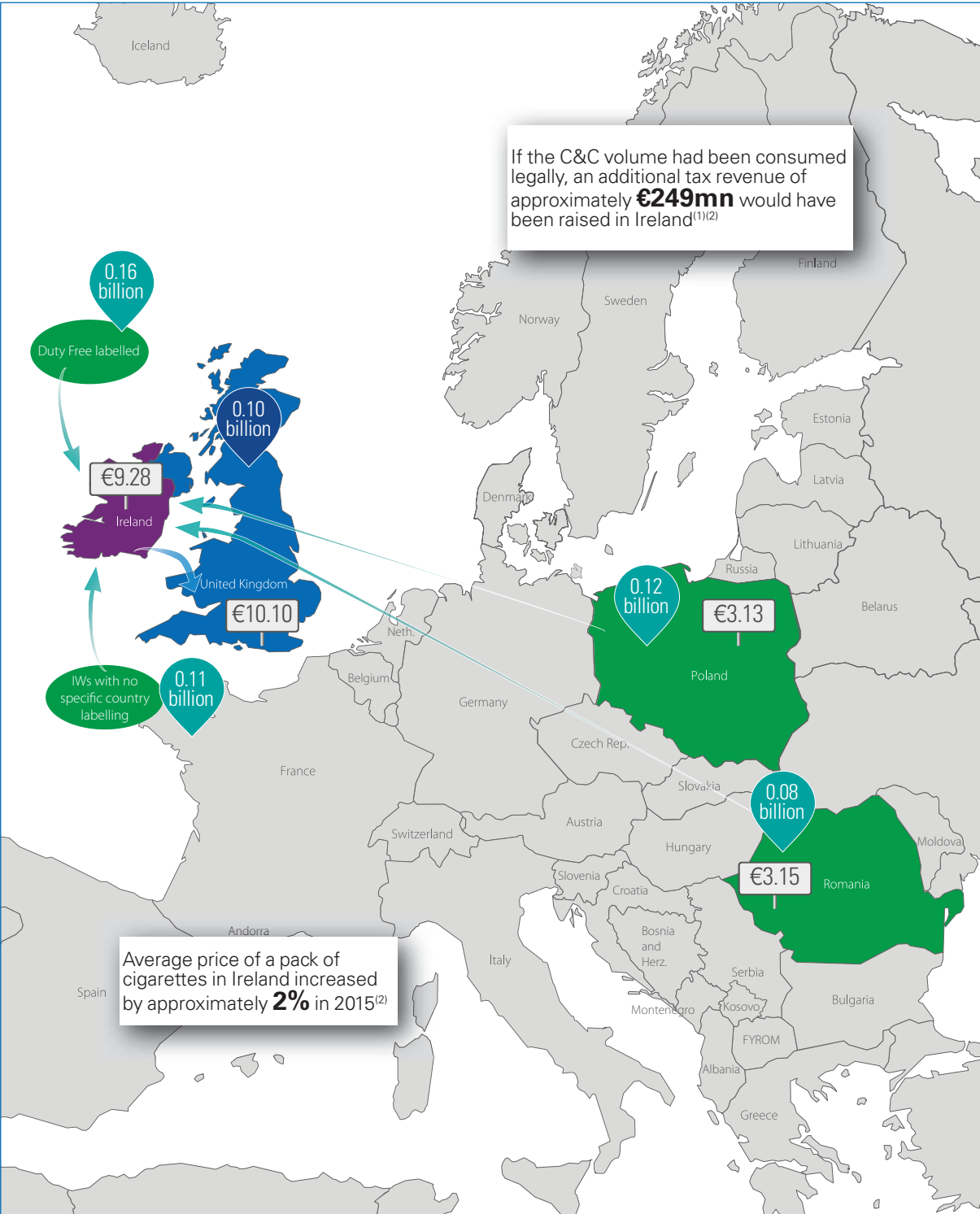
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## Manufactured cigarette consumption - 2009-2015





# Key inflows and outflows



Notes: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow (b) The Duty Free inflow excludes Illicit Whites which have Duty Free labelling  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL IRELAND CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	4.52	4.28	4.09	3.70	3.37	3.18	3.05	(4%)
Outflows	-0.09	-0.07	-0.06	-0.07	-0.09	-0.07	-0.12	77%
Legal domestic consumption (LDC)	4.43	4.21	4.03	3.63	3.28	3.11	2.93	(6%)
Non-domestic legal (ND(L))	0.60	0.61	0.55	0.47	0.33	0.33	0.35	8%
Counterfeit and contraband (C&C)	1.44	1.15	0.99	0.97	0.97	0.65	0.65	(0%)
Total non-domestic	2.04	1.76	1.54	1.43	1.30	0.97	1.00	3%
<b>Total consumption</b>	<b>6.47</b>	<b>5.97</b>	<b>5.57</b>	<b>5.07</b>	<b>4.58</b>	<b>4.08</b>	<b>3.93</b>	<b>(4%)</b>

- Poland was the second highest inflow country, reflecting the high price differences and level of travel between Ireland and Poland
  - A total of 400,000 inbound and outbound trips were made between Ireland and Poland in 2015, where cigarettes were on average €6.15 less per packet of 20
  - In addition, the most recent census (2011) recorded 122,000 Polish residents in Ireland<sup>(3)</sup>
- Inflows and outflows to the UK are considered legal given the large volume of border crossings with Northern Ireland and travel to the UK

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)(d)</sup>

ND INFLOWS TO IRELAND							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Duty Free labelled	0.08	0.01	0.09	0.12	0.17	0.13	0.16
Poland	0.14	0.22	0.19	0.19	0.16	0.11	0.12
IWs with no country-specific labelling	0.09	0.12	0.15	0.11	0.16	0.09	0.11
UK	0.35	0.20	0.24	0.14	0.06	0.08	0.08
Romania	0.08	0.05	0.06	0.10	0.09	0.06	0.08
Other	1.29	1.16	0.81	0.78	0.66	0.51	0.45
<b>Total inflows</b>	<b>2.04</b>	<b>1.76</b>	<b>1.54</b>	<b>1.43</b>	<b>1.30</b>	<b>0.97</b>	<b>1.00</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM IRELAND							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
UK	0.05	0.02	0.03	0.05	0.06	0.05	0.10
Netherlands	0.02	0.02	0.01	0.00	0.02	0.01	0.01
Italy	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.01	0.03	0.01	0.01	0.00	0.01	0.01
<b>Total outflows</b>	<b>0.09</b>	<b>0.07</b>	<b>0.06</b>	<b>0.07</b>	<b>0.09</b>	<b>0.07</b>	<b>0.12</b>

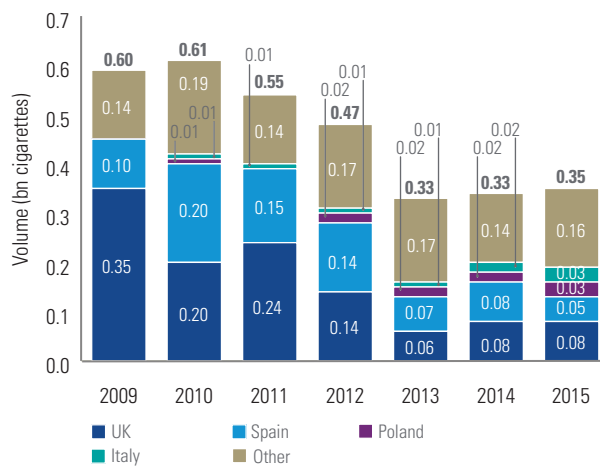
Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling (d) Note that analysis may not provide the same results as seizures data – explanation provided in Appendix

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) Central Statistics Office, Ireland, October 2012

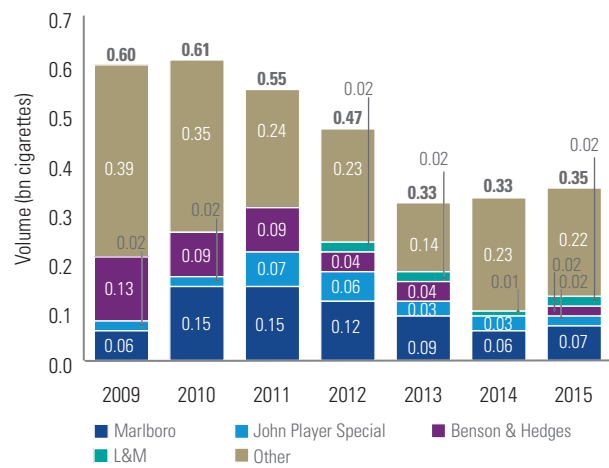
# ND(L) and C&C flows

- C&C is primarily comprised of Illicit Whites brand flows and contraband brands
  - **Illicit Whites brand flows** – 65 brands with limited or no legal distribution in Ireland were identified during the study, mainly in small numbers, with the largest identified as MG and 821. Many of these brands have no country specific labelling and therefore the country of origin cannot be identified
  - **Contraband flows** – Genuine product that has been bought in low-tax countries such as Poland and Romania and which exceeds legal border limits or was acquired without taxes for export purposes to be illegally re-sold (for financial profit) in a higher priced country. High volumes of Duty Free are also identified in this segment. Whilst some of the product identified in Ireland is legal, travel volumes could not support the entire flow as being legal and it therefore exceeded border limits

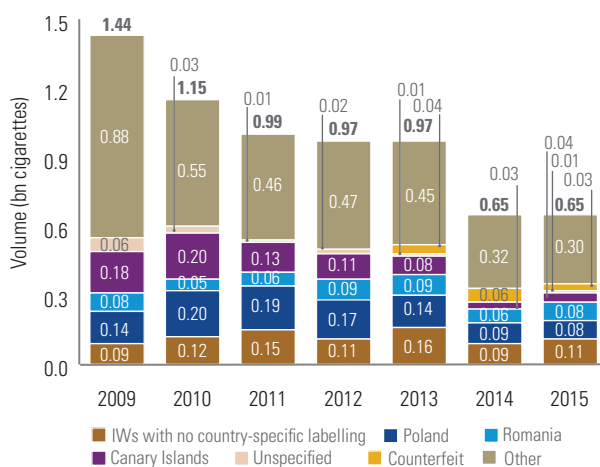
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



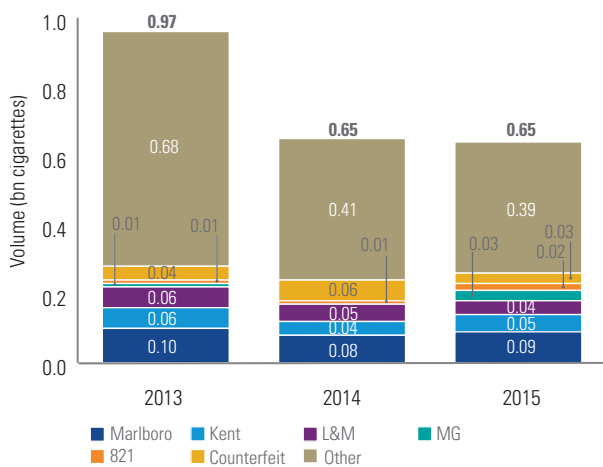
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)(c)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) The brands identified as C&C is based on KPMG's methodology which identifies all forms of C&C, some of which may not be identified in seizures reports. Please see Appendix for further detail

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

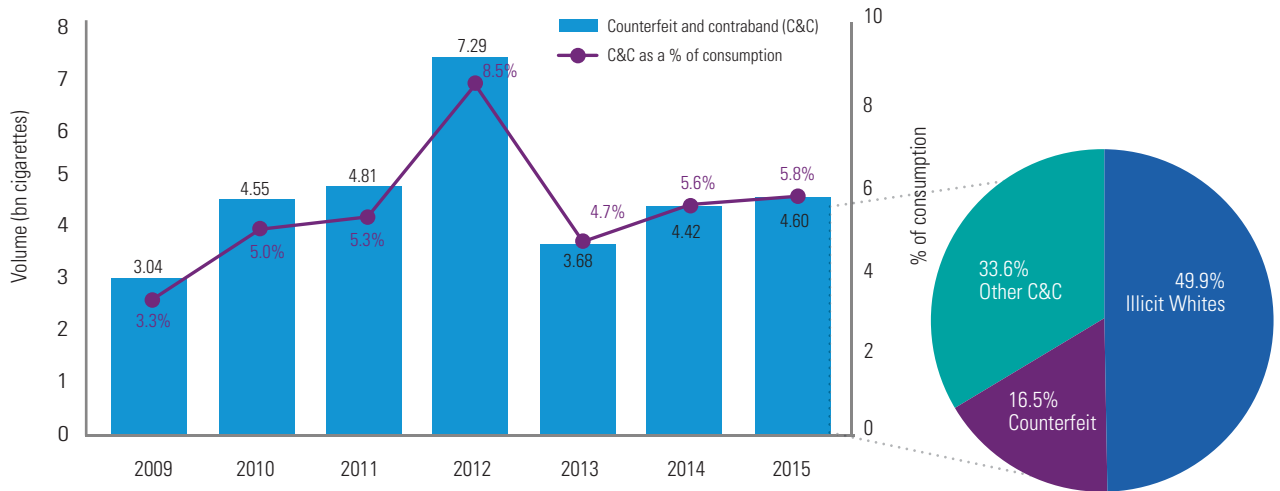


# Italy

## Overview

- C&C remained stable at 5.8% of total consumption in 2015
- Illicit Whites brand flows decreased by 9%, but still accounted for the largest proportion of non-domestic consumption, representing 2.3 billion cigarettes
- The decline in Illicit Whites brand flows was offset by a doubling of counterfeit product, demonstrating the flexibility of illicit cigarette flows
- Although overall consumption remained stable, ND(L) grew by 17% as more tourists visited Italy in 2015

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

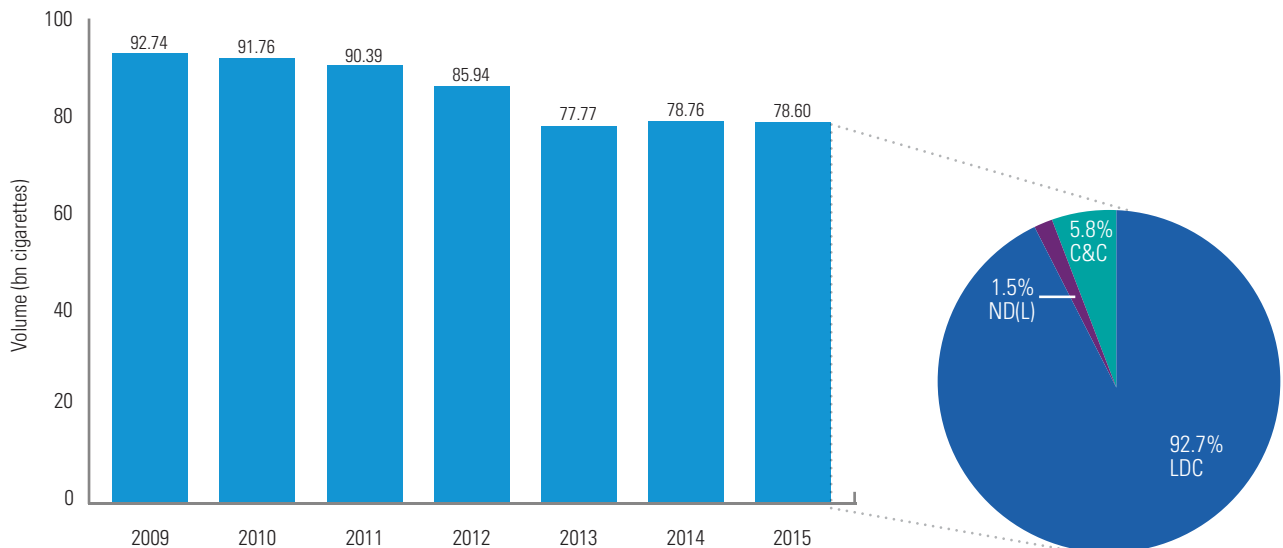


Italy

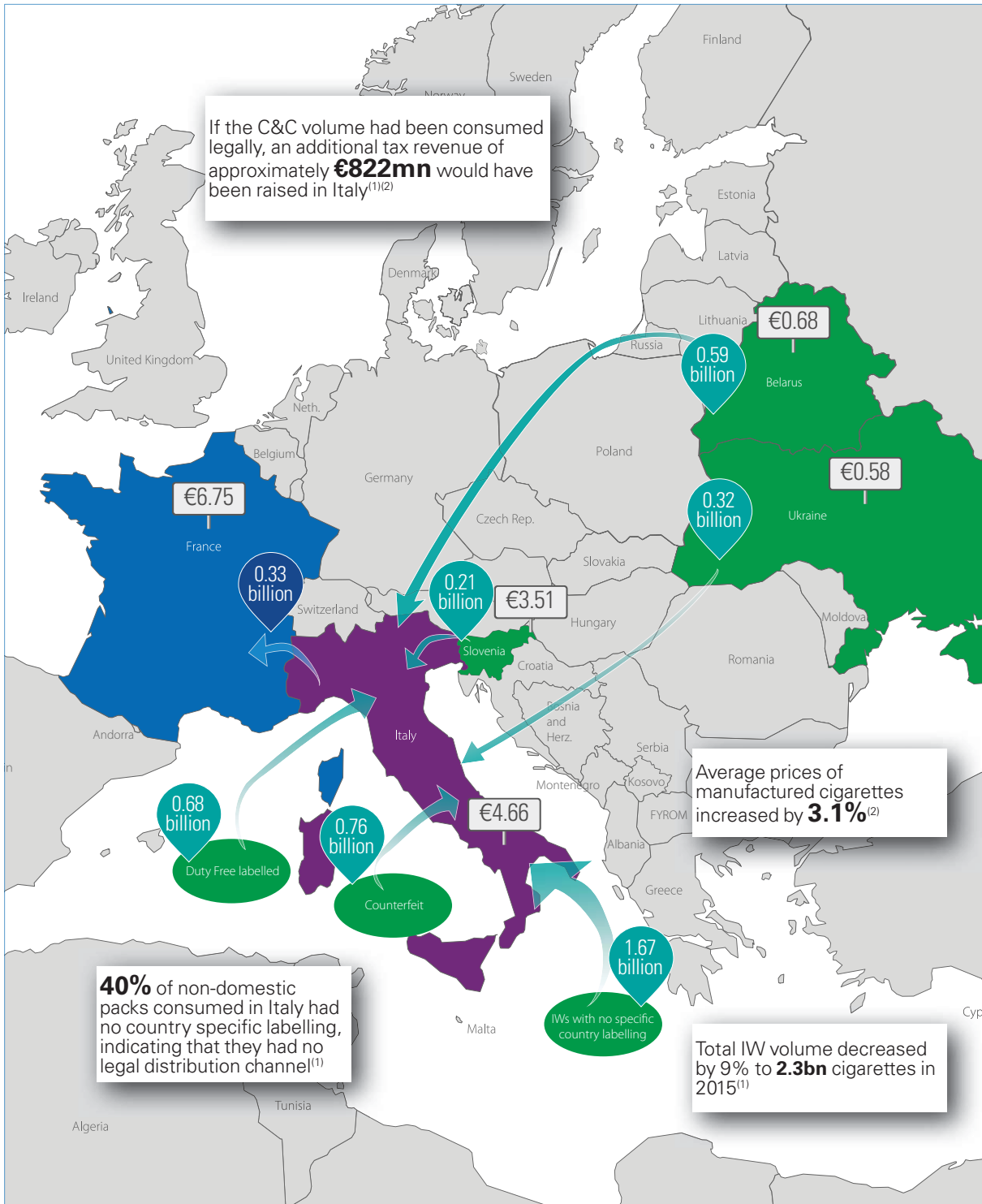


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## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows



Italy  
Project SUN

Main outflow ■  
Main inflow ■  
Weighted average price for a pack of 20 cigarettes   
Number of cigarettes ●

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
Source: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL ITALY CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	89.16	87.05	85.47	78.74	74.04	74.44	73.82	(1%)
Outflows	-0.92	-0.93	-1.01	-0.93	-0.78	-1.08	-0.98	(10%)
Legal domestic consumption (LDC)	88.24	86.12	84.46	77.81	73.25	73.36	72.85	(1%)
Non-domestic legal (ND(L))	1.46	1.09	1.12	0.84	0.84	0.99	1.16	17%
Counterfeit and contraband (C&C)	3.04	4.55	4.81	7.29	3.68	4.42	4.60	4%
Total non-domestic	4.50	5.64	5.93	8.13	4.52	5.41	5.75	6%
<b>Total consumption</b>	<b>92.74</b>	<b>91.76</b>	<b>90.39</b>	<b>85.94</b>	<b>77.77</b>	<b>78.76</b>	<b>78.60</b>	<b>(0%)</b>

- Legal domestic sales and C&C remained stable in 2015
- The increase in ND(L) was supported by a 40% increase in Slovenian product, mainly from cross-border purchases
- Flows from Belarus and Ukraine increased by 193% to become major sources of inflows alongside Illicit Whites brands with no country specific labelling
- Total outflows from Italy fell, led by a 30% decrease in French outflows, which may have been influenced by price stability in France in 2015

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO ITALY								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
IWs with no country-specific labelling	0.01	0.15	0.59	1.27	0.86	2.27	1.67	
Duty Free labelled	0.94	0.98	0.95	1.52	0.91	0.86	0.68	
Counterfeit					0.33	0.31	0.76	
Belarus	0.01	0.01	0.04	0.76	0.50	0.19	0.59	
Ukraine	0.92	1.61	1.52	1.83	0.32	0.12	0.32	
Slovenia	0.13	0.09	0.21	0.10	0.19	0.15	0.21	
France	0.04	0.10	0.08	0.14	0.07	0.05	0.10	
Germany	0.04	0.11	0.06	0.08	0.05	0.05	0.09	
Other	2.41	2.60	2.49	2.42	1.29	1.40	1.33	
<b>Total inflows</b>	<b>4.50</b>	<b>5.64</b>	<b>5.93</b>	<b>8.13</b>	<b>4.52</b>	<b>5.41</b>	<b>5.75</b>	

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM ITALY								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
France	0.32	0.38	0.51	0.31	0.39	0.47	0.33	
Switzerland						0.12	0.18	
Netherlands	0.06	0.21	0.18	0.17	0.13	0.13	0.13	
Germany	0.08	0.11	0.10	0.10	0.10	0.08	0.10	
UK	0.25	0.04	0.05	0.16	0.03	0.04	0.05	
Other	0.21	0.18	0.18	0.18	0.13	0.24	0.19	
<b>Total outflows</b>	<b>0.92</b>	<b>0.93</b>	<b>1.01</b>	<b>0.93</b>	<b>0.78</b>	<b>1.08</b>	<b>0.98</b>	

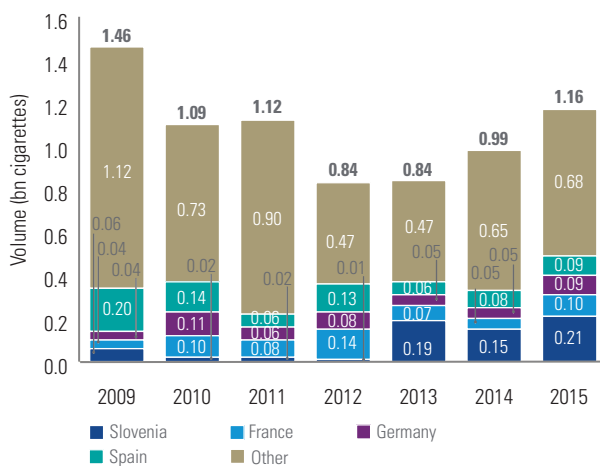
Note: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014

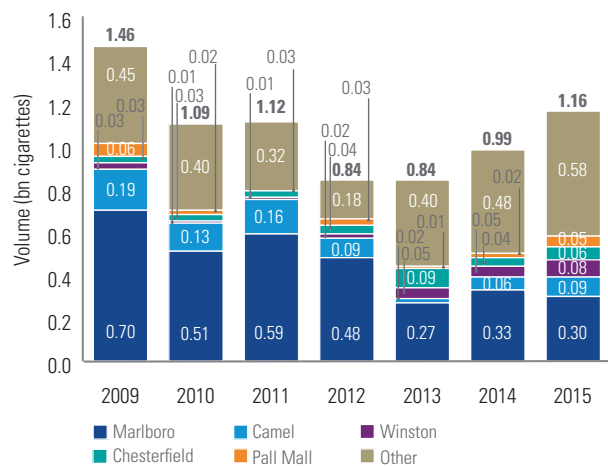
# ND(L) and C&C flows

- ND(L) reflects travel flows in 2015 along with cross-border purchases from Slovenia
  - Flows from France and Germany are both considered 100% ND(L) due to higher prices compared with Italy. Average French prices were €6.75 while German prices were €5.34 per pack in 2015
- Despite remaining stable, the composition of C&C changed in 2015, as brands from Belarus and Ukraine replaced Illicit Whites brand flows with no country specific labelling
  - Incidence of flows of Yesmoke dropped by 80% between the first and fourth quarters of 2015, while 821 was not identified after Q1.
  - Flows of Belarusian Minsk and NZ increased from 0.08 billion cigarettes in 2014 to 0.51 billion cigarettes in 2015
- Counterfeit flows more than doubled from 0.31 to 0.76 billion cigarettes to account for 16.5% of C&C in 2015
  - 65% of counterfeit identified was Marlboro, primarily with Russian labelling
  - The remaining counterfeit brands included Bond Street with Ukrainian labelling and L&M and Winston with Moldovan labelling

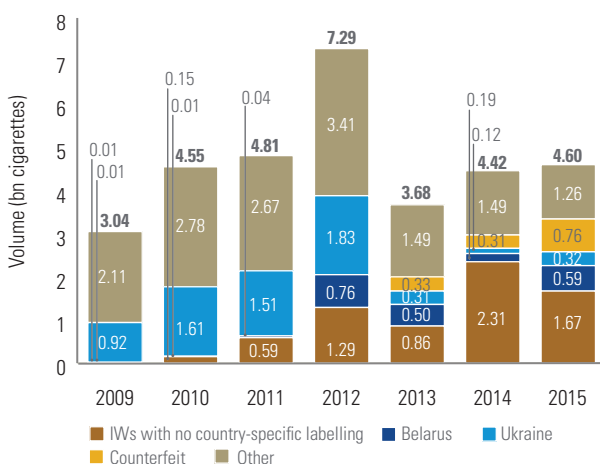
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



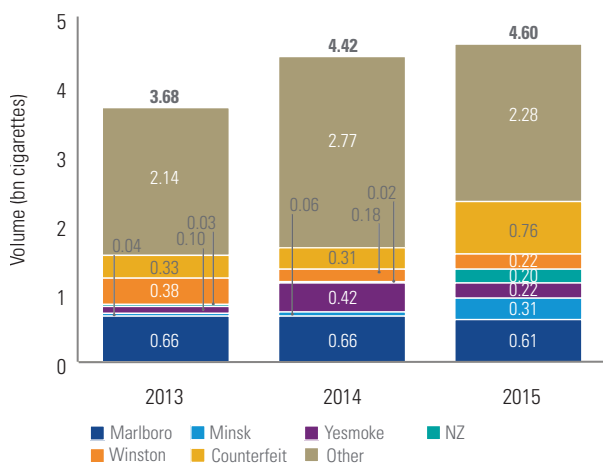
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>

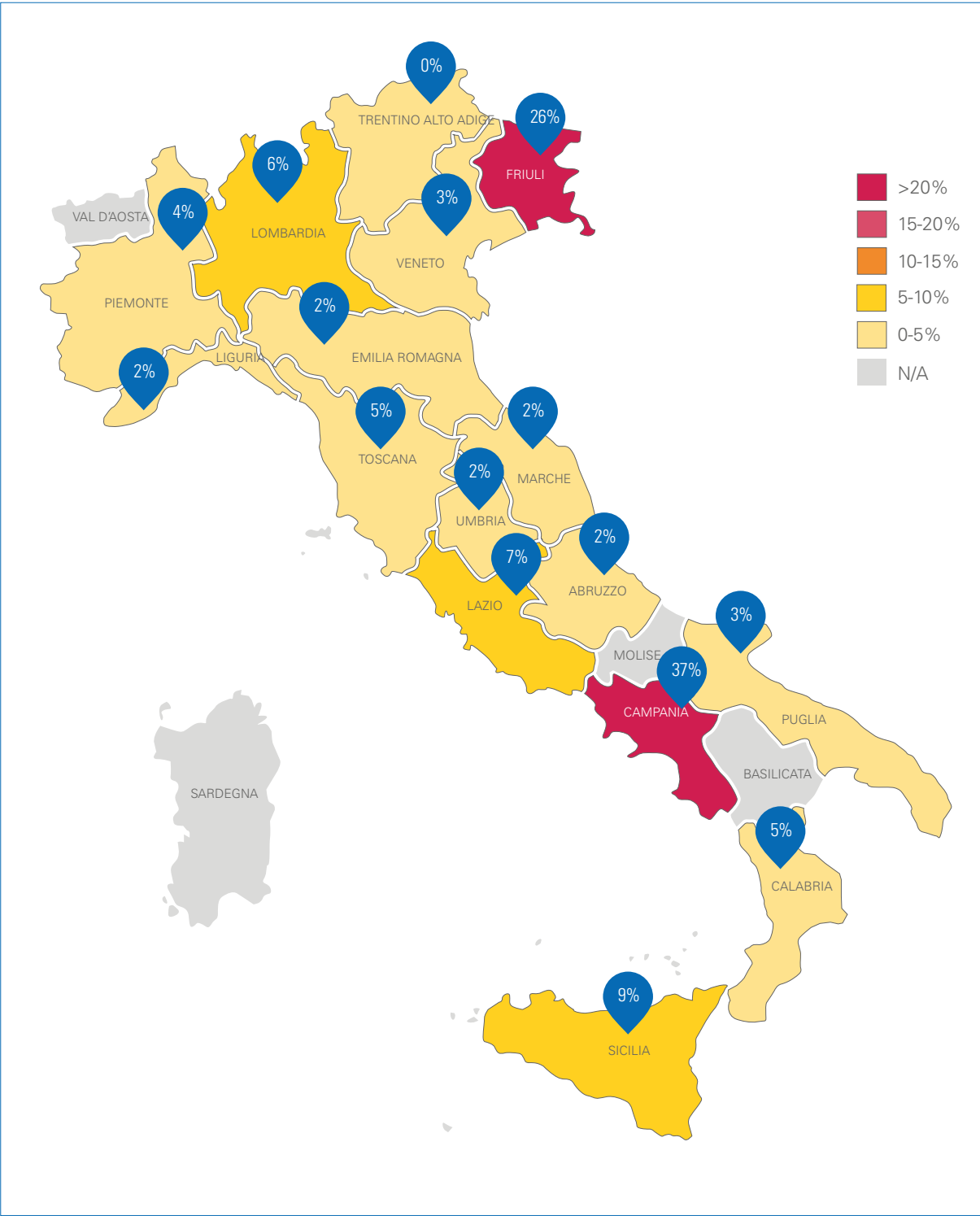


Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers



# Non-domestic incidence heat map



Source: Independent agency Empty Pack Survey, 2015



Italy



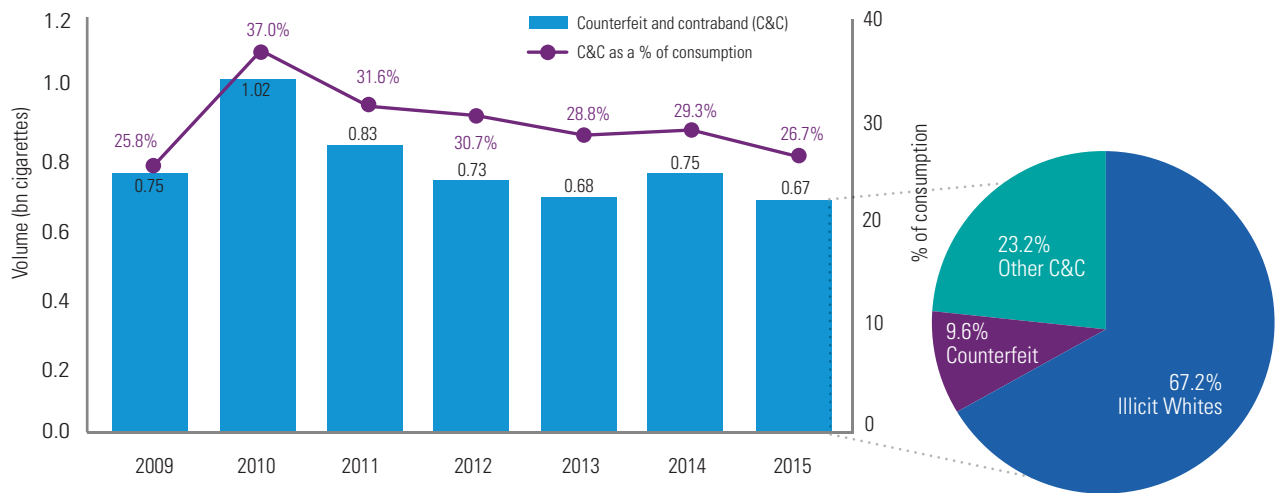
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# Latvia

## Overview

- C&C declined by 2.6 percentage points due to reduced flows from Russia but, as a percentage of total consumption, it remained the highest in Europe
- Total consumption declined by only 1.6% as an increase in legal domestic consumption partly offset the reduced C&C flows
- Almost 90% of C&C flows were from Russia and Belarus, with approximately two thirds being Illicit Whites brand flows from Belarus

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

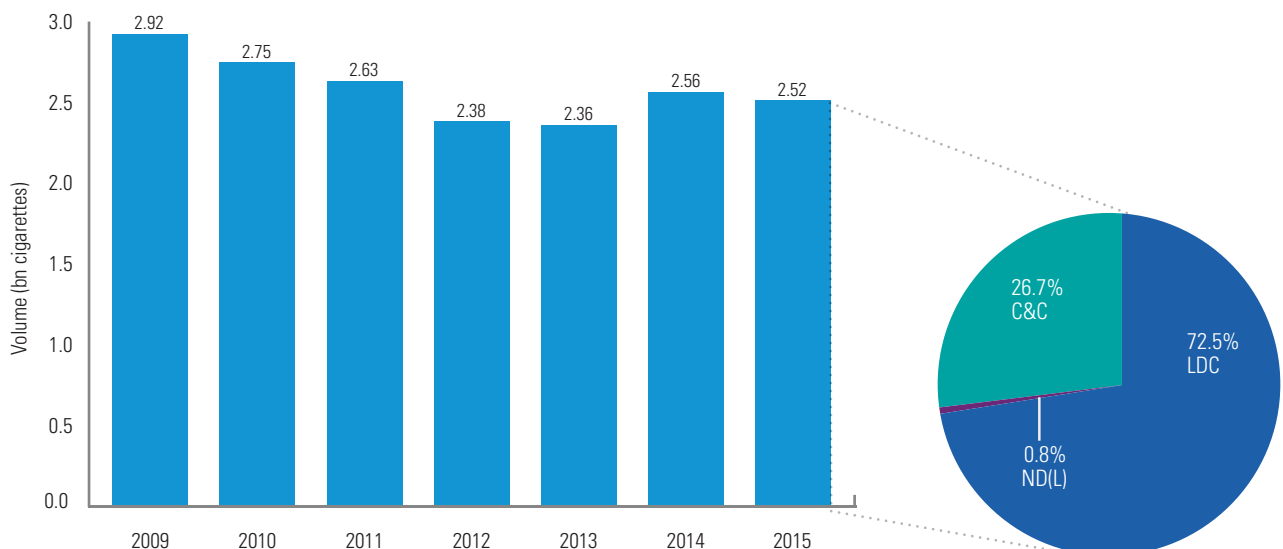


Latvia

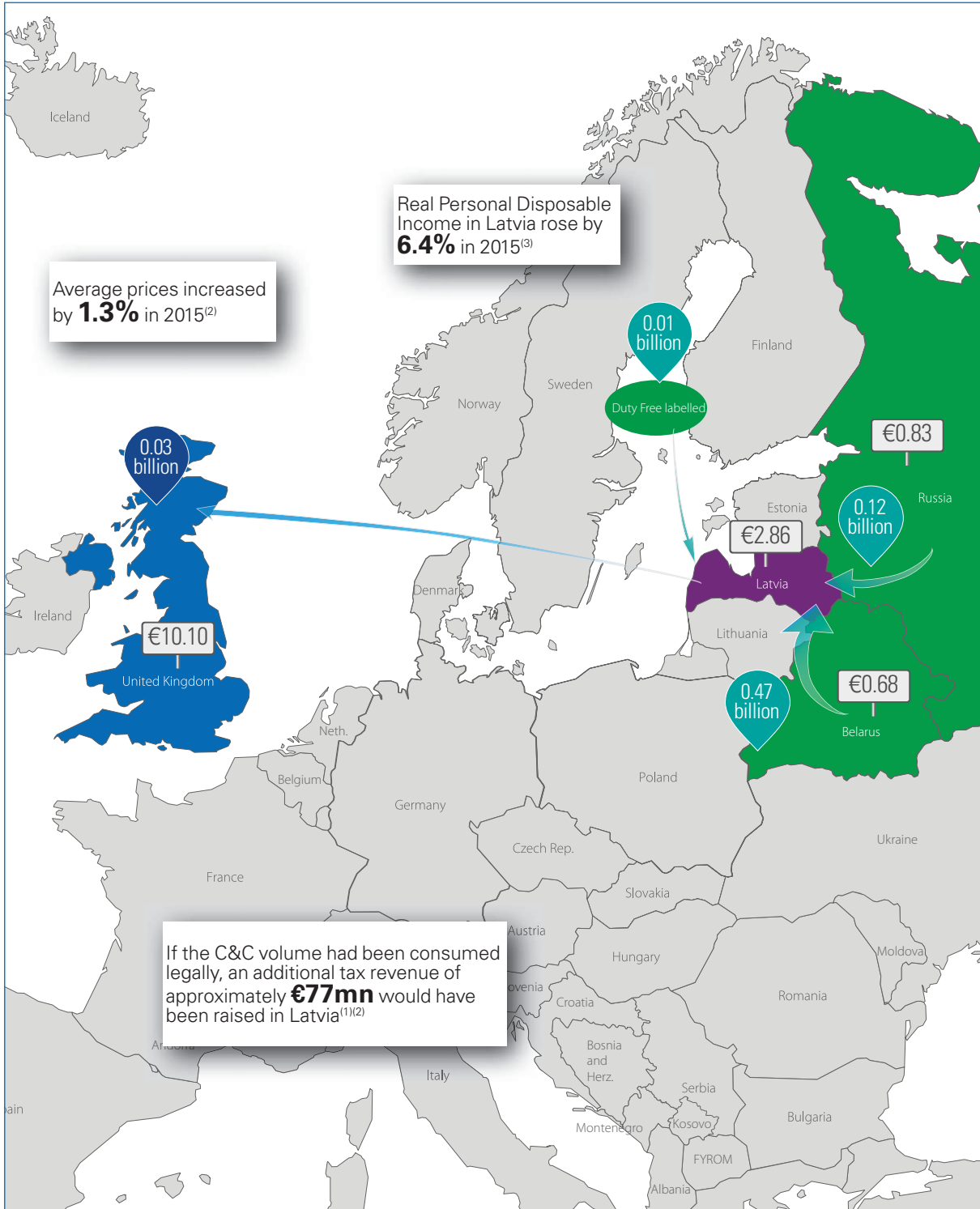


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## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows



Latvia  
Project SUN

- Main outflow ■
- Main inflow ■
- Weighted average price for a pack of 20 cigarettes
- Number of cigarettes ●

Notes: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow (b) Additional tax revenue calculation includes both VAT and Excise duty  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) (3) Economist Intelligence Unit  
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# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL LATVIA CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	2.12	1.65	1.77	1.68	1.67	1.86	1.91	3%
Outflows	-0.07	-0.04	-0.05	-0.10	-0.05	-0.06	-0.09	45%
Legal domestic consumption (LDC)	2.04	1.61	1.72	1.57	1.63	1.80	1.82	1%
Non-domestic legal (ND(L))	0.12	0.12	0.07	0.07	0.05	0.01	0.02	46%
Counterfeit and contraband (C&C)	0.75	1.02	0.83	0.73	0.68	0.75	0.67	(10%)
Total non-domestic	0.88	1.14	0.90	0.80	0.73	0.76	0.69	(9%)
<b>Total consumption</b>	<b>2.92</b>	<b>2.75</b>	<b>2.63</b>	<b>2.38</b>	<b>2.36</b>	<b>2.56</b>	<b>2.52</b>	<b>(2%)</b>

- Legal domestic consumption remained stable. The small decrease in total consumption was accounted for by reduced C&C flows
- Total inflows fell by 9%, driven largely by a reduction in flows from Russia and Belarus. Flows from Russia continued to fall, possibly due to strict excise policy in Russia, lower prices in Belarus and an increased number of seizures
- Outflows to the UK and Germany increased significantly in percentage terms

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO LATVIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Belarus	0.10	0.24	0.23	0.33	0.42	0.51	0.47
Russia	0.72	0.86	0.64	0.43	0.30	0.21	0.12
Duty Free labelled	0.01	0.01	0.01	0.01	0.00	0.01	0.01
Ukraine	0.02	0.01	0.00	0.01	0.00	0.00	0.00
Lithuania	0.02	0.01	0.00	0.00	0.00	0.00	0.00
Other	0.01	0.02	0.02	0.02	0.01	0.04	0.08
<b>Total inflows</b>	<b>0.88</b>	<b>1.14</b>	<b>0.90</b>	<b>0.80</b>	<b>0.73</b>	<b>0.76</b>	<b>0.69</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM LATVIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
UK	0.02	0.01	0.02	0.04	0.01	0.01	0.03
Germany	0.01	0.01	0.00	0.00	0.00	0.01	0.02
Finland	0.01	0.00	0.00	0.01	0.00	0.01	0.01
Sweden	0.00	0.00	0.00	0.01	0.01	0.01	0.01
Lithuania	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Other	0.03	0.02	0.02	0.04	0.02	0.03	0.02
<b>Total outflows</b>	<b>0.07</b>	<b>0.04</b>	<b>0.05</b>	<b>0.10</b>	<b>0.05</b>	<b>0.06</b>	<b>0.09</b>

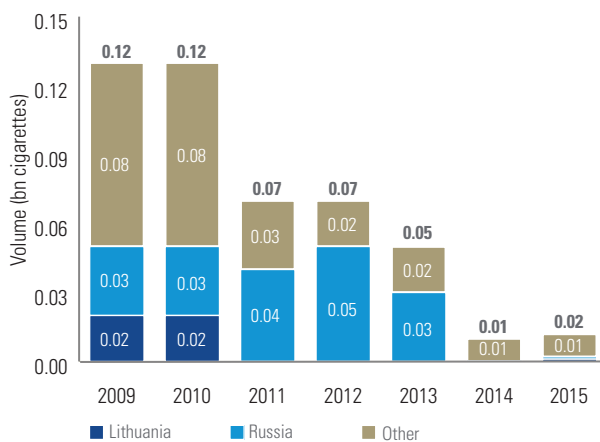
Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014

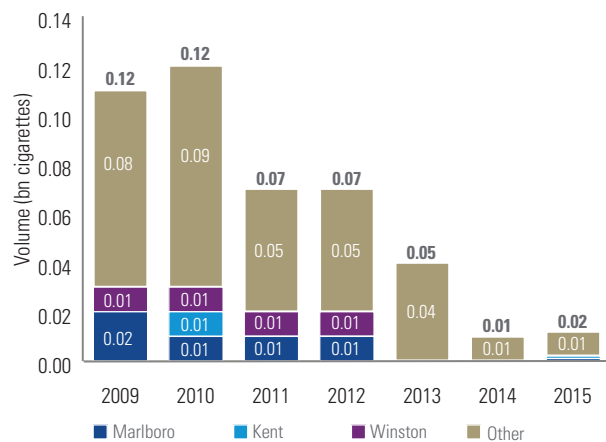
# ND(L) and C&C flows

- Low volumes of ND(L) were identified, due to the low legal limit of 40 cigarettes per month that can be brought from non-EU countries to Latvia
- Illicit Whites brand flows trademark-owned by Grodno Tobacco (including Premier, NZ and Fest) accounted for half of the total C&C inflow
- Over 90% of counterfeit was Winston with Russian labelling

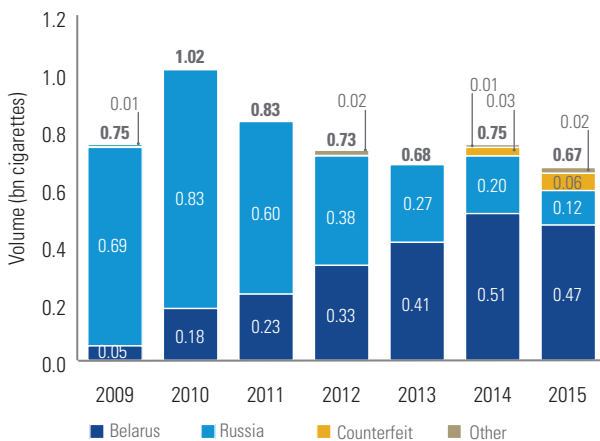
**ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>**



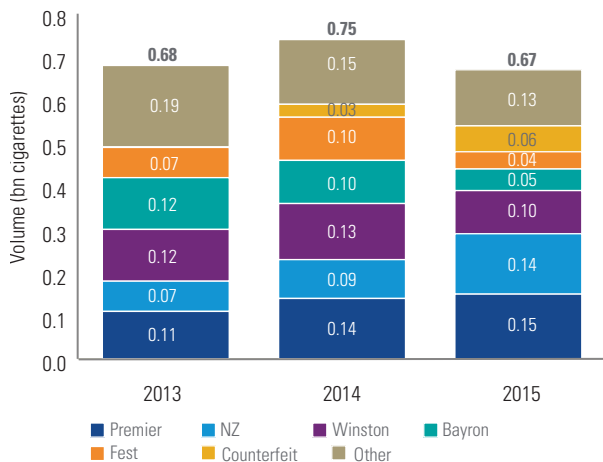
**ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>**



**C&C by country of origin - 2009-2015<sup>(1)(a)</sup>**



**C&C by brand - 2013-2015<sup>(1)(a)</sup>**



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

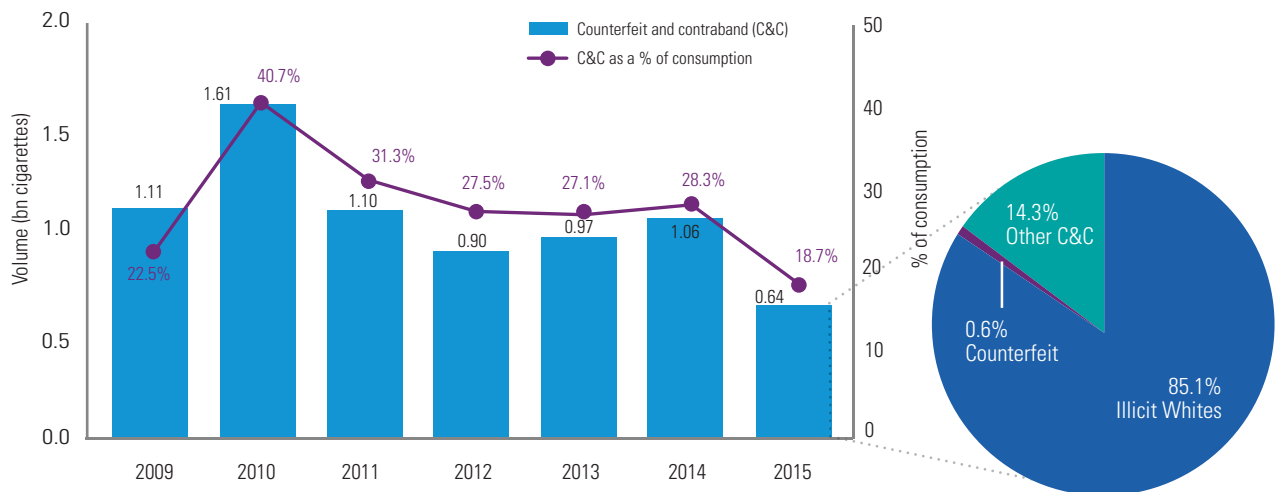


# Lithuania

## Overview

- C&C inflows fell by 40% due to reduced flows from Belarus and Russia
- Total consumption fell by 9% despite an increase in legal domestic consumption of 2%
- Outflows to the UK and Norway more than doubled

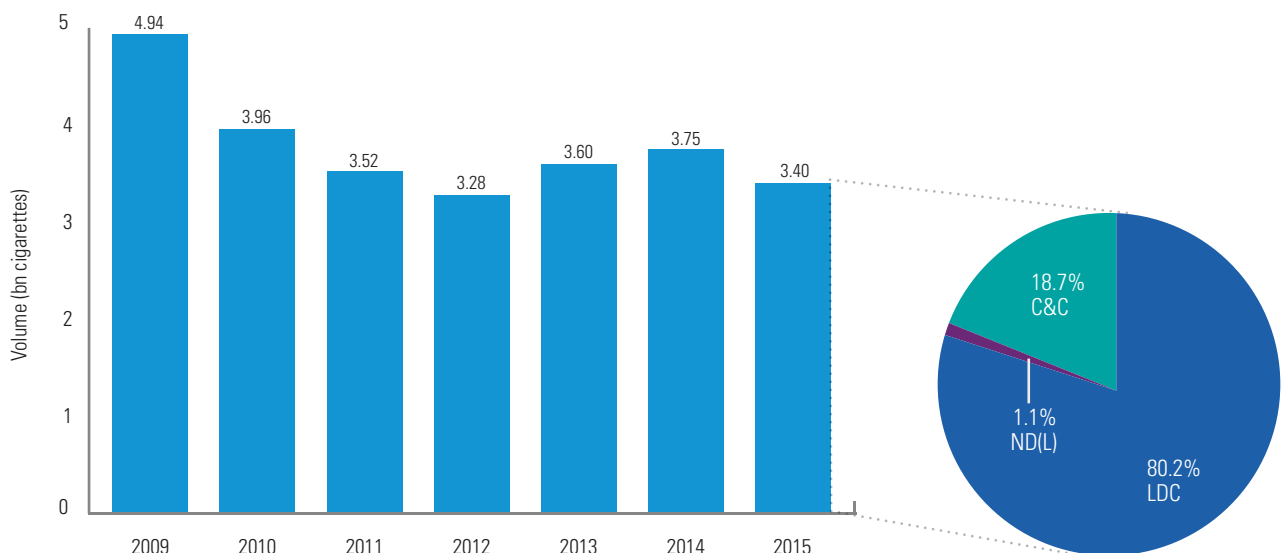
## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015



Lithuania

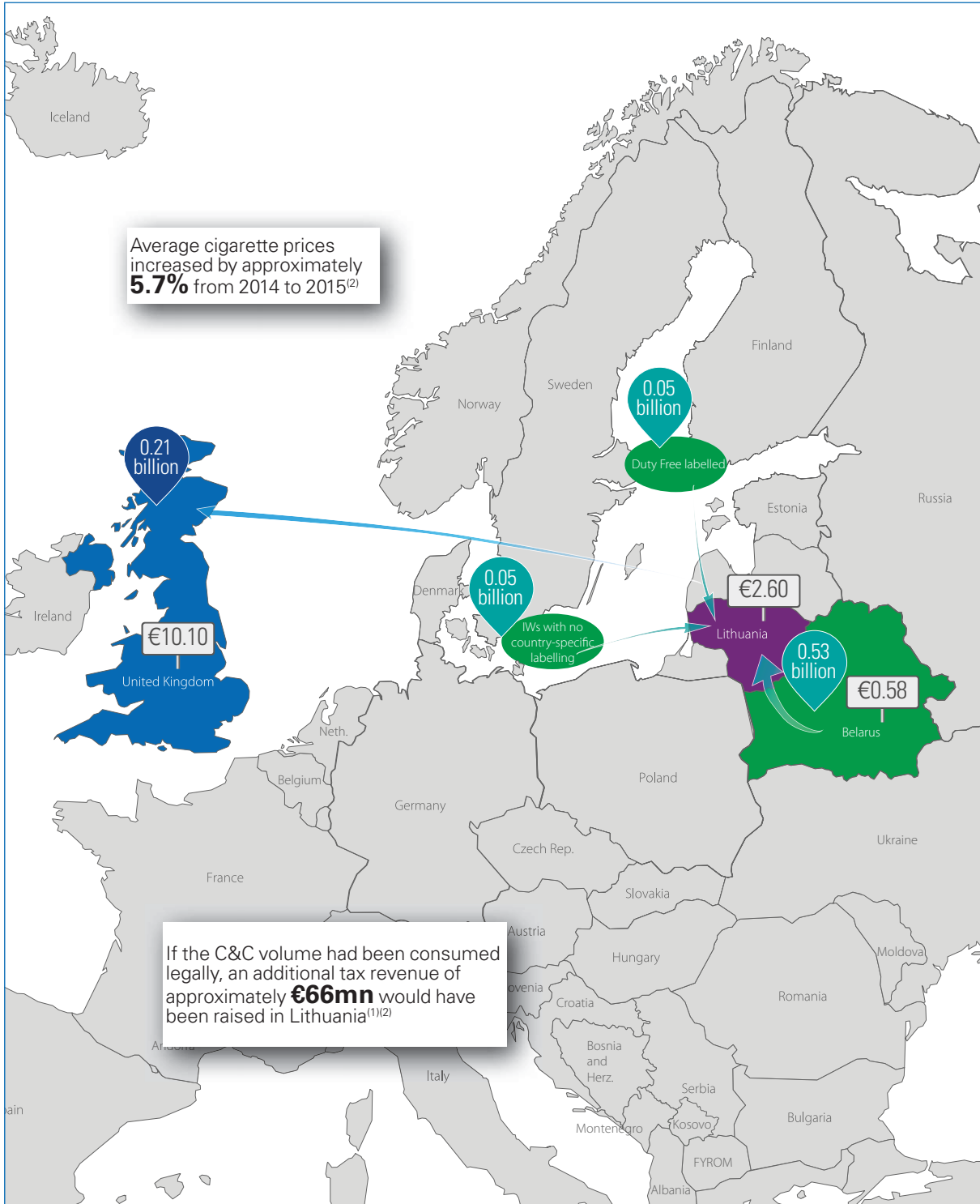


## Manufactured cigarette consumption - 2009-2015

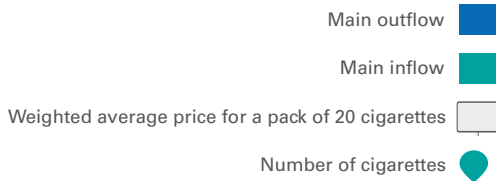


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# Key inflows and outflows



Lithuania  
Project SUN



Notes: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow (b) Additional tax revenue calculation includes both VAT and Excise duty  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL LITHUANIA CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	4.17	2.48	2.70	2.62	2.79	2.92	3.17	9%
Outflows	-0.41	-0.19	-0.37	-0.40	-0.25	-0.26	-0.45	73%
Legal domestic consumption (LDC)	3.76	2.29	2.34	2.22	2.54	2.66	2.73	2%
Non-domestic legal (ND(L))	0.07	0.06	0.08	0.16	0.09	0.02	0.04	59%
Counterfeit and contraband (C&C)	1.11	1.61	1.10	0.90	0.97	1.06	0.64	(40%)
Total non-domestic	1.18	1.67	1.18	1.06	1.06	1.09	0.67	(38%)
<b>Total consumption</b>	<b>4.94</b>	<b>3.96</b>	<b>3.52</b>	<b>3.28</b>	<b>3.60</b>	<b>3.75</b>	<b>3.40</b>	<b>(9%)</b>

- Non-domestic consumption decreased by 38% against a backdrop of strengthened border control
- Legal domestic sales grew, driven primarily by a reduction in C&C inflows
- Outflows to the UK more than doubled and were at levels similar to 2011/2012

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO LITHUANIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Belarus	0.23	0.78	0.80	0.76	0.81	0.87	0.53
Duty Free labelled	0.05	0.08	0.07	0.09	0.08	0.07	0.05
IWs with no country-specific labelling	0.00	0.00	0.01	0.01	0.02	0.05	0.05
Russia	0.87	0.78	0.28	0.18	0.12	0.06	0.02
Ukraine	0.01	0.01	0.01	0.00	0.00	0.00	0.01
Other	0.02	0.02	0.02	0.02	0.02	0.03	0.02
<b>Total inflows</b>	<b>1.18</b>	<b>1.67</b>	<b>1.18</b>	<b>1.06</b>	<b>1.06</b>	<b>1.09</b>	<b>0.67</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM LITHUANIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
UK	0.19	0.06	0.21	0.22	0.09	0.09	0.21
Norway						0.02	0.13
Ireland	0.07	0.06	0.06	0.06	0.05	0.03	0.02
Germany	0.02	0.02	0.03	0.03	0.03	0.05	0.02
France	0.02	0.00	0.02	0.05	0.04	0.03	0.02
Other	0.11	0.04	0.05	0.04	0.04	0.04	0.04
<b>Total outflows</b>	<b>0.41</b>	<b>0.19</b>	<b>0.37</b>	<b>0.40</b>	<b>0.25</b>	<b>0.26</b>	<b>0.45</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014

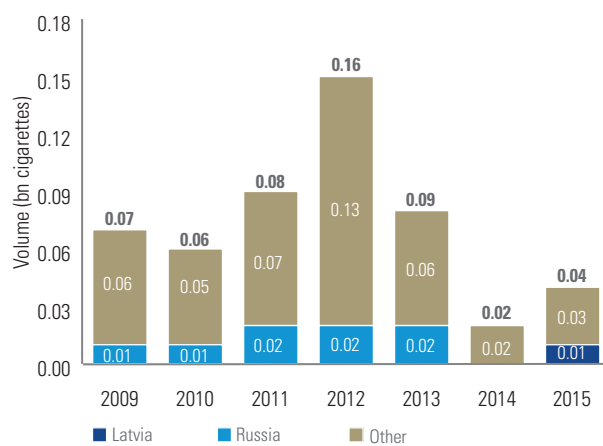




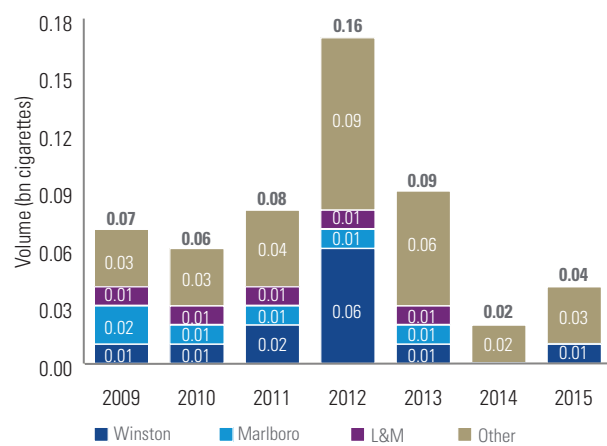
# ND(L) and C&C flows

- Belarus remained the major source of C&C flows, while the trend in declining C&C flows from Russia continued
- Reduced C&C volumes were seen across almost all C&C brands, with Illicit Whites brands Fest, Minsk and NZ retaining the largest share of the C&C market flows
- ND(L) flows remained low due to the low legal limit of 40 cigarettes per month that can be brought from non-EU countries to Lithuania

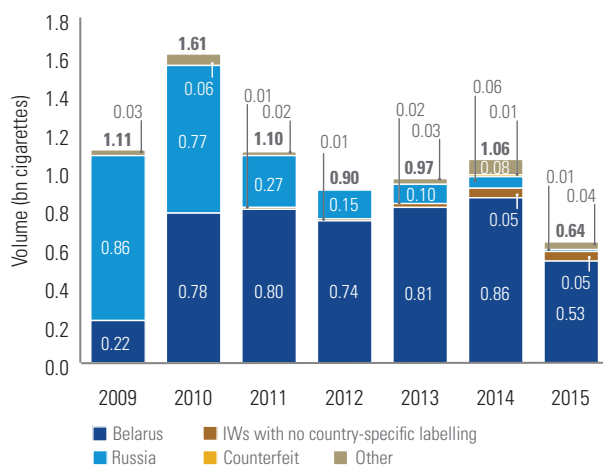
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



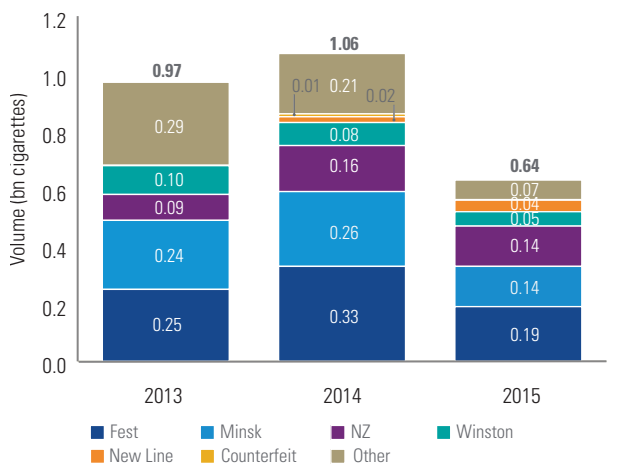
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Lithuania

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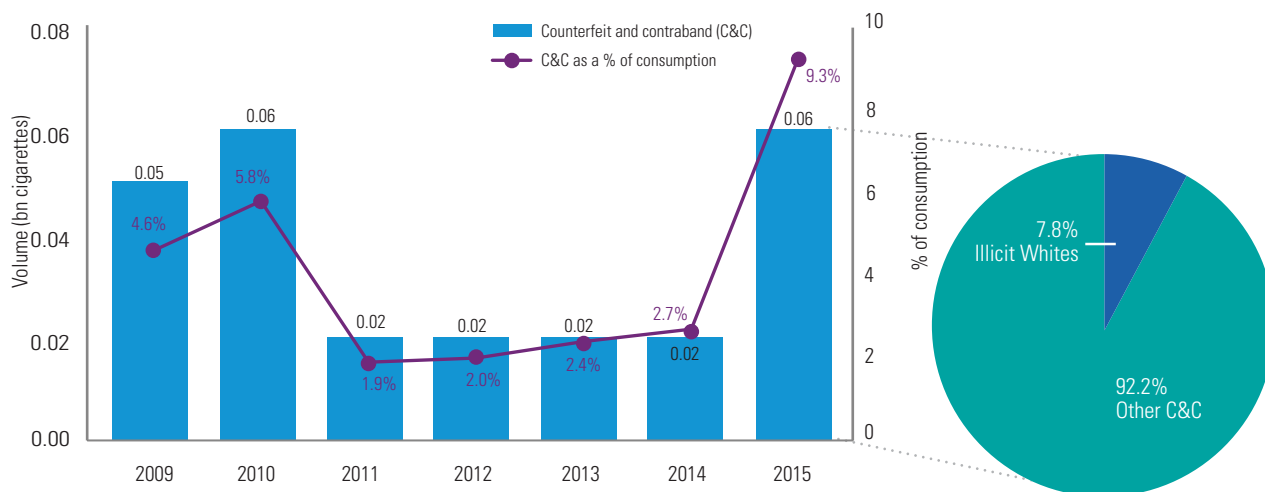
Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

# Luxembourg

- Total consumption declined by 10% due to a decrease in legal domestic consumption
- C&C volumes increased, mainly from Eastern Europe and Russia
- With the lowest prices in the region, Luxembourg is predominantly an outflow country with 81% of legal domestic sales leaving the country and consumed legally in neighbouring countries
- The largest C&C flows identified came from Russia and FYROM

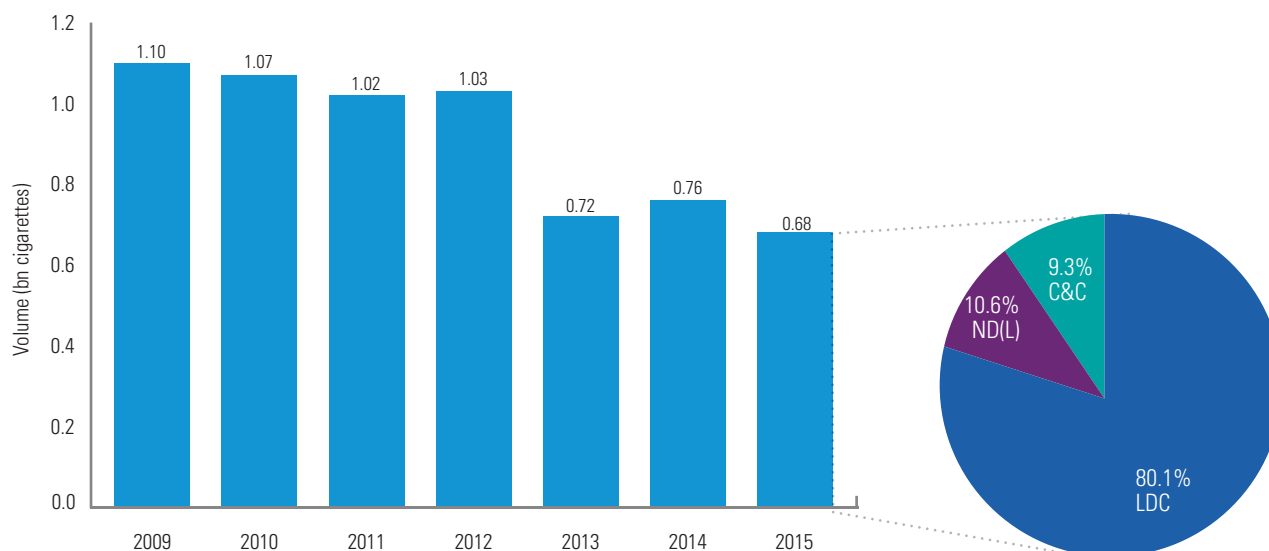
## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015



Luxembourg

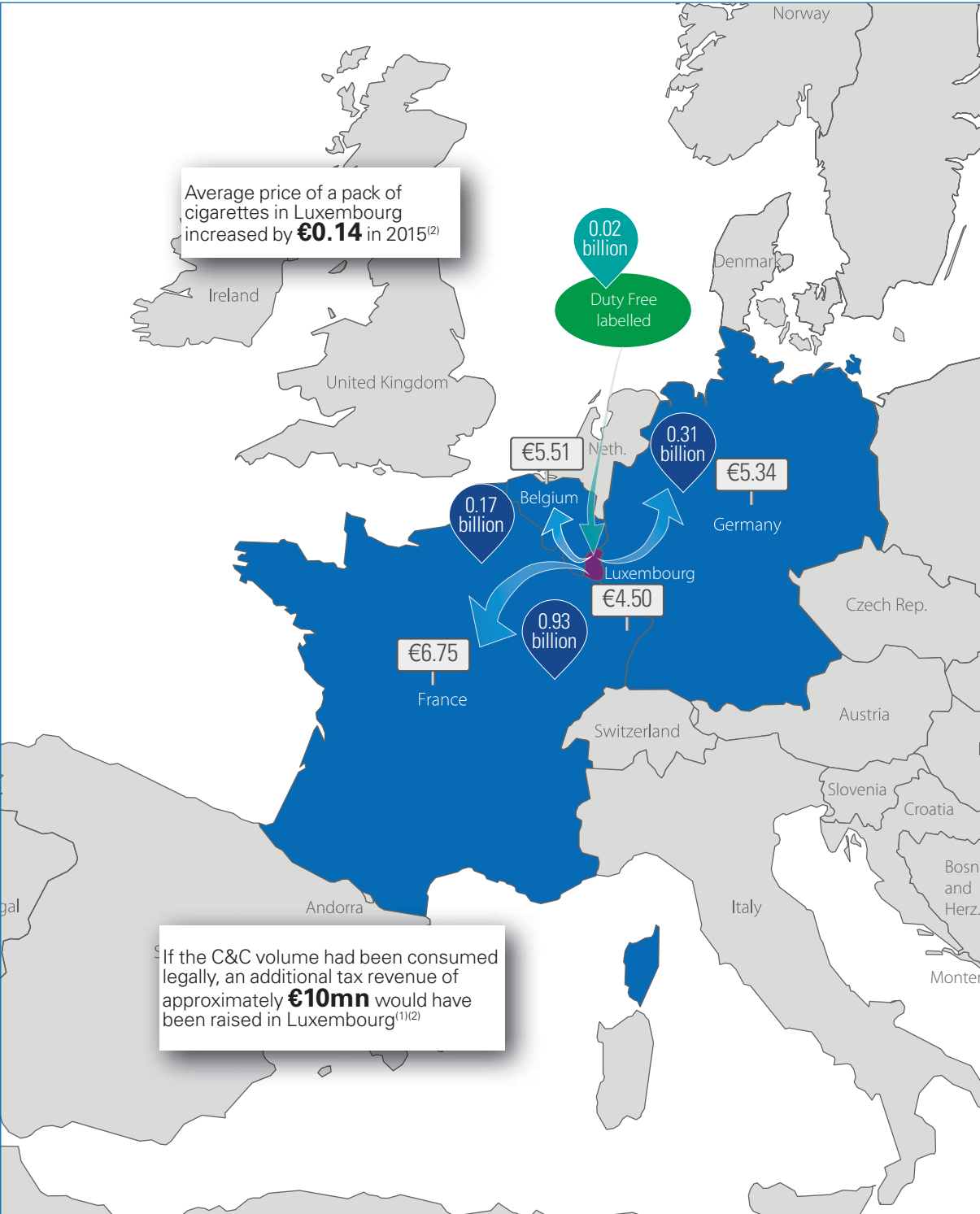


## Manufactured cigarette consumption - 2009-2015



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# Key inflows and outflows



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Luxembourg

Main outflow ■  
 Main inflow ■  
 Weighted average price for a pack of 20 cigarettes   
 Number of cigarettes ●

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL LUXEMBOURG CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	4.15	3.93	3.94	3.68	3.42	3.39	2.84	(16%)
Outflows	-3.18	-3.00	-2.98	-2.72	-2.77	-2.74	-2.30	(16%)
Legal domestic consumption (LDC)	0.97	0.93	0.96	0.96	0.66	0.65	0.54	(16%)
Non-domestic legal (ND(L))	0.07	0.07	0.04	0.05	0.04	0.09	0.07	(16%)
Counterfeit and contraband (C&C)	0.05	0.06	0.02	0.02	0.02	0.02	0.06	213%
Total non-domestic	0.12	0.13	0.06	0.07	0.06	0.11	0.14	28%
<b>Total consumption</b>	<b>1.10</b>	<b>1.07</b>	<b>1.02</b>	<b>1.03</b>	<b>0.72</b>	<b>0.76</b>	<b>0.68</b>	<b>(10%)</b>

- Over half of the inflows to Luxembourg are considered legal as the largest inflow countries, France and Belgium, have higher prices; therefore inflows are generally reflective of tourist flows
- Over 60% of outflows went to neighbouring France, Germany and Belgium. As Luxembourg is one of the cheapest markets in Western Europe, flows also go to many other EU countries in smaller volumes

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)(d)</sup>

ND INFLOWS TO LUXEMBOURG								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
France	0.02	0.01	0.01	0.02	0.01	0.03	0.02	
Duty Free labelled	0.01	0.01	0.01	0.01	0.00	0.01	0.02	
Belgium	0.04	0.06	0.01	0.00	0.01	0.02	0.02	
Portugal	0.00	0.03	0.00	0.00	0.00	0.00	0.01	
FYROM	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Other	0.05	0.03	0.03	0.03	0.03	0.05	0.05	
<b>Total inflows</b>	<b>0.12</b>	<b>0.13</b>	<b>0.06</b>	<b>0.07</b>	<b>0.06</b>	<b>0.11</b>	<b>0.14</b>	

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM LUXEMBOURG								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
France	0.58	0.52	0.73	1.11	1.08	1.11	0.93	
Germany	0.80	0.38	0.41	0.46	0.45	0.48	0.31	
Belgium	0.12	0.23	0.47	0.51	0.42	0.25	0.17	
Other	1.68	1.87	1.37	0.63	0.82	0.91	0.89	
<b>Total outflows</b>	<b>3.18</b>	<b>3.00</b>	<b>2.98</b>	<b>2.72</b>	<b>2.77</b>	<b>2.74</b>	<b>2.30</b>	

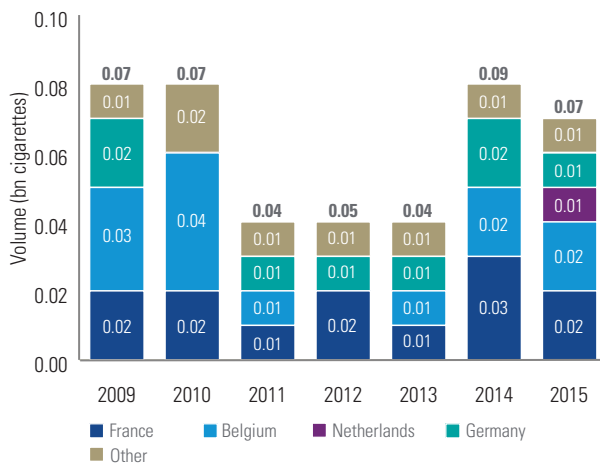
Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling (d) Fieldwork was undertaken during the public holiday celebrating All Saints Day which may have impacted the level of non-domestic product

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014

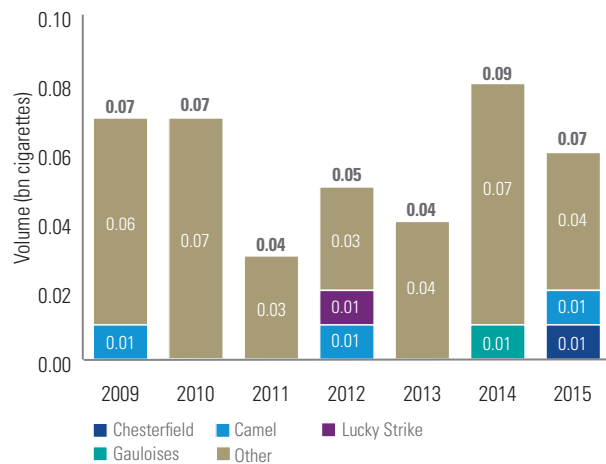
# ND(L) and C&C flows

- ND(L) declined by 16%, reflecting reduced inflows from Germany, France and the Netherlands
  - All flows from France, Belgium, the Netherlands and Germany were considered legal as average prices were higher than in Luxembourg
- 40% of flows identified as C&C came from Russia, FYROM, Belarus and Egypt, all countries which had lower prices than Luxembourg in 2015

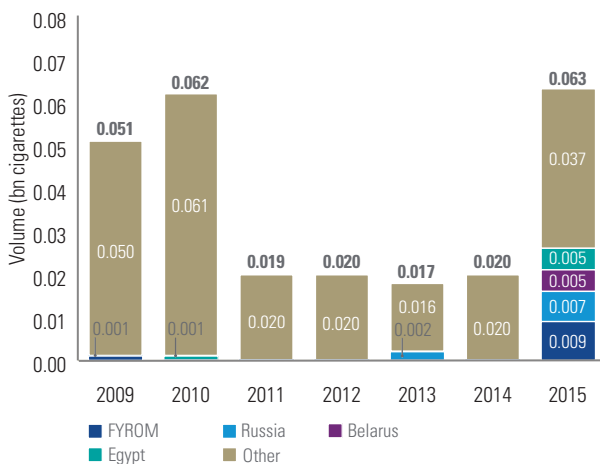
**ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>**



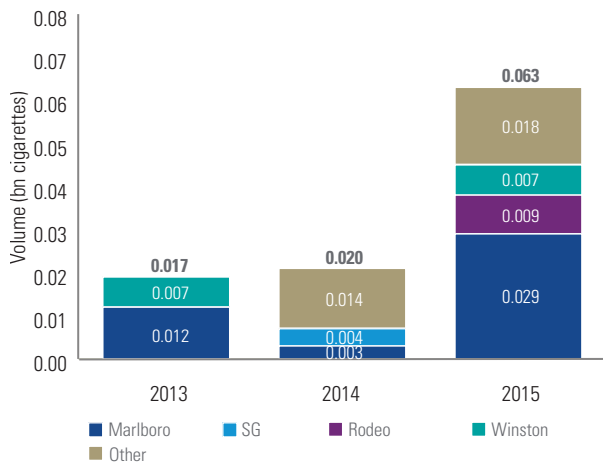
**ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>**



**C&C by country of origin - 2009-2015<sup>(1)(a)</sup>**



**C&C by brand - 2013-2015<sup>(1)(a)</sup>**



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

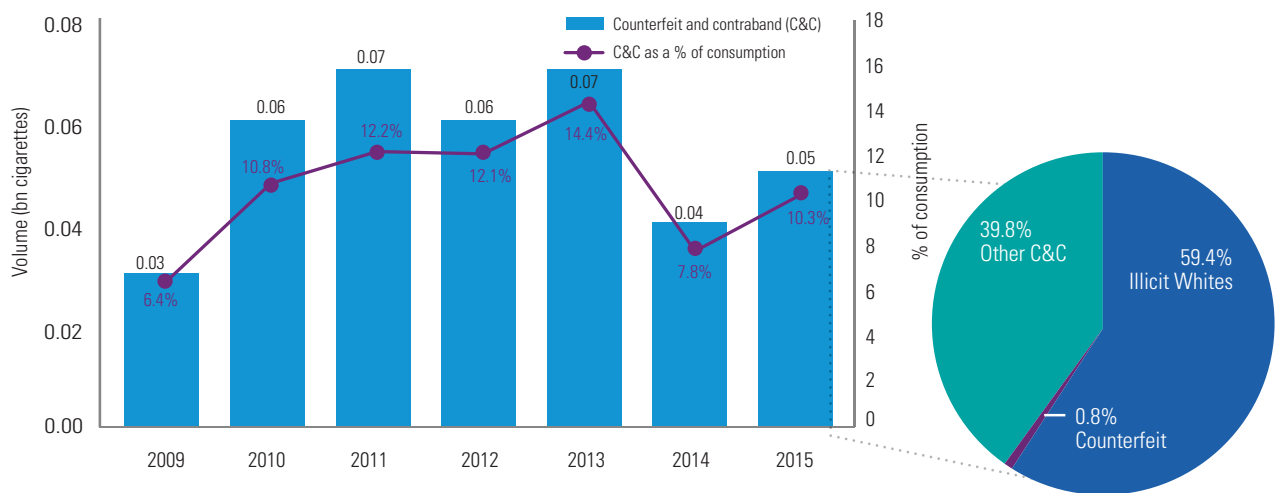


# Malta

## Overview

- Total legal consumption declined whilst C&C increased
- C&C increased by 28% against a backdrop of a 21% price increase
- Illicit Whites brand flows accounted for 60% of C&C flows compared with 22% in 2014

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

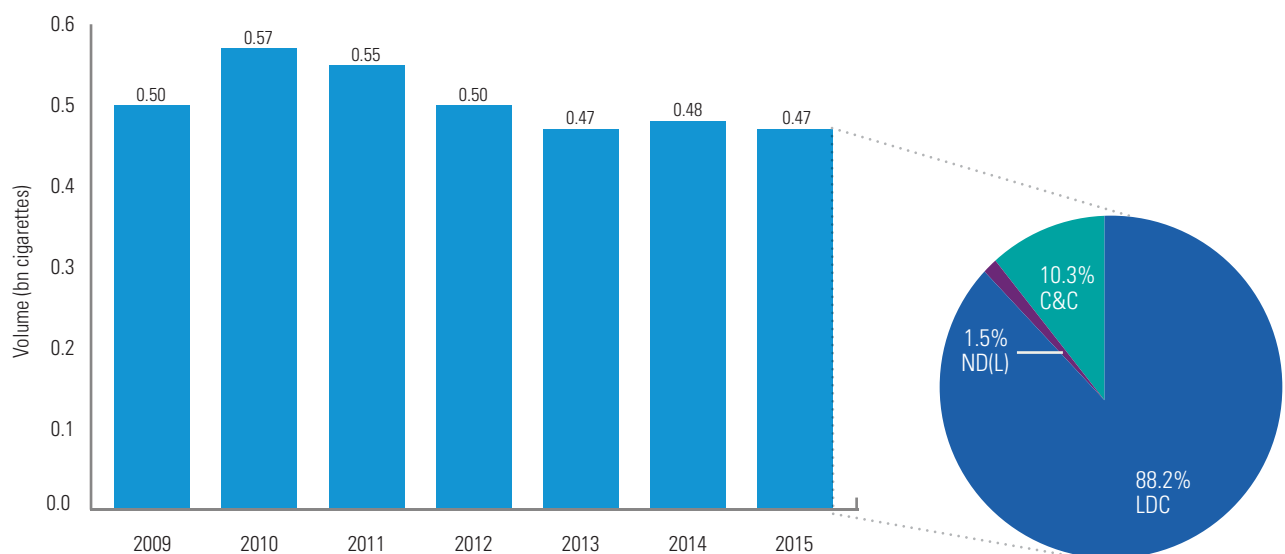


Malta

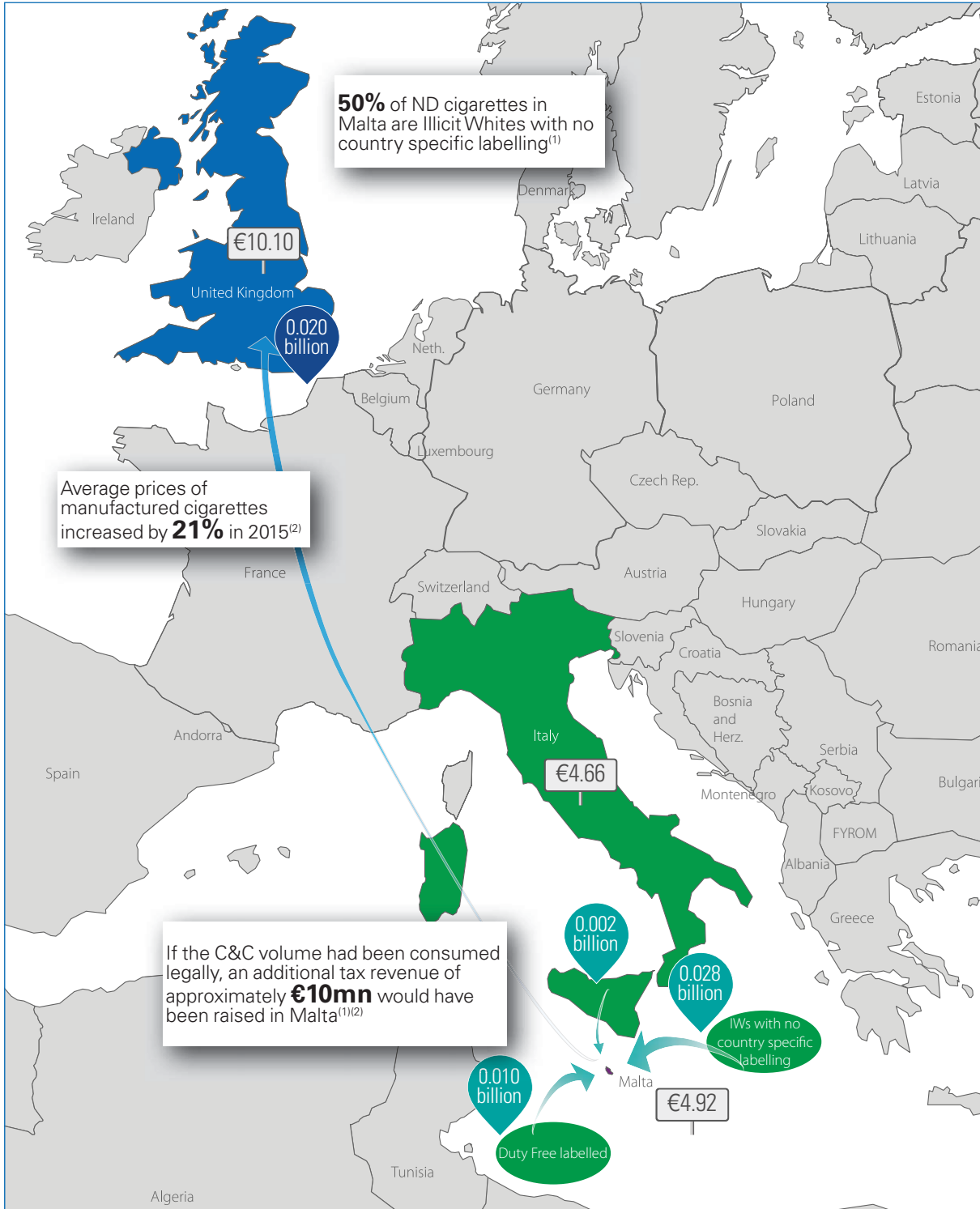


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## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows



Malta  
Project SUN

- Main outflow ■
- Main inflow ■
- Weighted average price for a pack of 20 cigarettes
- Number of cigarettes ●

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL MALTA CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	0.53	0.55	0.52	0.50	0.46	0.47	0.47	(1%)
Outflows	-0.07	-0.04	-0.05	-0.07	-0.06	-0.04	-0.05	36%
Legal domestic consumption (LDC)	0.46	0.51	0.47	0.43	0.40	0.43	0.42	(4%)
Non-domestic legal (ND(L))	0.01	0.01	0.01	0.01	0.00	0.01	0.01	(31%)
Counterfeit and contraband (C&C)	0.03	0.06	0.07	0.06	0.07	0.04	0.05	28%
Total non-domestic	0.04	0.07	0.07	0.07	0.07	0.05	0.06	15%
<b>Total consumption</b>	<b>0.50</b>	<b>0.57</b>	<b>0.55</b>	<b>0.50</b>	<b>0.47</b>	<b>0.48</b>	<b>0.47</b>	<b>(3%)</b>

- An increase in Illicit Whites brand flows with no country specific labelling was offset by a reduction in ND(L), resulting in a 15% increase in total inflows
- Duty free flows declined by 47%, which may have been due to increased enforcement of legal allowances by customs in Malta in 2015
- Outflows to France increased as tourist flows increased by 7.9%<sup>(2)</sup>

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO MALTA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
IWs with no country-specific labelling	0.000	0.017	0.017	0.037	0.035	0.000	0.028
Duty Free labelled	0.027	0.034	0.032	0.017	0.023	0.019	0.010
Unspecified	0.000	0.005	0.011	0.008	0.006	0.010	0.006
Italy	0.004	0.001	0.001	0.001	0.002	0.003	0.002
Bulgaria	0.000	0.001	0.000	0.000	0.001	0.000	0.001
Other	0.007	0.010	0.013	0.004	0.005	0.015	0.009
<b>Total inflows</b>	<b>0.039</b>	<b>0.069</b>	<b>0.074</b>	<b>0.068</b>	<b>0.073</b>	<b>0.048</b>	<b>0.056</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM MALTA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
UK	0.039	0.035	0.037	0.051	0.020	0.023	0.020
Spain	0.000	0.000	0.000	0.000	0.002	0.000	0.011
France	0.020	0.007	0.000	0.000	0.010	0.003	0.008
Other	0.011	0.003	0.009	0.020	0.032	0.012	0.015
<b>Total outflows</b>	<b>0.071</b>	<b>0.045</b>	<b>0.046</b>	<b>0.071</b>	<b>0.064</b>	<b>0.039</b>	<b>0.053</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014

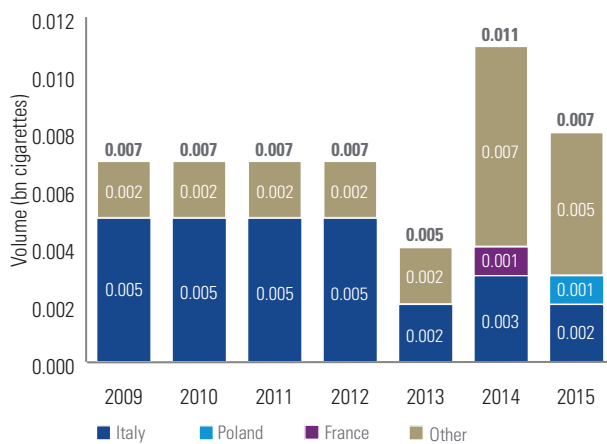




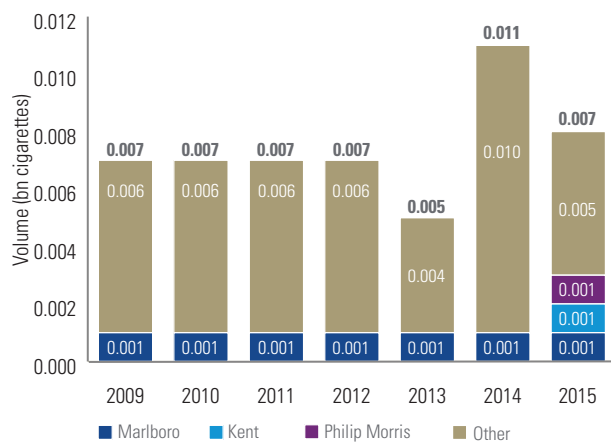
# ND(L) and C&C flows

- ND(L) decreased as increased flows from Poland was offset by lower flows from other European countries including Italy and France
- Illicit Whites brand flows increased from 0.009 in 2014 to 0.029 to account for 59% of C&C<sup>(c)</sup>
  - Business Royals and Tradition re-emerged in 2015 and accounted for 83% of Illicit Whites brand flows
  - Business Royals is only available from UAE Free Trade Zones

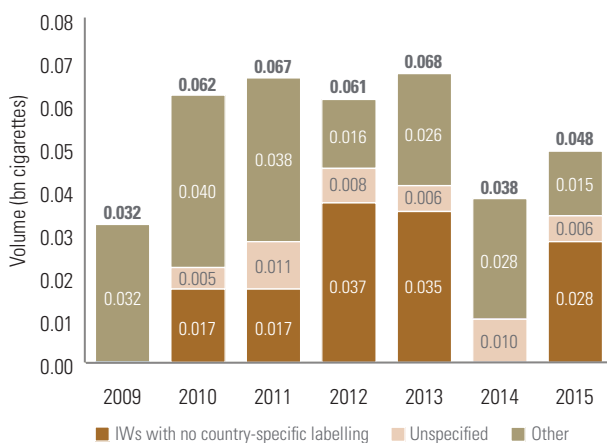
**ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>**



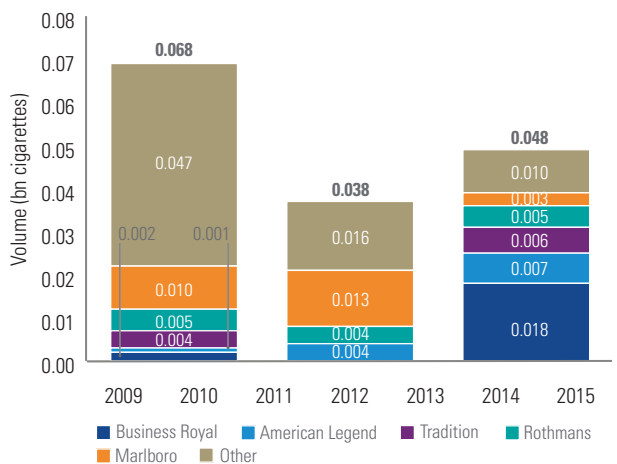
**ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>**



**C&C by country of origin - 2009-2015<sup>(1)(a)</sup>**



**C&C by brand - 2013-2015<sup>(1)(a)(c)</sup>**



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) American Legend had country specific labelling in 2014 and was accounted for as part of country specific Illicit Whites brand flows

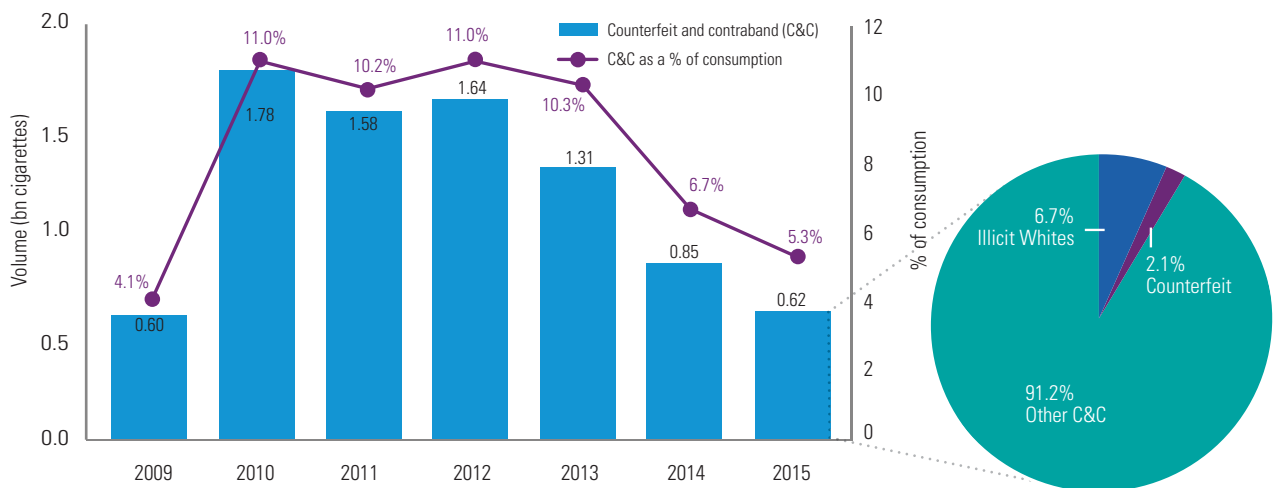
Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers



# Netherlands

- C&C continued its trend of decline, while ND(L) remained at 14% of total consumption
- 72% of non-domestic flows identified in the Netherlands were non-domestic legal, the majority came from neighbouring countries with lower prices and was found where large proportions of the population live close to the border

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

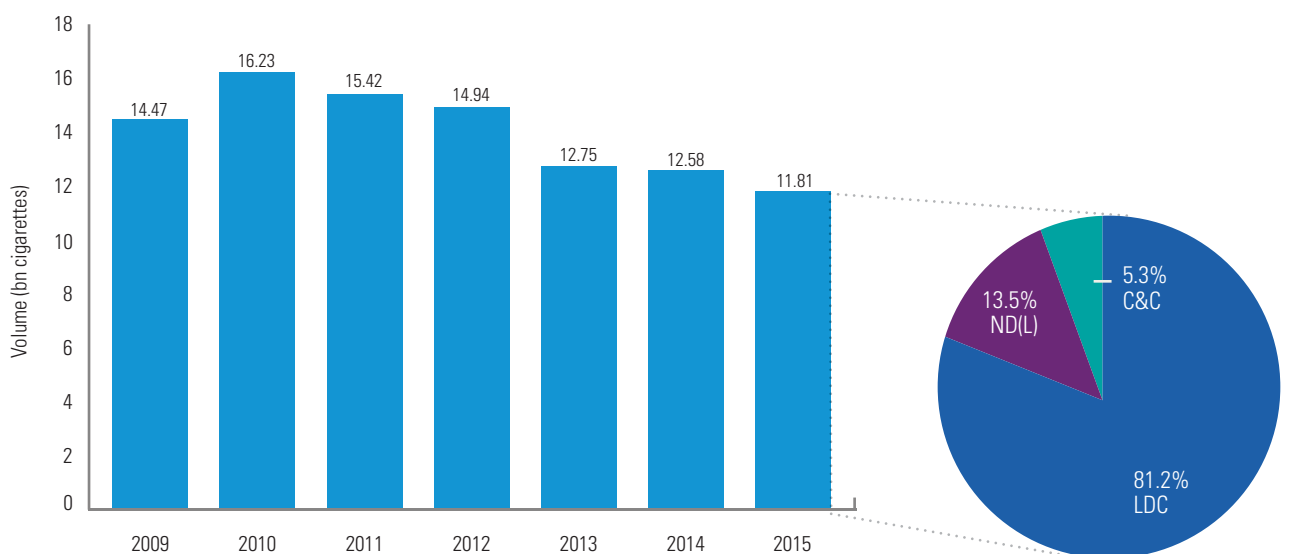


Netherlands

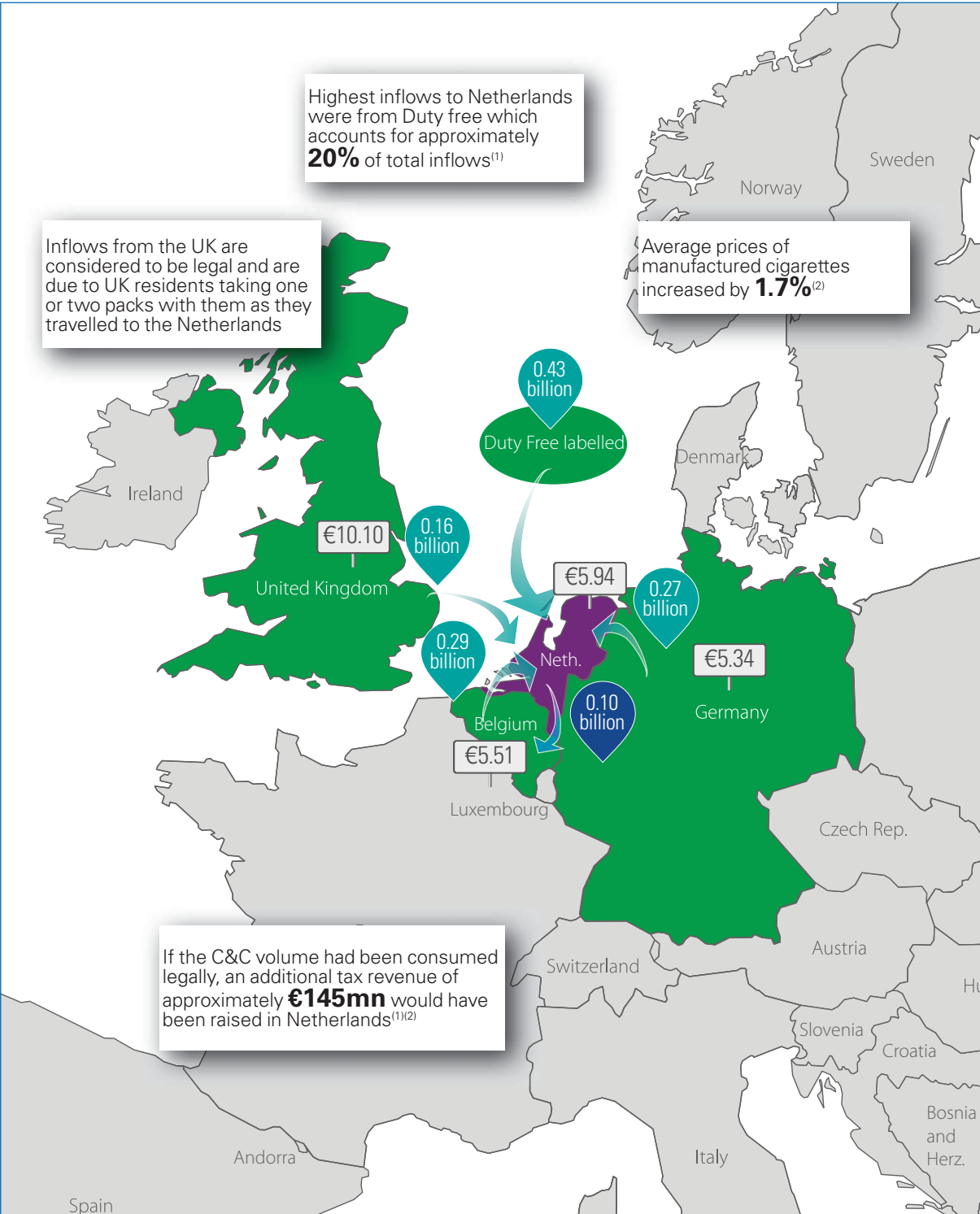


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## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows



Main outflow

Main inflow

Weighted average price for a pack of 20 cigarettes

Number of cigarettes

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL NETHERLANDS CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	13.39	13.16	12.71	12.05	10.25	10.24	9.97	(3%)
Outflows	-0.48	-0.49	-0.27	-0.29	-0.36	-0.32	-0.38	18%
Legal domestic consumption (LDC)	12.91	12.67	12.44	11.75	9.89	9.92	9.59	(3%)
Non-domestic legal (ND(L))	0.97	1.77	1.41	1.55	1.54	1.81	1.60	(12%)
Counterfeit and contraband (C&C)	0.60	1.78	1.58	1.64	1.31	0.85	0.62	(27%)
Total non-domestic	1.56	3.55	2.98	3.19	2.85	2.66	2.22	(16%)
<b>Total consumption</b>	<b>14.47</b>	<b>16.23</b>	<b>15.42</b>	<b>14.94</b>	<b>12.75</b>	<b>12.58</b>	<b>11.81</b>	<b>(6%)</b>

- Consumption fell by 6% as both non-domestic and legal domestic consumption fell
- The relatively high volume of non-domestic consumption in the Netherlands (19% of total consumption) is reflective of its ease of access to other lower-priced countries and a relatively high volume of visitors
- Inflows from the UK, which is a higher priced country, are all considered to be legal and reflect tourist and business trips made by British people to the Netherlands
- Outflows from the Netherlands were mainly to surrounding countries, and were consistent with tourist flows

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO NETHERLANDS							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Duty Free labelled	0.38	0.54	0.58	0.65	0.55	0.52	0.43
Belgium	0.15	0.24	0.29	0.32	0.38	0.28	0.29
Germany	0.13	0.35	0.25	0.33	0.33	0.36	0.27
UK	0.11	0.20	0.14	0.15	0.14	0.16	0.16
Italy	0.06	0.21	0.18	0.17	0.13	0.13	0.13
Other	0.73	2.01	1.55	1.57	1.32	1.21	0.95
<b>Total inflows</b>	<b>1.56</b>	<b>3.55</b>	<b>2.98</b>	<b>3.19</b>	<b>2.85</b>	<b>2.66</b>	<b>2.22</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM NETHERLANDS							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Belgium	0.11	0.13	0.06	0.04	0.17	0.08	0.10
France	0.14	0.09	0.08	0.07	0.07	0.05	0.08
Germany	0.13	0.14	0.07	0.06	0.03	0.11	0.08
Other	0.10	0.13	0.06	0.12	0.08	0.08	0.12
<b>Total outflows</b>	<b>0.48</b>	<b>0.49</b>	<b>0.27</b>	<b>0.29</b>	<b>0.36</b>	<b>0.32</b>	<b>0.38</b>

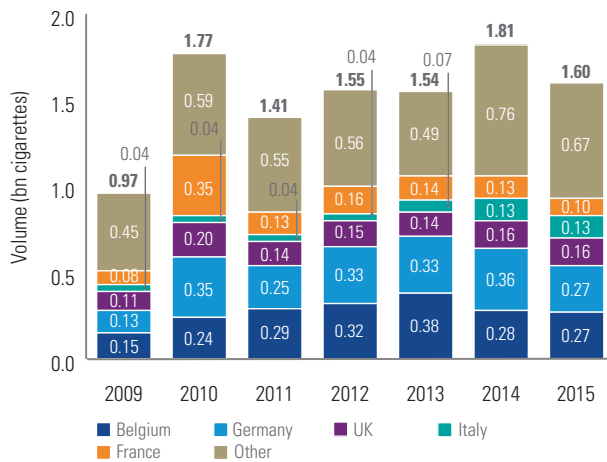
Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty freelabelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

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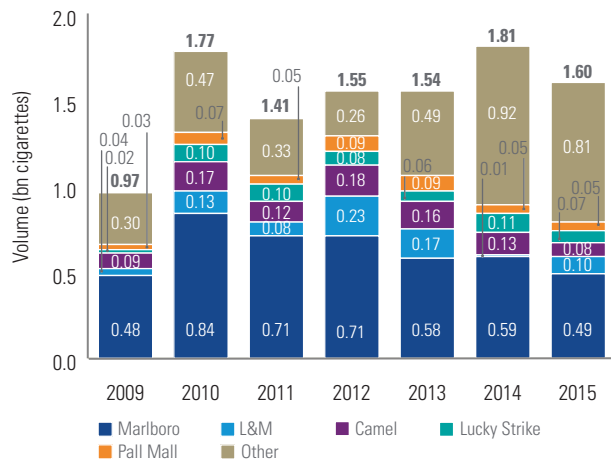
# ND(L) and C&C flows

- 72% of non-domestic consumption in the Netherlands is legal, reflecting the high volume of travel undertaken by Dutch consumers and the lower prices in many surrounding countries
  - Flows from Belgium, Germany, France, the UK and Italy are all categorised as 100% legal

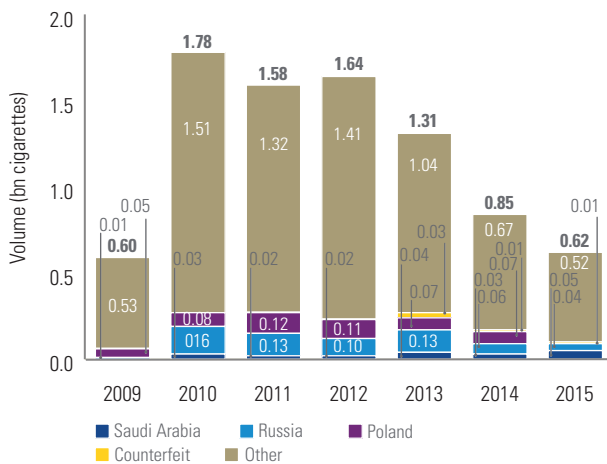
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



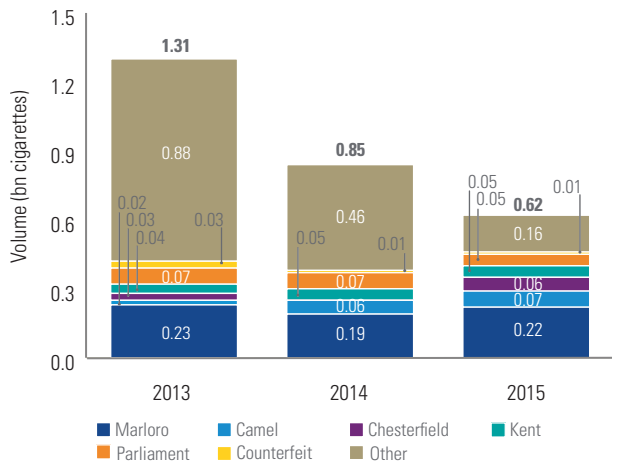
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

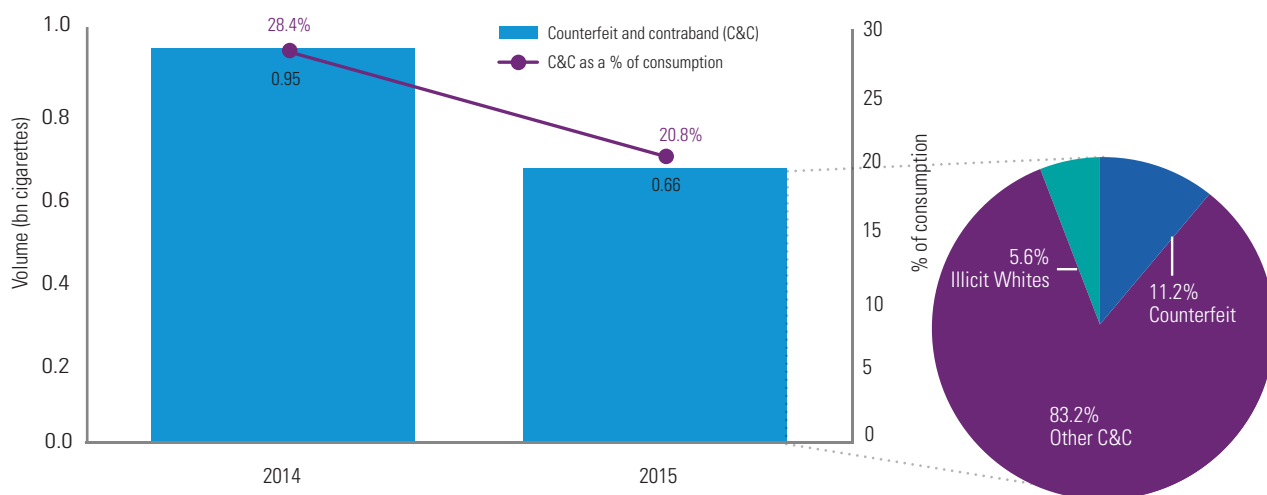


# Norway

## Overview

- Overall non-domestic consumption remained the highest in Europe at 46% of total consumption
- Cigarettes are more expensive in Norway than any other country in Europe
- The balance between non-domestic legal purchases and C&C shifted towards ND(L) as more product from Duty Free channels and Sweden was identified and less product from Eastern European countries

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2014-2015

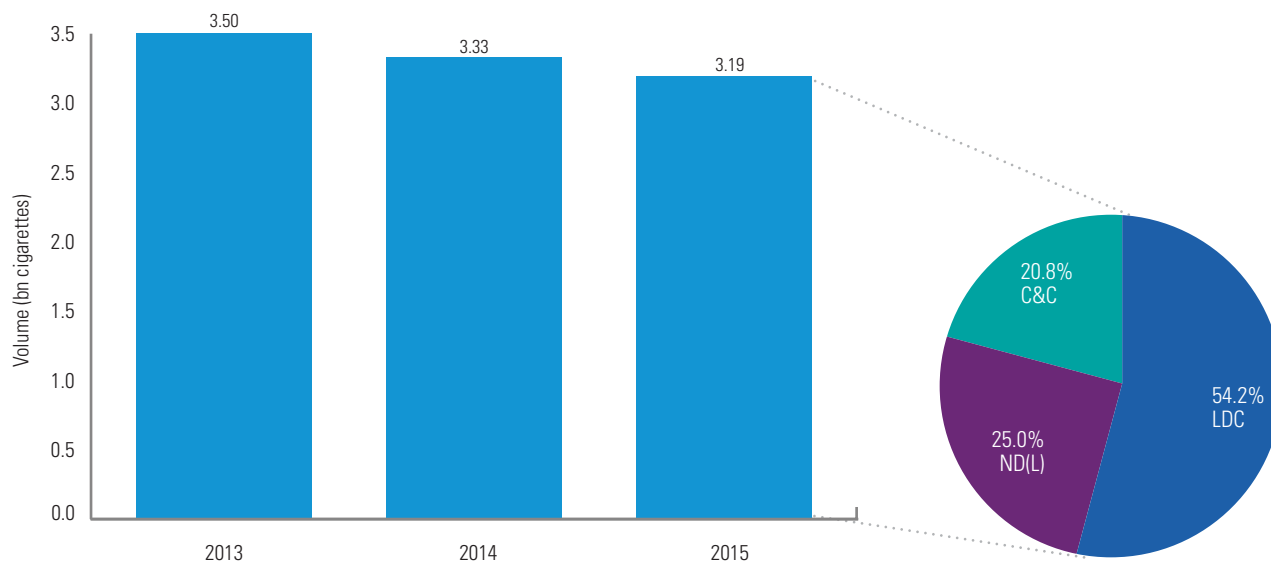


Norway

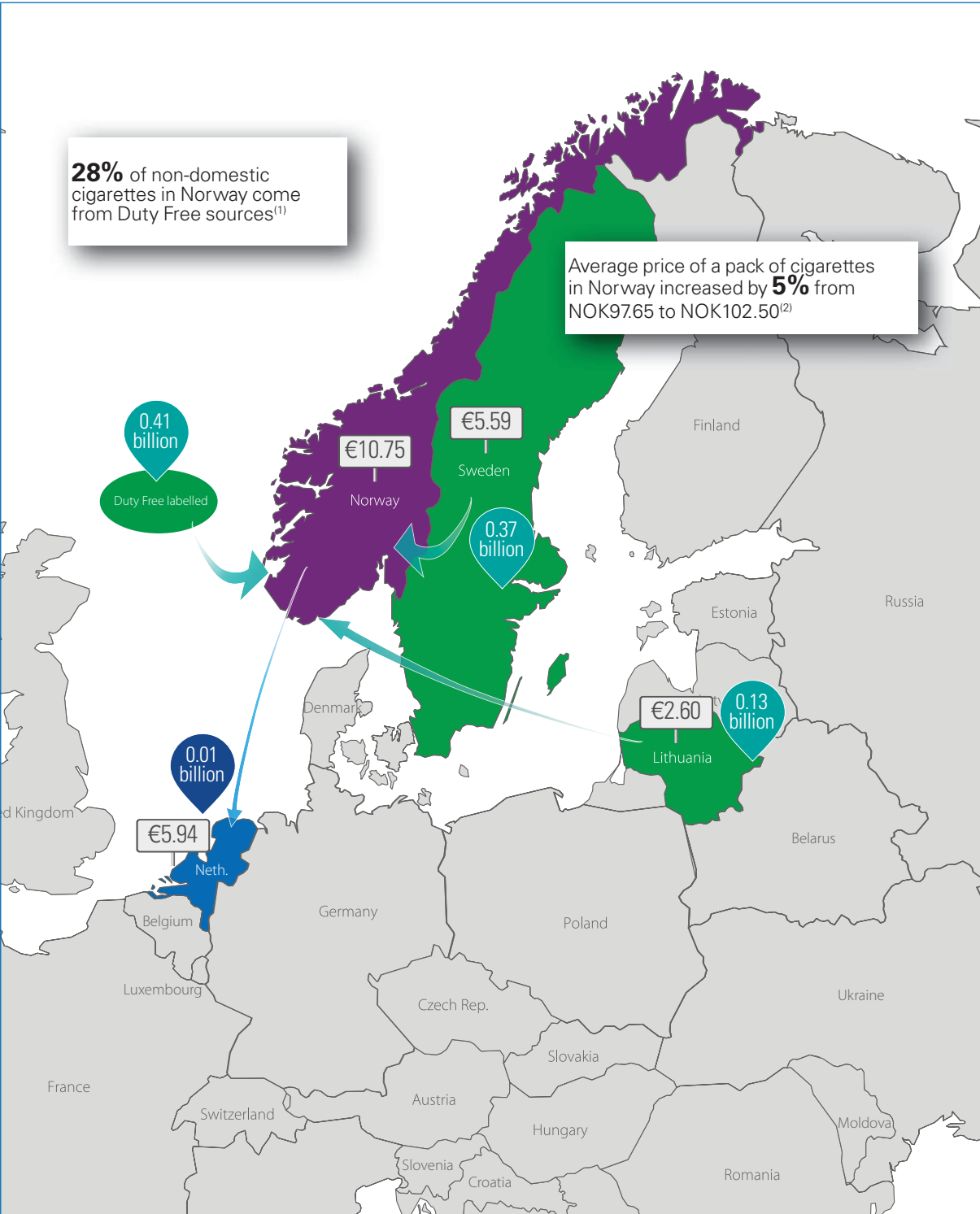






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## Manufactured cigarette consumption - 2013-2015



# Key inflows and outflows



Main outflow   
 Main inflow   
 Weighted average price for a pack of 20 cigarettes   
 Number of cigarettes 

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) PMI tax table calculation from Nielsen data

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2013-2015<sup>(1)(2)(a)</sup>

TOTAL NORWAY CONSUMPTION				
Billion cigarettes	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	1.83	1.79	1.77	(1%)
Outflows	-0.05	-0.03	-0.05	35%
Legal domestic consumption (LDC)	1.78	1.76	1.73	(2%)
Non-domestic legal (ND(L))		0.63	0.80	28%
Counterfeit and contraband (C&C)		0.95	0.66	(30%)
Total non-domestic	1.72	1.57	1.46	(7%)
<b>Total consumption</b>	<b>3.50</b>	<b>3.33</b>	<b>3.19</b>	<b>(4%)</b>

- Increases in inflows from Sweden were reflected by the wide average price gap of €5.16 for a packet of 20 cigarettes between Norway and Sweden
- Duty Free inflows account for a higher proportion of non-domestic consumption in Norway compared with EU countries
  - All international travellers are entitled to a Duty Free allowance of 200 cigarettes when entering Norway from any country

## Total inflows by country of origin - 2013-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO NORWAY			
Billion cigarettes	2013	2014	2015
Duty Free labelled	0.50	0.45	0.41
Sweden	0.26	0.27	0.37
Lithuania		0.02	0.13
Poland	0.40	0.31	0.09
Belarus	0.02	0.03	0.09
Romania	0.14	0.19	0.06
Other	0.40	0.31	0.31
<b>Total inflows</b>	<b>1.72</b>	<b>1.57</b>	<b>1.46</b>

## Total outflows by destination country – 2013-2015<sup>(1)</sup>

OUTFLOWS FROM NORWAY			
Billion cigarettes	2013	2014	2015
Netherlands	0.01	0.02	0.01
UK	0.01	0.00	0.01
Sweden	0.00	0.00	0.00
Other	0.02	0.01	0.02
<b>Total outflows</b>	<b>0.05</b>	<b>0.03</b>	<b>0.05</b>

Notes: (a) In years 2013-2015 non-domestic incidence is stated on a sticks basis (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling except for 2013 values

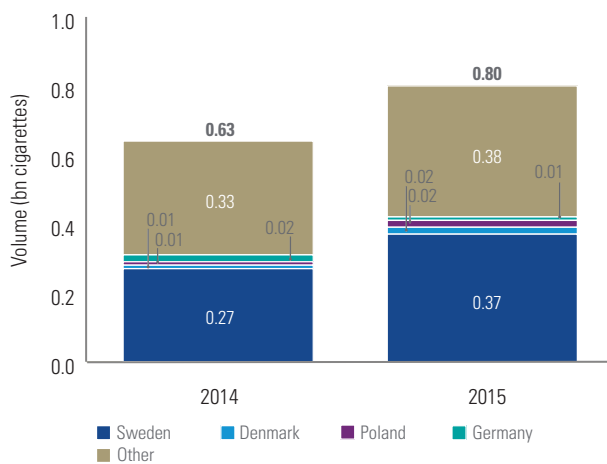
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014



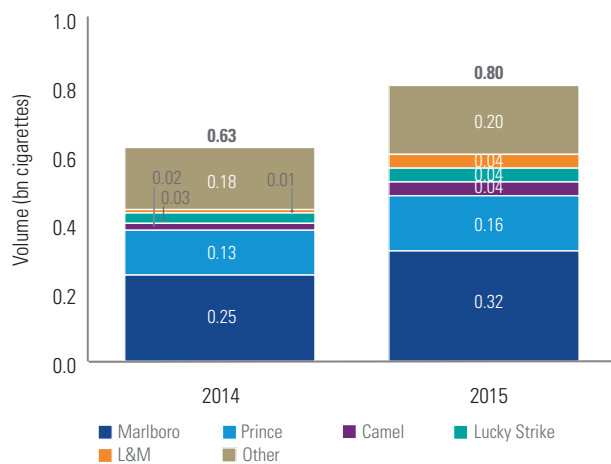
# ND(L) and C&C flows

- While the total level of non-domestic consumption remained at the highest level in Europe, 46% compared to 47% in 2014, the split between non-domestic legal and C&C changed. An increase in Swedish flows was offset by declines in volumes from Eastern Europe, especially Romania and Poland
  - While Norway has an immigrant population of over 97,000 Polish-born and 37,000 Lithuanian-born residents<sup>(2)</sup>, the flows of cigarettes identified from these countries in 2014 was not supported by the travel movements between each country. As a result, the majority of the product was C&C
- High numbers of Norwegians travel to Sweden take advantage of cheaper goods, including cigarettes, resulting in 12% of total consumption in Norway being Swedish ND(L)

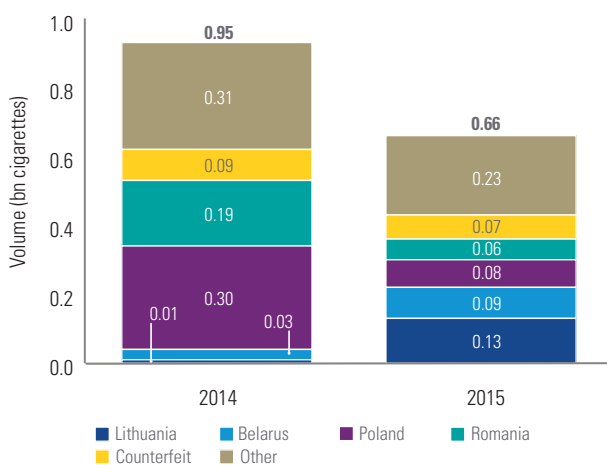
ND(L) by country of origin - 2014-2015<sup>(1)(a)(b)(c)</sup>



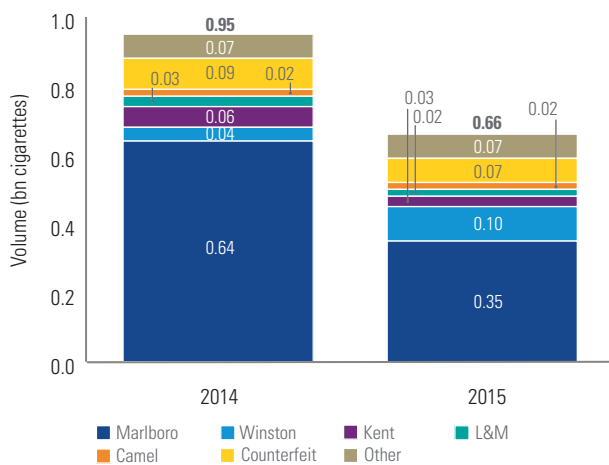
ND(L) by brand - 2014-2015<sup>(1)(a)(b)(c)</sup>



C&C by country of origin - 2014-2015<sup>(1)(a)(c)</sup>



C&C by brand - 2014-2015<sup>(1)(a)(c)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) As Norway has been included in the study for the first time in 2014, there are no prior figures for comparison in the charts

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers (2) Norwegian Statistical Office

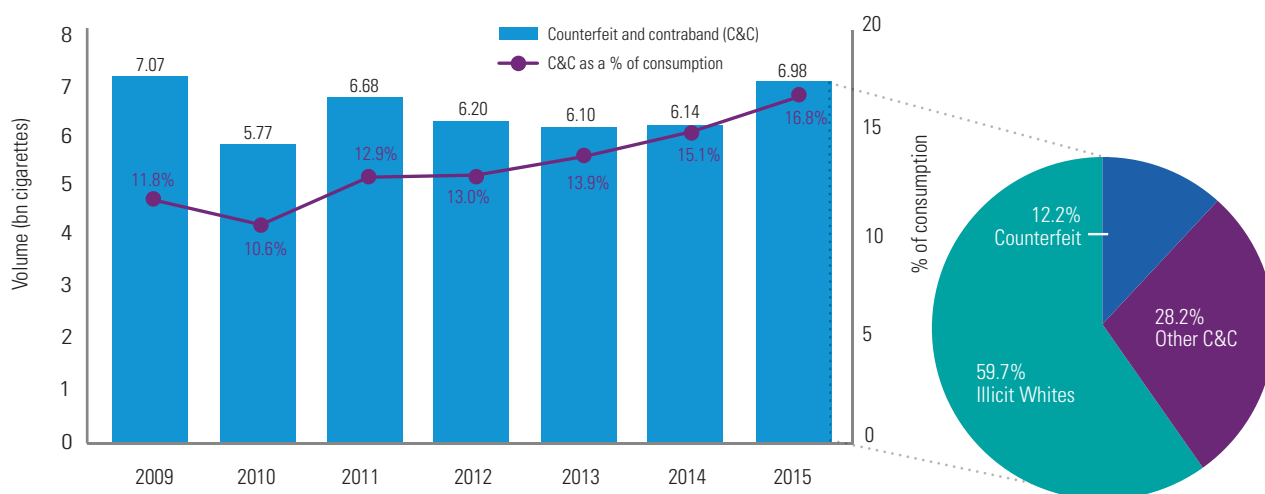


# Poland

## Overview

- Consumption, in line with smoking prevalence, remained stable, however LDS declined by 0.8 billion and C&C increased by 0.8 billion
- C&C in Poland was mainly comprised of Illicit Whites brand flows and cigarettes from the lower priced non EU countries of Belarus, Ukraine and Russia
- Higher volumes of cigarettes from Ukraine, where average prices were 81% lower, resulted in a large increase in C&C<sup>(1)</sup>
- Outflows decreased by 1 billion mainly due to a 0.9 billion decline in flows to Germany

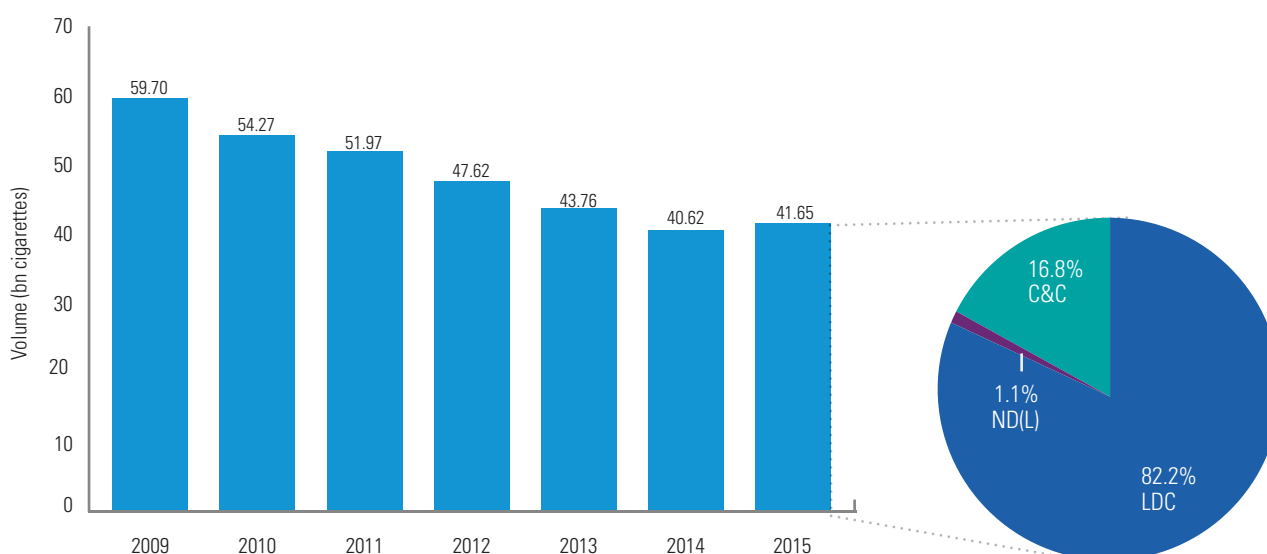
## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015



Poland



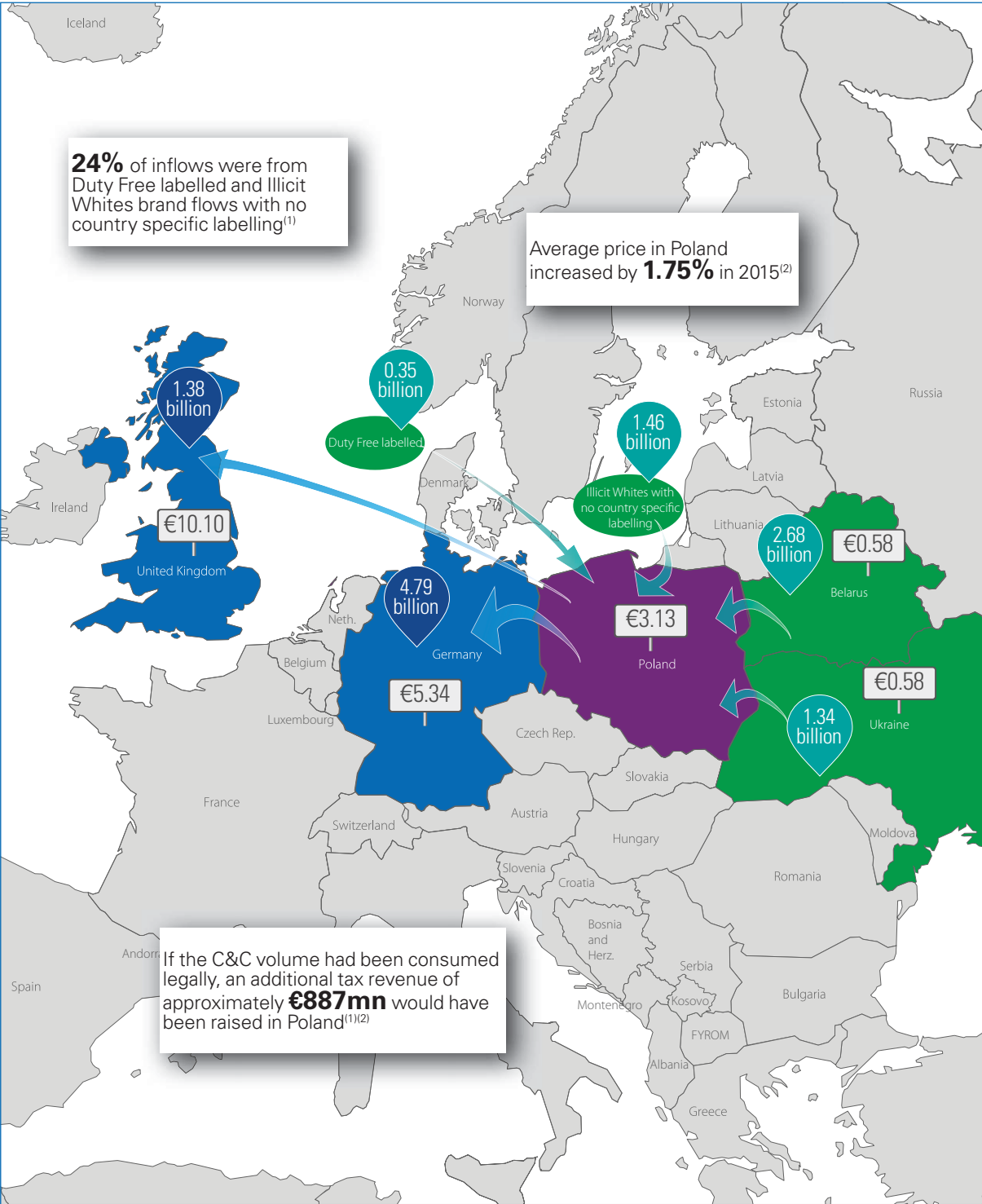
## Manufactured cigarette consumption - 2009-2015



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Source: (1) KPMG analysis of EC Excise Duty tables, January 2016 (Part III – Manufactured Tobacco) and data sources provided by manufacturers

# Key inflows and outflows



24% of inflows were from Duty Free labelled and Illicit Whites brand flows with no country specific labelling<sup>(1)</sup>

Average price in Poland increased by 1.75% in 2015<sup>(2)</sup>

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€887mn** would have been raised in Poland<sup>(1)(2)</sup>

Poland  
Project SUN

- Main outflow ■
- Main inflow ■
- Weighted average price for a pack of 20 cigarettes
- Number of cigarettes ●

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL POLAND CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	61.12	57.32	55.55	52.15	46.63	42.00	41.20	(2%)
Outflows	-9.43	-9.35	-10.80	-11.36	-9.39	-7.95	-6.97	(12%)
Legal domestic consumption (LDC)	51.68	47.97	44.75	40.79	37.24	34.05	34.23	1%
Non-domestic legal (ND(L))	0.94	0.53	0.55	0.63	0.43	0.42	0.44	4%
Counterfeit and contraband (C&C)	7.07	5.77	6.68	6.20	6.10	6.14	6.98	14%
Total non-domestic	8.02	6.30	7.23	6.83	6.52	6.56	7.42	13%
<b>Total consumption</b>	<b>59.70</b>	<b>54.27</b>	<b>51.97</b>	<b>47.62</b>	<b>43.76</b>	<b>40.62</b>	<b>41.65</b>	<b>3%</b>

- Inflows increased by 0.9 billion mainly from the lower priced countries of Belarus and Ukraine, where prices were €0.58 and €0.58 respectively in 2015 compared to €3.13 in Poland<sup>(3)</sup>
  - Higher volumes of cigarettes from Ukraine contributed to a 13% increase in inflows, against a backdrop of the devaluation of the Hryvnia
  - The number of applications for Polish work permits for Ukrainian citizens increased by 105% to 762,000 in 2015<sup>(4)</sup>
- The volume of Illicit Whites brand flows consumed in Poland remains among the highest in Europe and Illicit Whites brand flows with no country specific labelling increased by 17% in 2015
- Poland is among the largest outflow markets in the EU, reflecting lower prices and high volumes of Polish citizens working abroad
  - Outflows decreased by 1 billion mainly due to a 0.9 billion reduction in the outflow to Germany as German consumers switched to lower priced cigarettes from the Czech Republic

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO POLAND								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
Belarus	1.04	1.39	2.66	3.52	2.97	3.15	2.68	
Ukraine	4.71	2.96	1.70	1.07	0.30	0.14	1.34	
IWs with no country-specific labelling	0.07	0.05	0.46	0.48	1.04	1.25	1.46	
Duty Free labelled	0.29	0.19	0.35	0.28	0.22	0.26	0.35	
Russia	1.35	1.08	1.01	0.83	0.64	0.59	0.46	
Other	0.56	0.64	1.05	0.66	1.35	1.17	1.13	
<b>Total inflows</b>	<b>8.02</b>	<b>6.30</b>	<b>7.23</b>	<b>6.83</b>	<b>6.52</b>	<b>6.56</b>	<b>7.42</b>	

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM POLAND								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
Germany	7.54	7.49	8.64	8.54	7.54	5.67	4.79	
UK	1.01	0.86	0.96	1.72	0.89	1.23	1.38	
France	0.28	0.30	0.55	0.31	0.32	0.24	0.19	
Other	0.61	0.69	0.66	0.78	0.63	0.81	0.60	
<b>Total outflows</b>	<b>9.43</b>	<b>9.35</b>	<b>10.80</b>	<b>11.36</b>	<b>9.39</b>	<b>7.95</b>	<b>6.97</b>	

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

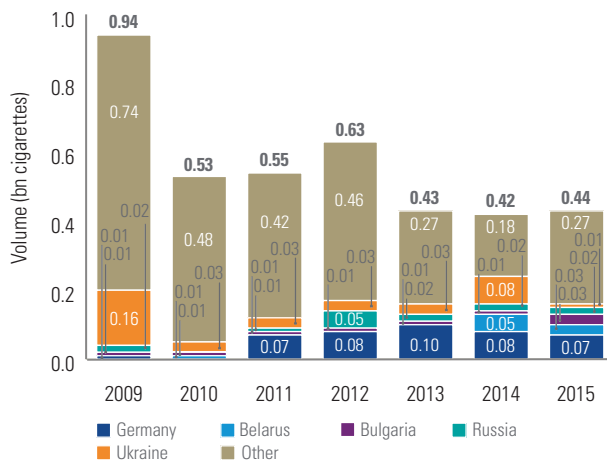
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) Weighted averaged price calculated for a pack of 20 cigarettes using EC Excise Duty tables (Part III - Manufactured Tobacco), January 2016 and data sources provided by manufacturers (4) Ministry of Labour and Social Policy, Poland



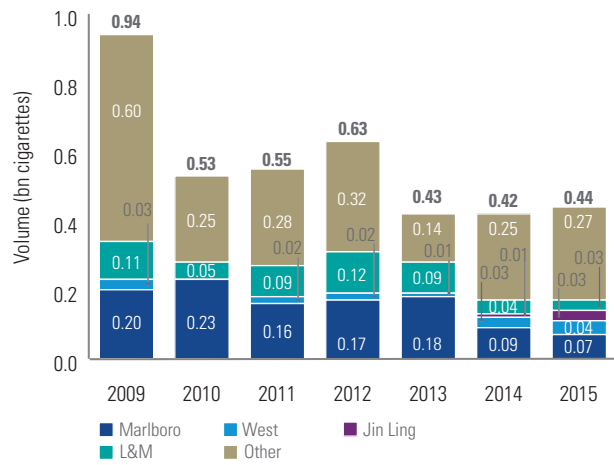
# ND(L) and C&C flows

- C&C increased by 0.8 billion cigarettes between 2014 and 2015 due to:
  - An additional 1.3 billion cigarettes from Ukraine, including 0.8 billion of LD, where the weighted average price of a pack of 20 cigarettes was €0.58 in December 2015<sup>(2)</sup>
  - An increase of 0.2 billion in Illicit Whites brand flows with no country specific labelling, including Jin Ling
- Travellers are only permitted to bring two packs of cigarettes when crossing the border into Poland from Belarus or Ukraine, leading to small legal volumes from these countries as a proportion of the total inflow<sup>(3)</sup>
- C&C from Belarus declined from 51% to 38% of total C&C between 2014 and 2015; a decrease in the flow of Illicit White brand Fest resulted in a decline of 0.2 billion

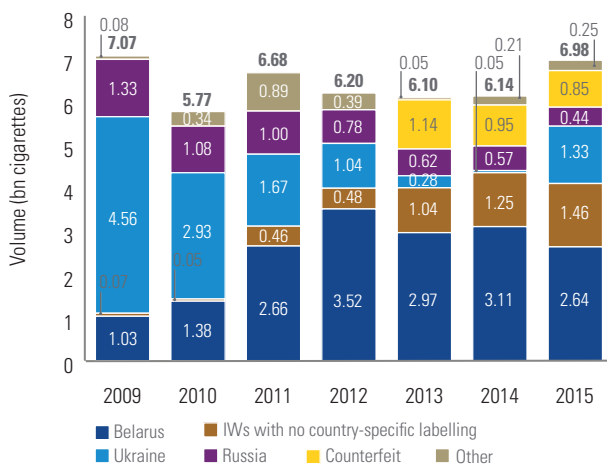
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



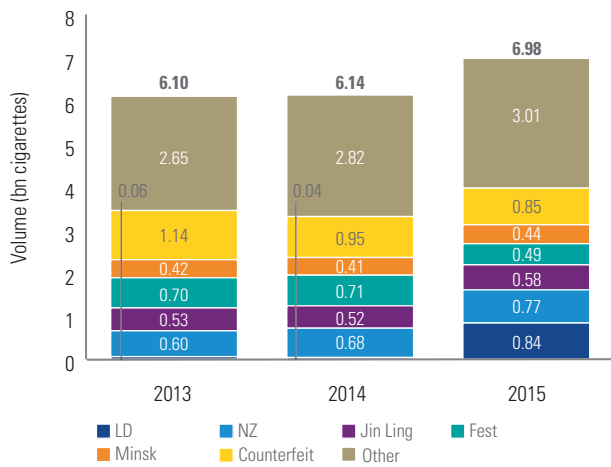
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers (2) Analysis of data sources provided by manufacturers (3) VisaHQ, April 2016

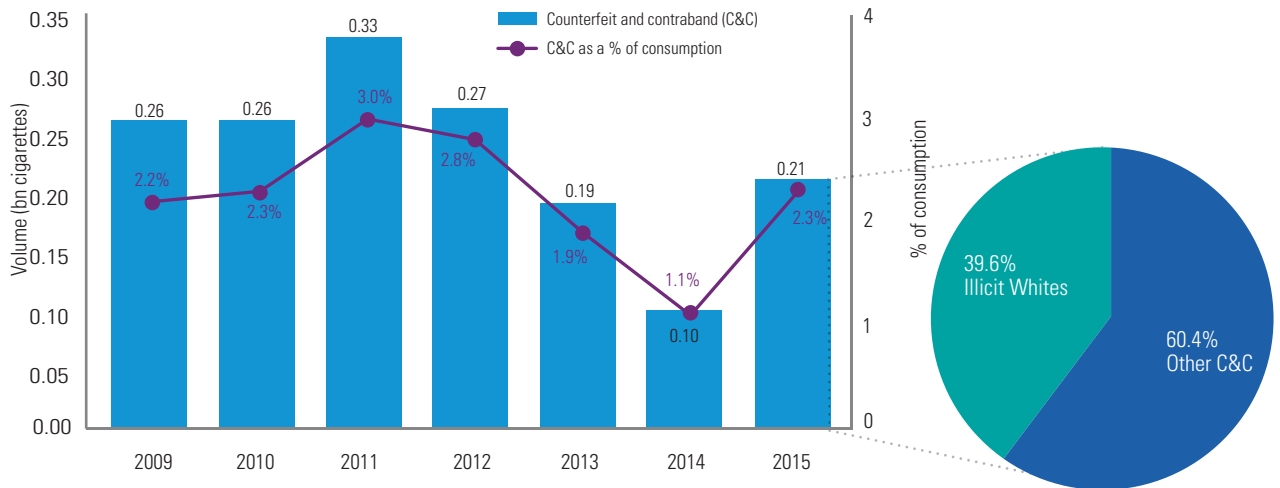


# Portugal

## Overview

- C&C volumes more than doubled, reversing a declining trend
- Consumption in Portugal increased as a result of the increases in C&C
- Non-domestic consumption in Portugal remained low, which may be as a result of low cigarette prices (compared with other EU countries) and few surrounding countries
- C&C grew as an increase in flows from Angola and growth in Illicit Whites brand flows were identified

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

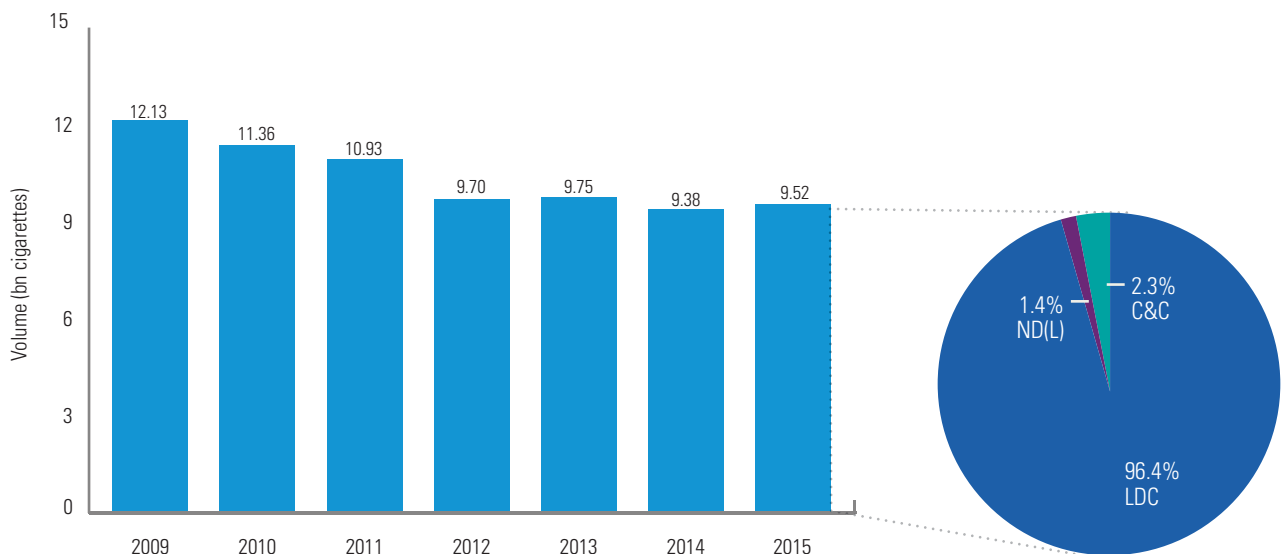


Portugal

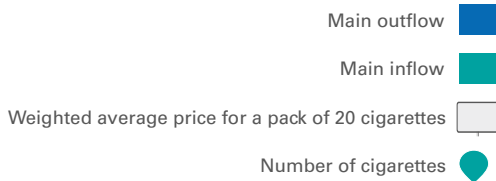
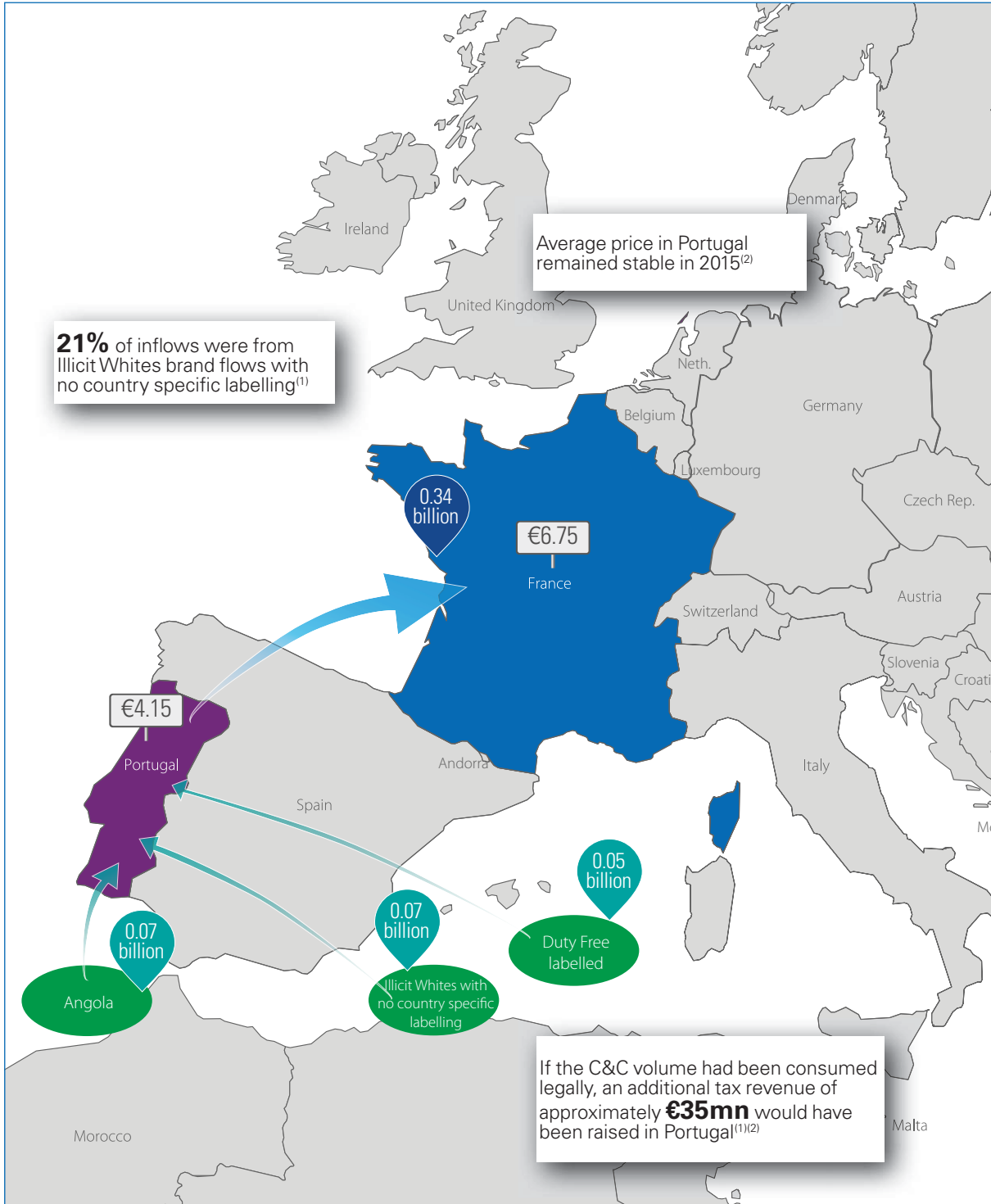


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## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows



Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL PORTUGAL CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	12.37	11.86	11.23	10.13	10.04	9.56	9.77	2%
Outflows	-0.63	-0.89	-0.70	-0.75	-0.52	-0.41	-0.60	46%
Legal domestic consumption (LDC)	11.73	10.97	10.53	9.38	9.52	9.15	9.18	0%
Non-domestic legal (ND(L))	0.13	0.13	0.07	0.05	0.03	0.13	0.13	(0%)
Counterfeit and contraband (C&C)	0.26	0.26	0.33	0.27	0.19	0.10	0.21	109%
Total non-domestic	0.39	0.39	0.40	0.32	0.22	0.23	0.34	48%
<b>Total consumption</b>	<b>12.13</b>	<b>11.36</b>	<b>10.93</b>	<b>9.70</b>	<b>9.75</b>	<b>9.38</b>	<b>9.52</b>	<b>1%</b>

- LDS increased as outflows from Portugal grew, however total consumption increases were attributed to a rise in C&C
- Inflows also increased, mainly from Angola and Illicit Whites brand flows with no country specific labelling
- Approximately 57% of outflows were to France and others were to the UK and Germany, which is reflective of Portugal's lower cigarette prices and the high volume of tourists from these countries

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO PORTUGAL							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
IWs with no country-specific labelling	0.00	0.00	0.01	0.02	0.01	0.04	0.07
Angola	0.00	0.00	0.01	0.00	0.01	0.00	0.07
Duty Free labelled	0.06	0.05	0.08	0.06	0.07	0.04	0.05
Spain	0.13	0.11	0.04	0.02	0.00	0.04	0.03
Andorra	0.05	0.02	0.01	0.06	0.02	0.00	0.01
Other	0.15	0.21	0.25	0.16	0.11	0.11	0.11
<b>Total inflows</b>	<b>0.39</b>	<b>0.39</b>	<b>0.40</b>	<b>0.32</b>	<b>0.22</b>	<b>0.23</b>	<b>0.34</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM PORTUGAL							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
France	0.27	0.51	0.41	0.44	0.30	0.21	0.34
UK	0.12	0.10	0.11	0.15	0.07	0.06	0.07
Germany	0.02	0.03	0.03	0.03	0.03	0.02	0.04
Other	0.21	0.24	0.15	0.13	0.12	0.11	0.15
<b>Total outflows</b>	<b>0.63</b>	<b>0.89</b>	<b>0.70</b>	<b>0.75</b>	<b>0.52</b>	<b>0.41</b>	<b>0.60</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014

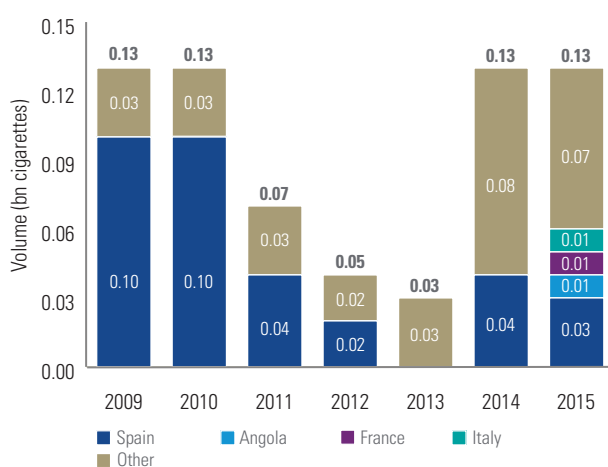




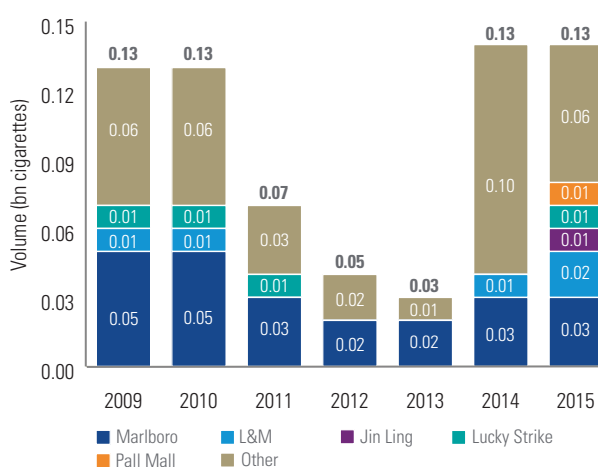
# ND(L) and C&C flows

- Tourist flows from the higher-priced countries of France, Spain and Italy to Portugal accounted for most of the ND(L)
- Despite being a low percentage of consumption compared with other EU countries, C&C more than doubled in 2015
  - This was due to increased flows of Marlboro and Chesterfield, which had Angolan labelling and an increase in the Illicit Whites brand flow Jin Ling, which had no country specific labelling

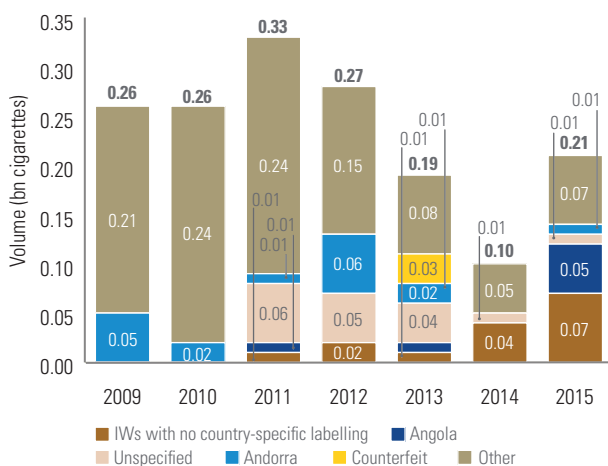
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



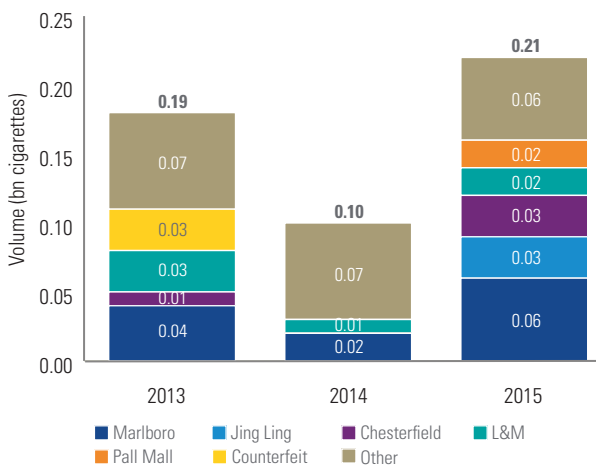
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

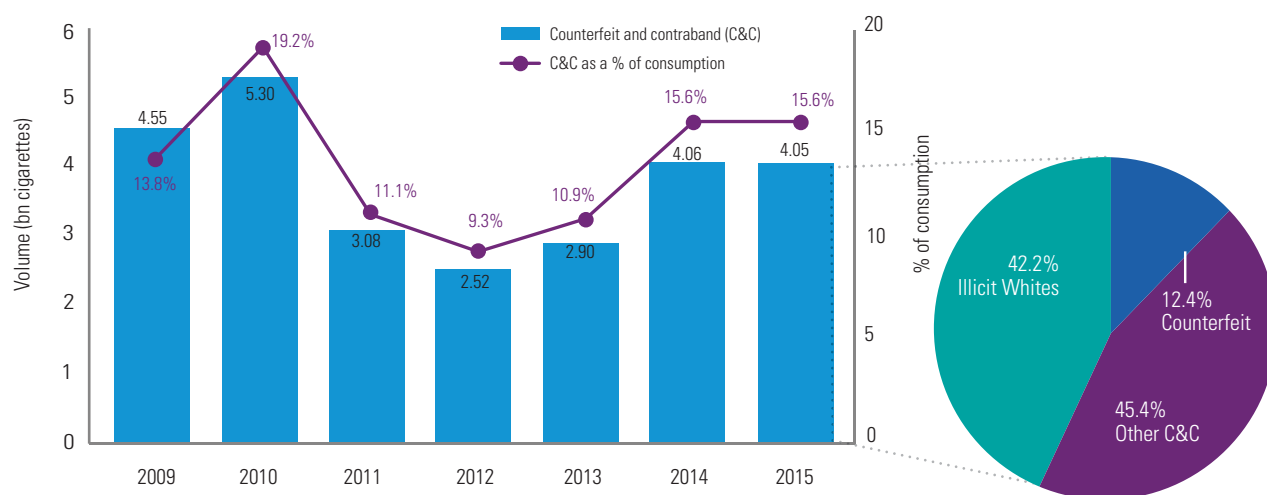


# Romania

## Overview

- C&C volumes remained flat in terms of volume and share, against a backdrop of stable consumption
- Outflows grew by 38%, predominantly to the higher priced Western European countries of France and the UK
- Illicit Whites brand flows increased as a proportion of total C&C from 27.5% to 42.2% between 2014 and 2015

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015<sup>(a)</sup>

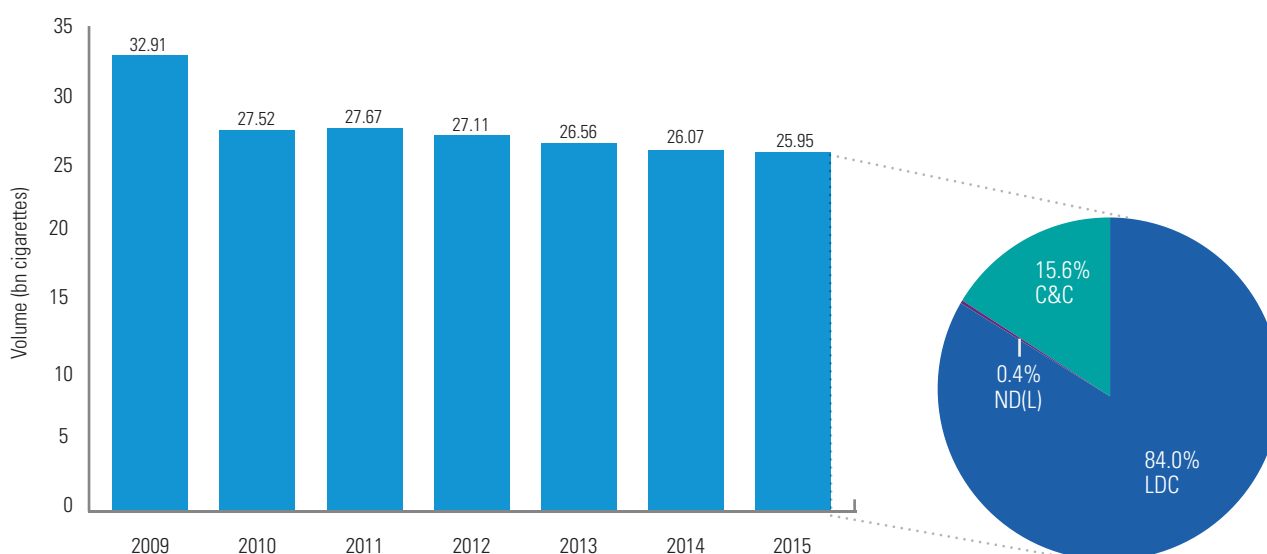


Romania



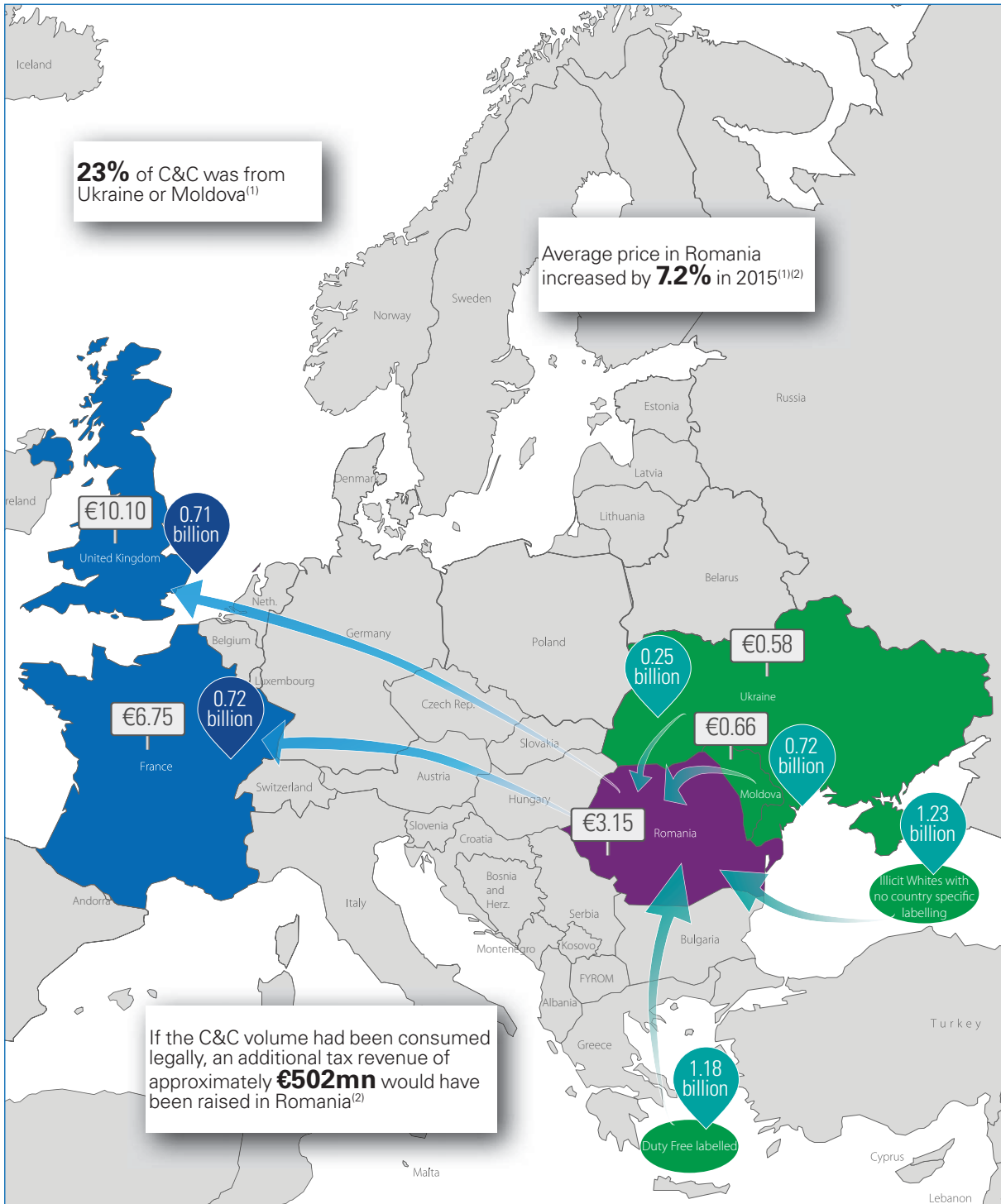
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## Manufactured cigarette consumption - 2009-2015<sup>(a)</sup>



Note: (a) Novel pack-swap survey introduced into the methodology in 2014 and 2015; in previous years EPS was used therefore results from 2014 and 2015 are not directly comparable to earlier years. A comparison between the two methodologies can be found in the appendix

# Key inflows and outflows



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Romania

- Main outflow ■
- Main inflow ■
- Weighted average price for a pack of 20 cigarettes
- Number of cigarettes ●

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL ROMANIA CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	29.81	23.10	25.58	25.54	24.49	23.37	23.80	2%
Outflows	-1.89	-1.26	-1.38	-1.33	-1.21	-1.45	-2.00	38%
Legal domestic consumption (LDC)	27.92	21.84	24.21	24.21	23.28	21.92	21.80	(1%)
Non-domestic legal (ND(L))	0.44	0.38	0.38	0.38	0.38	0.09	0.10	10%
Counterfeit and contraband (C&C)	4.55	5.30	3.08	2.52	2.90	4.06	4.05	(0%)
Total non-domestic	4.99	5.67	3.46	2.90	3.27	4.15	4.15	0%
<b>Total consumption</b>	<b>32.91</b>	<b>27.52</b>	<b>27.67</b>	<b>27.11</b>	<b>26.56</b>	<b>26.07</b>	<b>25.95</b>	<b>(0%)</b>

- Total consumption declined slightly as an increase in legal domestic sales of 0.4 billion was partially offset by a 0.6 billion increase in outflows
- Inflows of Illicit Whites brand flows and cigarettes from the lower priced non-EU countries of Moldova and Ukraine increased; legal inflows from these countries are supported by 2015 travel trends<sup>(2)</sup>
- Outflows increased by 0.6 billion, mainly to the more expensive Western European markets of France and the UK
  - Average prices in January 2016 were €10.10 in the UK and €6.75 in France, compared to €3.15 in Romania<sup>(3)</sup>

*In 2015 the Duty Free labelled inflow includes 1 billion cigarettes of Duty Free labelled Marble, almost all of which was an illicit flow. Whilst 95% of all Marble consumed in Romania was illicit, the brand has not met KPMG's criteria to be defined as an IW brand flow: a brand for which >99% of the total consumption in any one country is illicit<sup>(1)(d)</sup>*

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWSTO ROMANIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
IWs with no country specific labelling	0.17	0.79	0.62	0.35	0.18	0.77	1.23
Duty Free labelled	1.20	0.35	0.11	0.05	0.99	1.34	1.18
Moldova	2.01	1.90	1.10	0.95	0.76	0.77	0.72
Ukraine	0.98	1.07	0.59	0.55	0.07	0.02	0.25
Serbia	0.07	0.95	0.75	0.69	0.40	0.11	0.12
Other	0.55	0.61	0.29	0.32	0.87	1.15	0.65
<b>Total inflows</b>	<b>4.99</b>	<b>5.67</b>	<b>3.46</b>	<b>2.90</b>	<b>3.27</b>	<b>4.15</b>	<b>4.15</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM ROMANIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
France	0.62	0.32	0.57	0.62	0.66	0.57	0.72
UK	0.30	0.37	0.32	0.19	0.05	0.17	0.71
Germany	0.10	0.10	0.10	0.14	0.14	0.14	0.13
Italy	0.51	0.18	0.12	0.09	0.09	0.11	0.08
Other	0.37	0.29	0.27	0.28	0.27	0.46	0.36
<b>Total outflows</b>	<b>1.89</b>	<b>1.26</b>	<b>1.38</b>	<b>1.33</b>	<b>1.21</b>	<b>1.45</b>	<b>2.00</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Novel pack-swap survey introduced into the methodology in 2014 and 2015; in previous years EPS was used. A comparison between the two methodologies can be found in the appendix (c) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology. The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling (d) Additional information about the process for identifying Illicit Whites is provided in the appendix

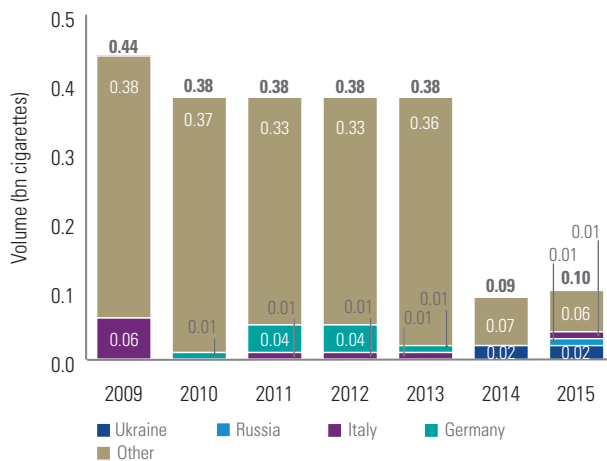
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) EC Excise Duty tables (Part III – Manufactured Tobacco)



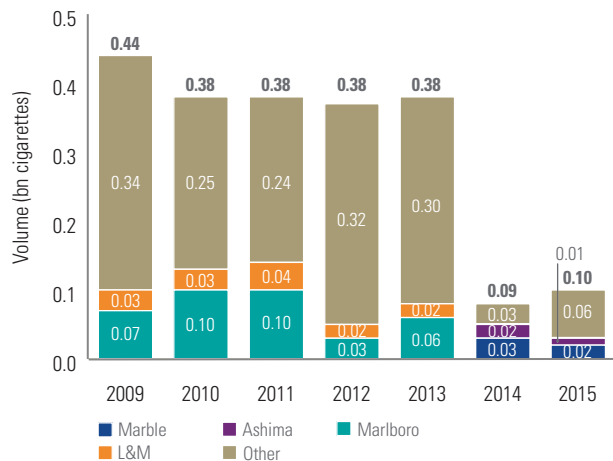
# ND(L) and C&C flows

- C&C remained stable between 2014 and 2015 as increases in Illicit Whites brand flows and inflows with Ukrainian labelling were offset by declines in counterfeit cigarettes
  - Marble became the largest C&C brand with the entire non-domestic flow identified bearing Duty Free labelling
  - C&C with Ukrainian labelling increased by 0.2 billion
  - C&C from Illicit Whites brand flows increased from 27.5% to 42.2% of total C&C between 2014 and 2015 and includes brands, Ritm, Ashima and Jin Ling
- Travellers are only permitted to bring two packs of cigarettes when crossing the border into Romania from Ukraine or Moldova, leading to small legal volumes from these countries as a proportion of the total inflow<sup>(2)</sup>

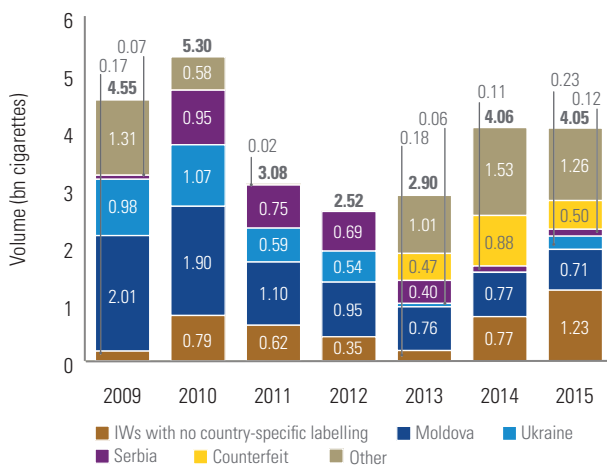
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



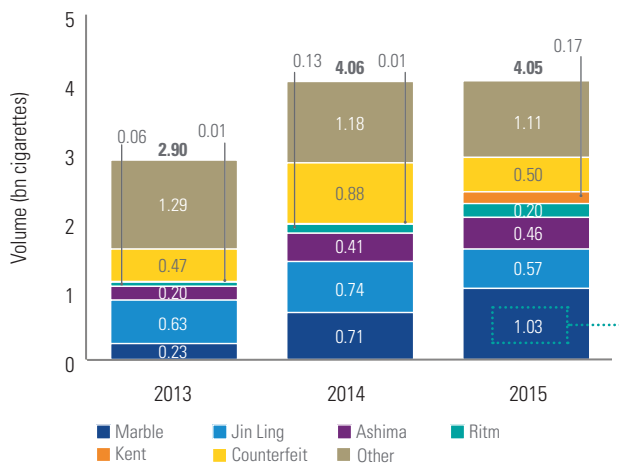
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



In 2015 95% of Marble consumed in Romania was illicit; KPMG defines an Illicit White brand flow as any brand for which >99% of the total consumption in any one country is illicit<sup>(1)(c)</sup>

Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) 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: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers (2) VisaHQ, April 2016

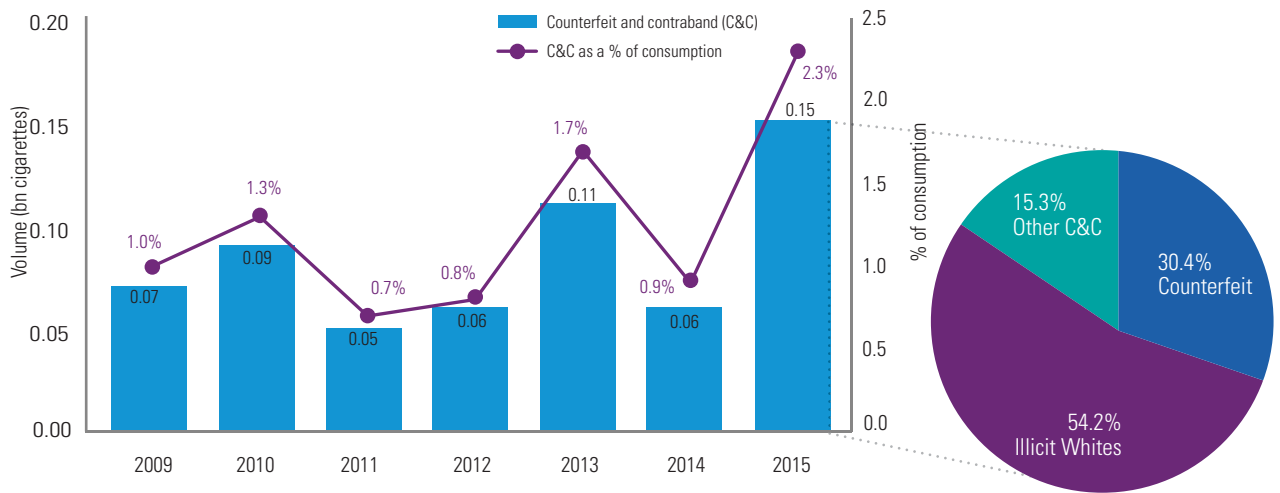


# Slovakia

## Overview

- Overall consumption in Slovakia increased against an improving economic outlook which saw unemployment fall by 1.3 percentage points and PDI improve by 2.8%
- C&C also increased as both Illicit Whites brand flows and counterfeit volumes more than tripled
- Despite increasing, C&C as a proportion of total consumption in Slovakia remained among the lowest in the EU

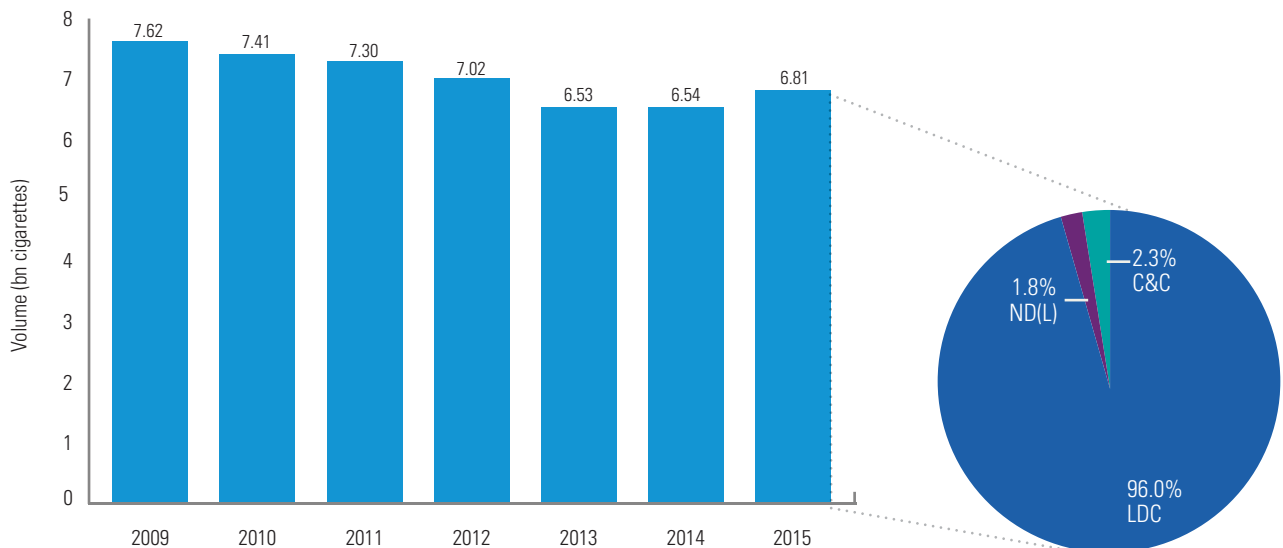
## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015



Slovakia

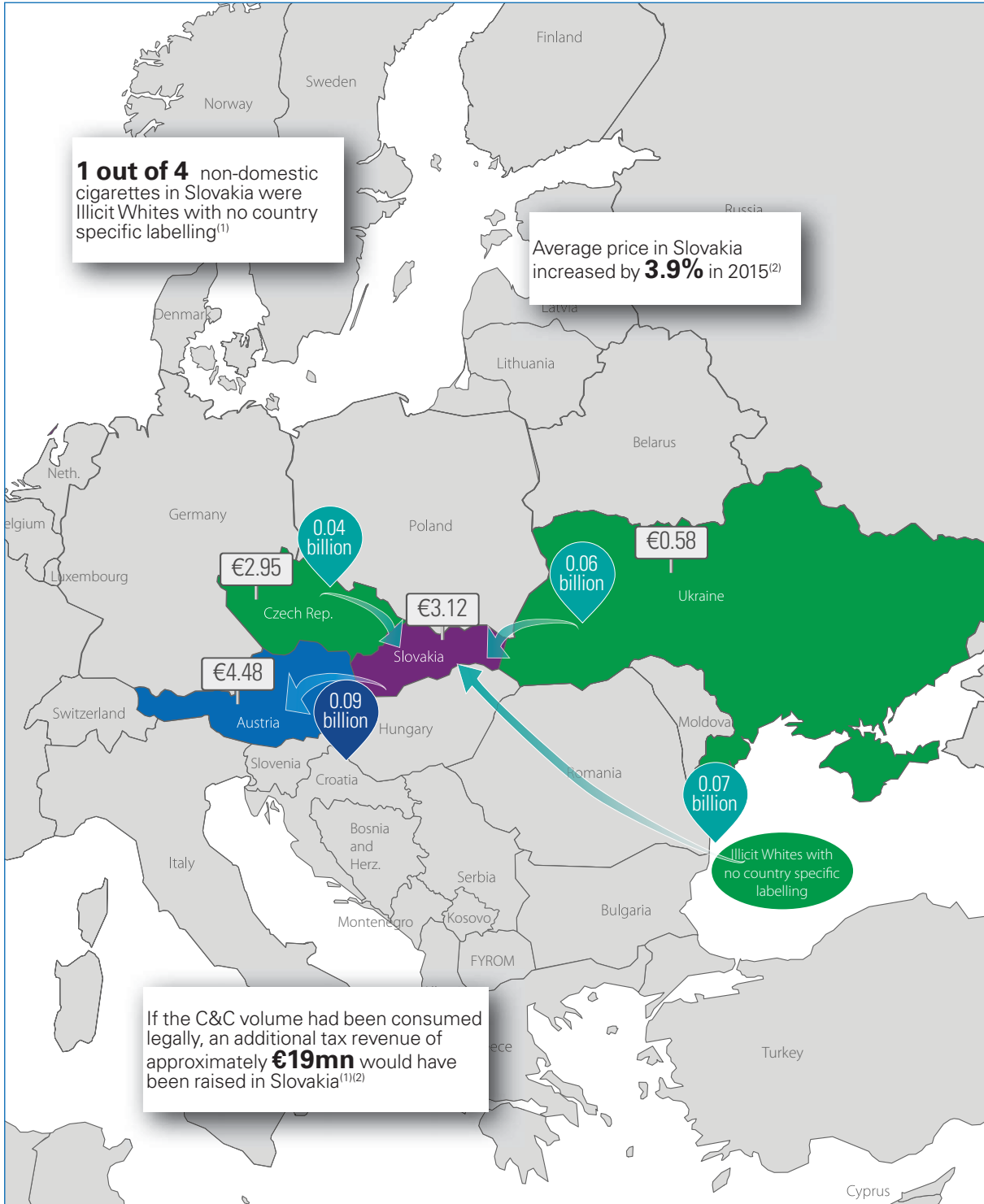


## Manufactured cigarette consumption - 2009-2015



Project SUN

# Key inflows and outflows



**1 out of 4** non-domestic cigarettes in Slovakia were Illicit Whites with no country specific labelling<sup>(1)</sup>

Average price in Slovakia increased by **3.9%** in 2015<sup>(2)</sup>

If the C&C volume had been consumed legally, an additional tax revenue of approximately **€19mn** would have been raised in Slovakia<sup>(1)(2)</sup>

- Main outflow █
- Main inflow █
- Weighted average price for a pack of 20 cigarettes
- Number of cigarettes ●

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL SLOVAKIA CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	7.69	7.48	7.36	7.19	6.64	6.63	6.82	3%
Outflows	-0.29	-0.25	-0.22	-0.29	-0.29	-0.18	-0.29	65%
Legal domestic consumption (LDC)	7.40	7.23	7.15	6.89	6.35	6.45	6.53	1%
Non-domestic legal (ND(L))	0.14	0.09	0.10	0.07	0.07	0.03	0.12	356%
Counterfeit and contraband (C&C)	0.07	0.09	0.05	0.06	0.11	0.06	0.15	166%
Total non-domestic	0.21	0.18	0.15	0.13	0.18	0.08	0.28	225%
<b>Total consumption</b>	<b>7.62</b>	<b>7.41</b>	<b>7.30</b>	<b>7.02</b>	<b>6.53</b>	<b>6.54</b>	<b>6.81</b>	<b>4%</b>

- Illicit Whites inflows with no country specific labelling increased from 0.03 billion to 0.07 billion cigarettes
- Inflows from Ukraine also increased as the currency devaluation and a cigarette price drop made cigarettes far cheaper, along with increases in Ukrainian nationals acquiring visas to work in Slovakia<sup>(3)</sup>
- Inflows from the Czech Republic were reflective of tourists and a high number of border crossings

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO SLOVAKIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
IWs with no country-specific labelling	0.00	0.01	0.00	0.04	0.09	0.03	0.07
Ukraine	0.08	0.05	0.05	0.01	0.02	0.00	0.06
Czech Republic	0.04	0.02	0.02	0.01	0.02	0.01	0.04
Belarus	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Hungary	0.06	0.03	0.04	0.03	0.01	0.01	0.01
Other	0.04	0.07	0.04	0.04	0.04	0.02	0.09
<b>Total inflows</b>	<b>0.21</b>	<b>0.18</b>	<b>0.15</b>	<b>0.13</b>	<b>0.18</b>	<b>0.08</b>	<b>0.28</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM SLOVAKIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Austria	0.04	0.03	0.04	0.04	0.04	0.06	0.09
Germany	0.04	0.04	0.04	0.07	0.09	0.05	0.05
UK	0.08	0.05	0.02	0.03	0.02	0.01	0.03
Other	0.12	0.13	0.12	0.16	0.14	0.06	0.12
<b>Total outflows</b>	<b>0.29</b>	<b>0.25</b>	<b>0.22</b>	<b>0.29</b>	<b>0.29</b>	<b>0.18</b>	<b>0.29</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

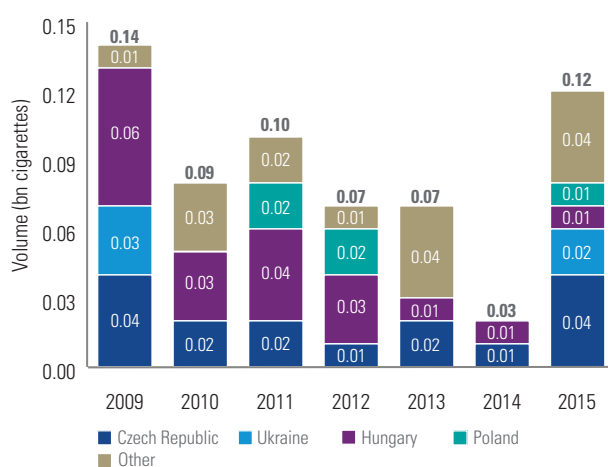
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) Slovakian Department for Labour, Social Affairs and Family



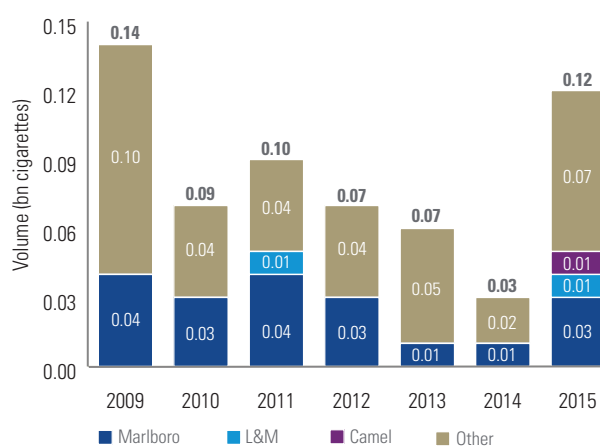
# ND(L) and C&C flows

- Illicit Whites with Belarusian labelling and with no country specific labelling accounted for 47% of C&C
  - Jin Ling had no country specific labelling and is not sold legally in any EU country
  - Fest and President had Belarusian labelling
- Flows of counterfeit increased from 11% to 30% of total C&C, the majority of which was Marlboro with Duty Free labelling

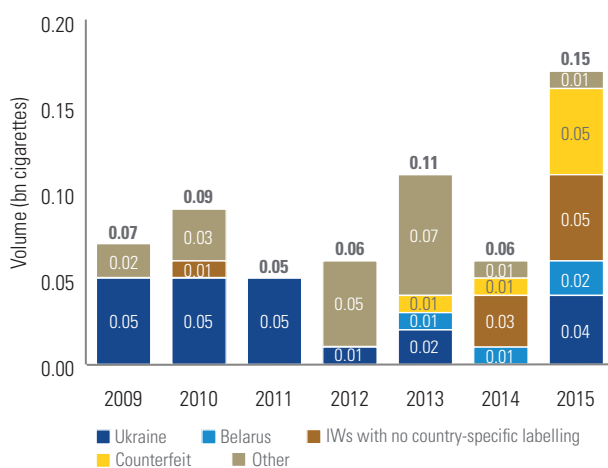
**ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>**



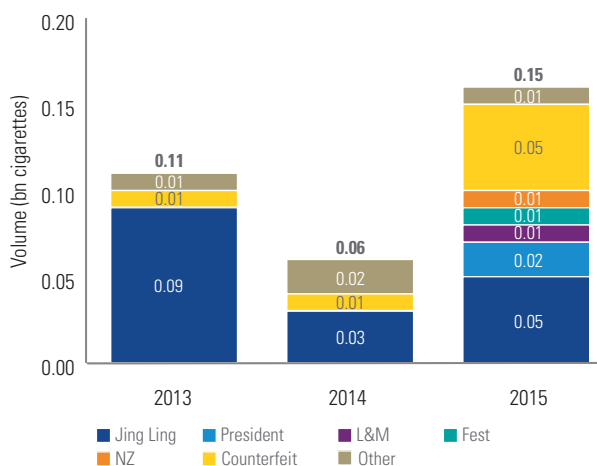
**ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>**



**C&C by country of origin - 2009-2015<sup>(1)(a)</sup>**



**C&C by brand - 2013-2015<sup>(1)(a)</sup>**



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Source: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

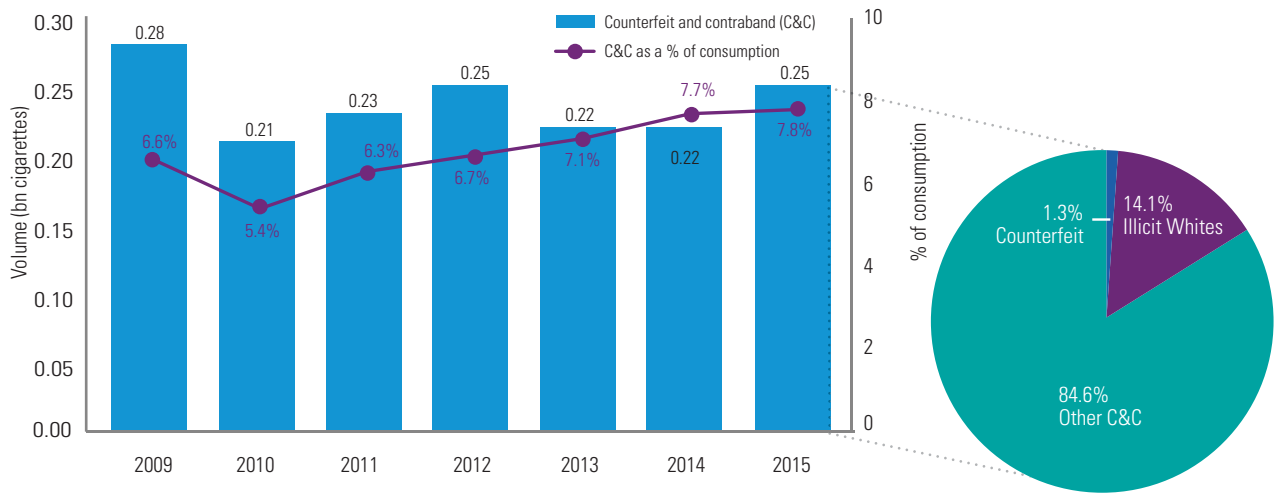


# Slovenia

## Overview

- C&C continued to account for approximately 8% of total consumption in 2015, with Bosnia and Herzegovina as the main source country
- Outflows from Slovenia to higher-priced countries, such as Austria, may have fallen due to increased border controls during the migrant crisis
  - The change in the Austrian pack sampling plan may have reduced the reported outflows from Slovenia to Austria

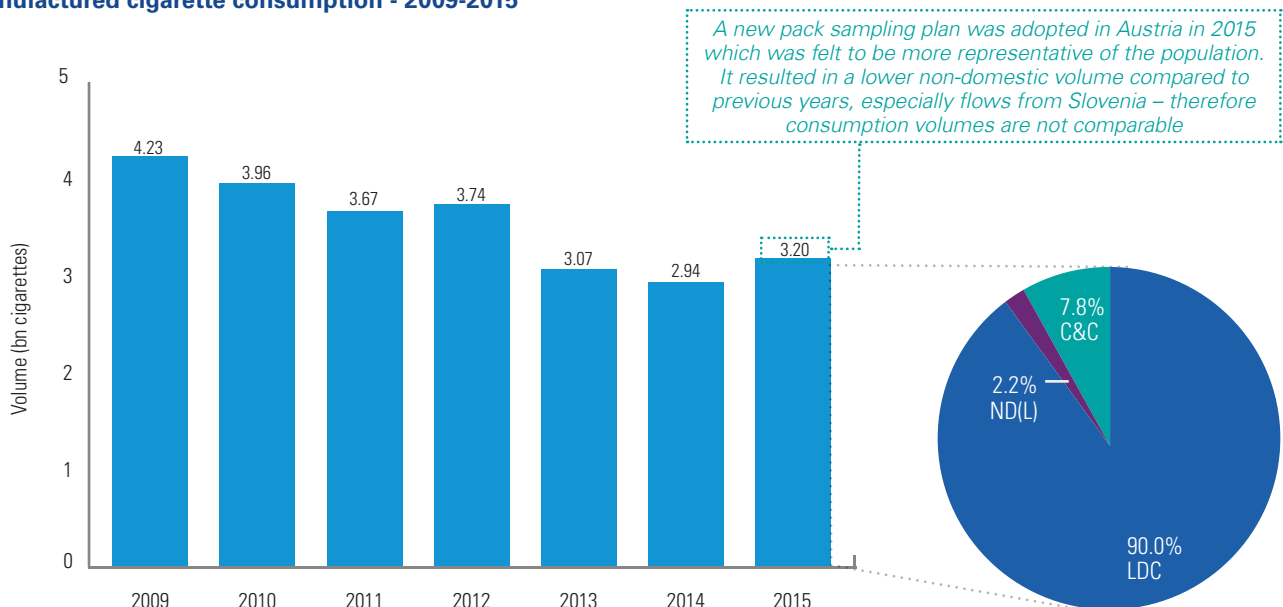
## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015



Slovenia

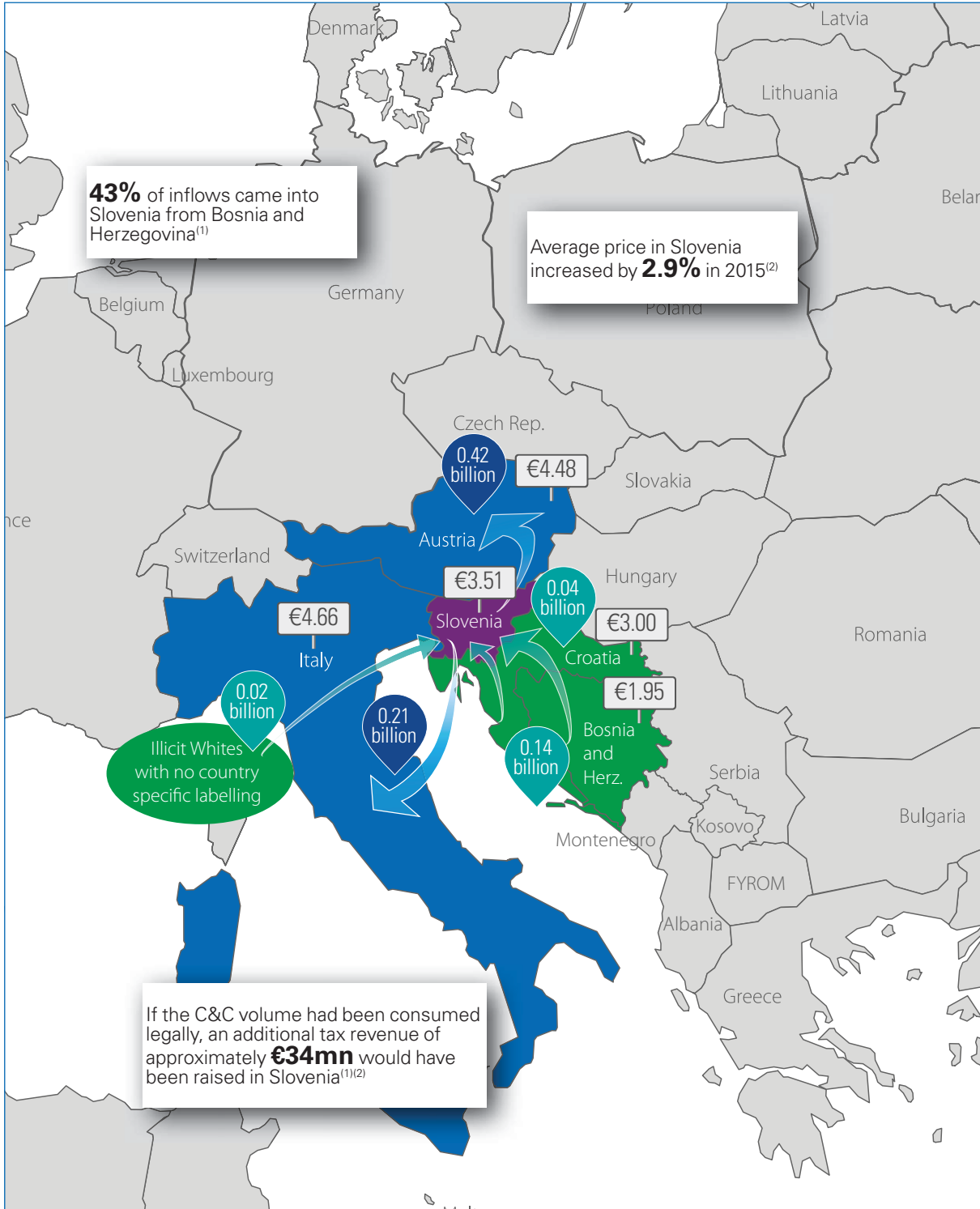






## Manufactured cigarette consumption - 2009-2015



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# Key inflows and outflows



Main outflow   
 Main inflow   
 Weighted average price for a pack of 20 cigarettes   
 Number of cigarettes 

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL SLOVENIA CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	4.98	4.87	4.84	4.57	3.86	3.69	3.67	(0%)
Outflows	-1.11	-1.19	-1.45	-1.15	-1.08	-1.03	-0.80	n/a
Legal domestic consumption (LDC)	3.86	3.68	3.39	3.42	2.77	2.66	2.88	n/a
Non-domestic legal (ND(L))	0.08	0.06	0.05	0.07	0.08	0.05	0.07	37%
Counterfeit and contraband (C&C)	0.28	0.21	0.23	0.25	0.22	0.22	0.25	11%
Total non-domestic	0.36	0.28	0.29	0.32	0.30	0.28	0.32	16%
<b>Total consumption</b>	<b>4.23</b>	<b>3.96</b>	<b>3.67</b>	<b>3.74</b>	<b>3.07</b>	<b>2.94</b>	<b>3.20</b>	<b>n/a</b>

- Whilst legal domestic sales remained stable, both non-domestic legal and C&C increased
- 43% of inflows to Slovenia came from neighbouring Bosnia and Herzegovina where average cigarette prices were 44% cheaper
- While outflows to Austria have reduced since 2011 as prices between each country have narrowed, there may have been an additional reduction in 2015 as borders were closed resulting in some of the border shops selling cigarettes to be closed for parts of the year<sup>(3)</sup>

*The new pack sampling plan in Austria reduced flows from Slovenia which has impacted domestic consumption. Consumption felt to have remained stable with outflows to Austria reduced by 13% based on border sales data*

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWSTO SLOVENIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Bosnia and Herzegovina	0.26	0.16	0.19	0.19	0.13	0.14	0.14
IWs with no country-specific labelling	0.00	0.00	0.00	0.01	0.02	0.02	0.02
Croatia	0.01	0.01	0.01	0.01	0.03	0.02	0.04
FYROM	0.02	0.00	0.01	0.01	0.01	0.01	0.03
Duty Free labelled	0.02	0.02	0.02	0.00	0.02	0.01	0.04
Other	0.05	0.08	0.06	0.10	0.09	0.07	0.06
<b>Total inflows</b>	<b>0.36</b>	<b>0.28</b>	<b>0.29</b>	<b>0.32</b>	<b>0.30</b>	<b>0.28</b>	<b>0.32</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM SLOVENIA							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Austria	0.79	0.85	1.04	0.83	0.68	0.74	0.42
Italy	0.13	0.09	0.21	0.10	0.19	0.15	0.21
Germany	0.14	0.16	0.13	0.16	0.18	0.10	0.10
Other	0.05	0.09	0.07	0.07	0.04	0.04	0.06
<b>Total outflows</b>	<b>1.11</b>	<b>1.19</b>	<b>1.45</b>	<b>1.15</b>	<b>1.08</b>	<b>1.03</b>	<b>0.80</b>

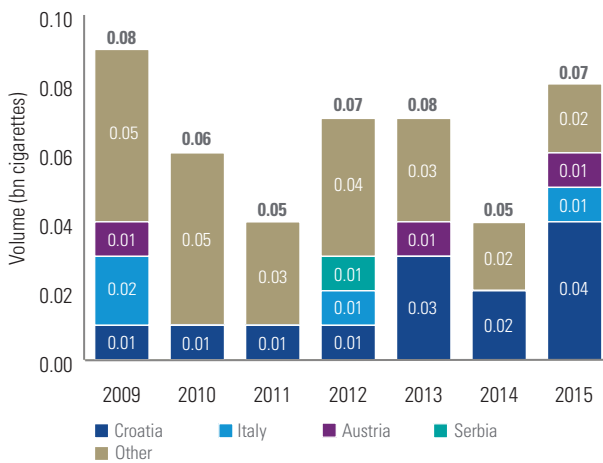
Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) Euromonitor International, August 2015

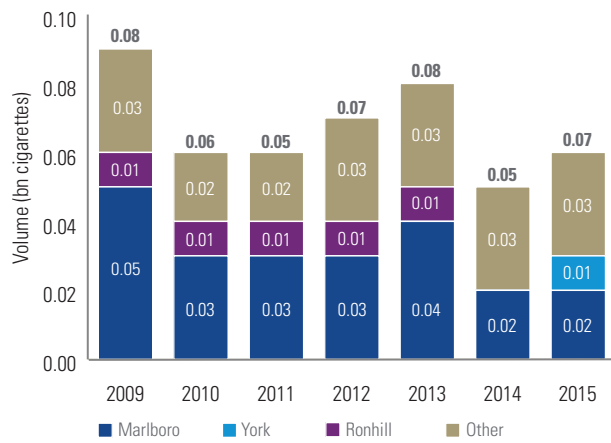
# ND(L) and C&C flows

- Most ND(L) is from surrounding countries and reflects tourist flows from Italy and Austria and cross-border shopping in areas near to Croatia where cigarettes are 15% cheaper
- Over 50% of C&C originated from Bosnia and Herzegovina; whilst there were 1.85 million trips made from Croatia to Bosnia and similar volumes the other way, the customs rules stipulate that 40 cigarettes can be brought per trip, resulting in less than 10% of the total flow identified as ND(L)<sup>(1)</sup>
- Most ND(L) and C&C brands reflected domestic consumption and brands available in Bosnia and Herzegovina. However, Rodeo originated exclusively from FYROM

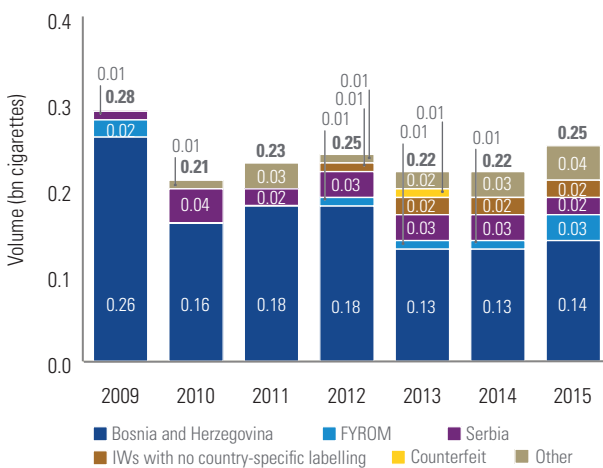
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



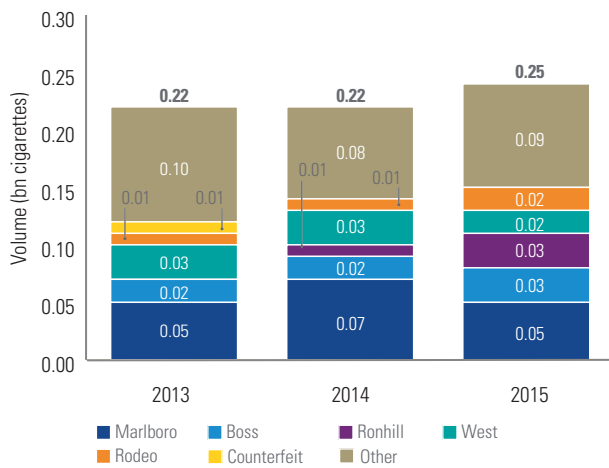
ND(L) by brand - 2009-2015<sup>(1)(a)(b)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers

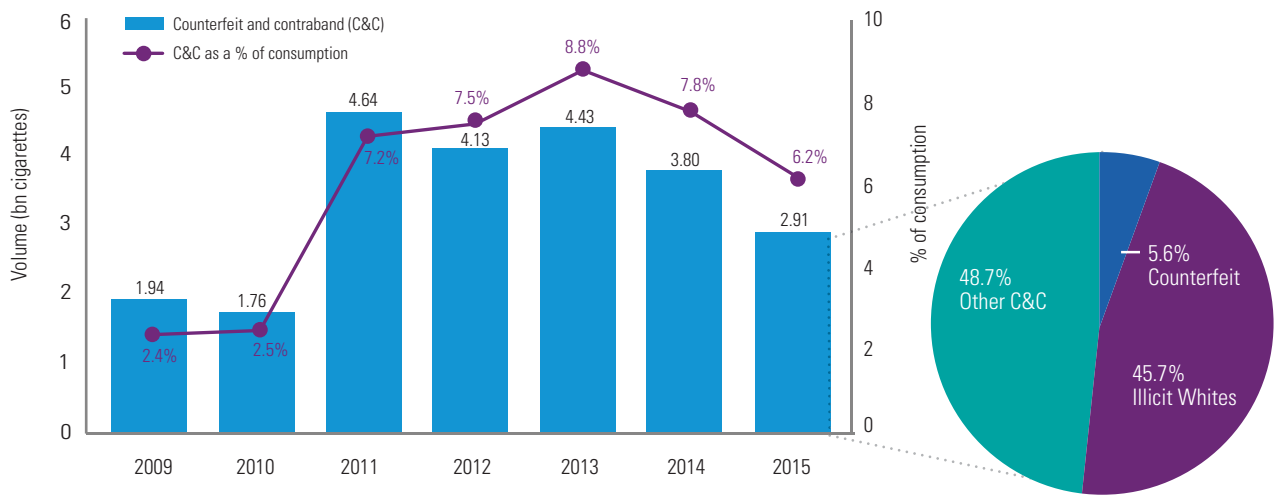


# Spain

## Overview

- C&C volumes declined by 24%, as legal domestic sales stabilised for the first time since 2009
- Flows from lower priced neighbouring regions, including Gibraltar, Andorra and the Canary Islands, accounted for two thirds of total inflows
- Illicit Whites brand flows declined by 48% in 2015, accounting for the majority of C&C decline
- Outflows from Spain were the 3<sup>rd</sup> highest in Europe reflecting Spain's popularity as a tourist destination, particularly for visitors from France and the UK where cigarette prices are higher

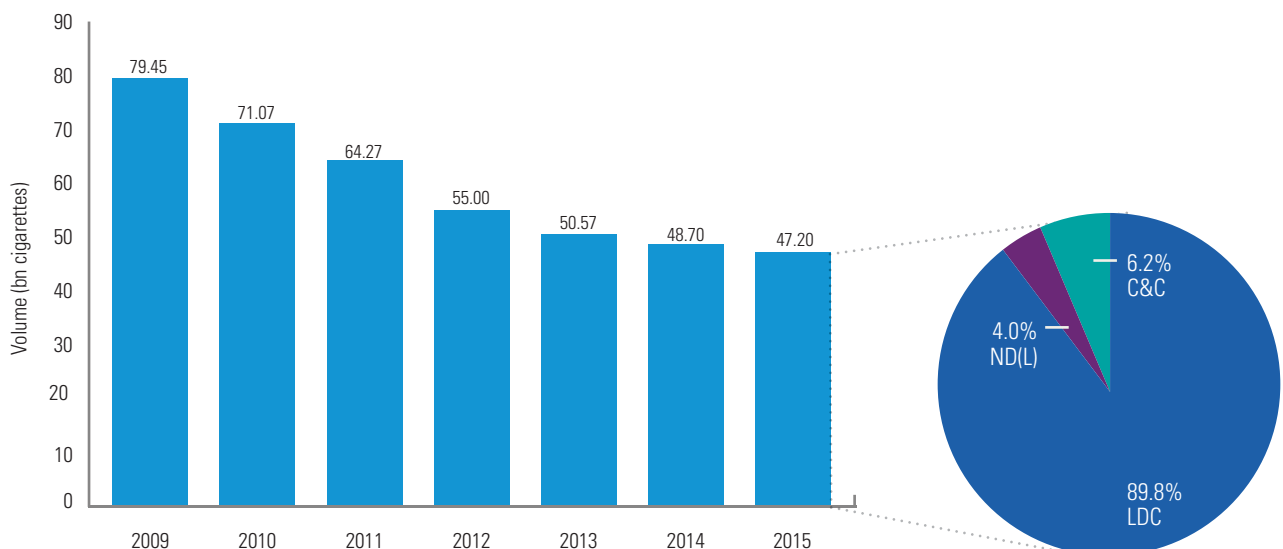
## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015



Spain

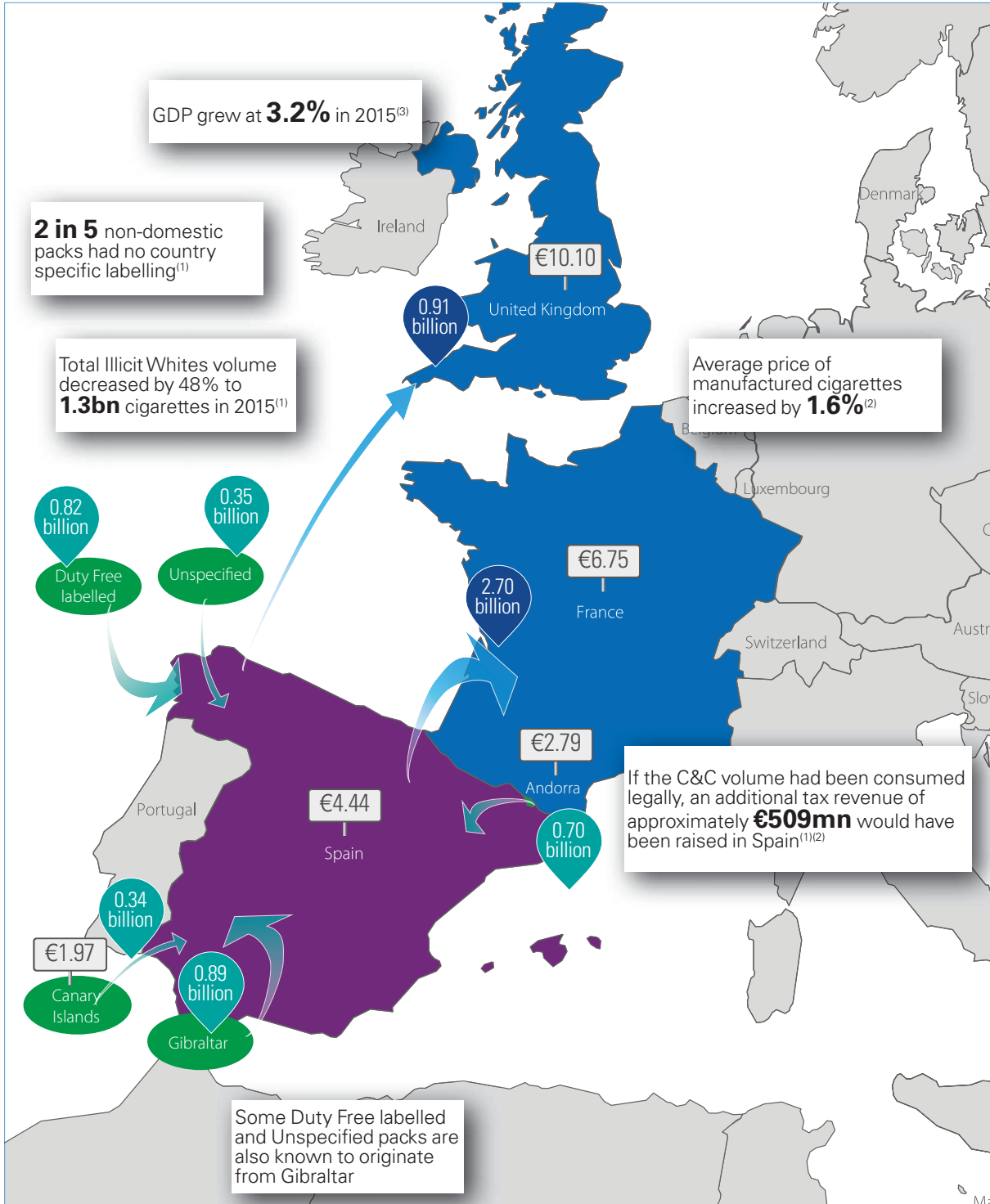


## Manufactured cigarette consumption - 2009-2015



Project SUN

# Key inflows and outflows



Main outflow █  
 Main inflow █  
 Weighted average price for a pack of 20 cigarettes   
 Number of cigarettes ●

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
 Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and analysis of data sources provided by manufacturers (3) European Commission, February 2016

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(3)(a)</sup>

TOTAL SPAIN CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	81.67	72.70	61.52	53.50	47.71	46.99	46.50	(1%)
Outflows	-5.76	-4.68	-3.30	-4.14	-2.85	-3.95	-4.11	4%
Legal domestic consumption (LDC)	75.91	68.01	58.21	49.35	44.86	43.04	42.39	(2%)
Non-domestic legal (ND(L))	1.60	1.30	1.41	1.51	1.29	1.85	1.91	3%
Counterfeit and contraband (C&C)	1.94	1.76	4.64	4.13	4.43	3.80	2.91	(24%)
Total non-domestic	3.54	3.06	6.05	5.64	5.71	5.65	4.82	(15%)
<b>Total consumption</b>	<b>79.45</b>	<b>71.07</b>	<b>64.27</b>	<b>55.00</b>	<b>50.57</b>	<b>48.70</b>	<b>47.20</b>	<b>(3%)</b>

- Inflows decreased on the back of a 24% decline in C&C, against a backdrop of increased enforcement activity<sup>(6)</sup>, improved economic environment and low price increases in 2015, with no tax increases during the year<sup>(5)</sup>
- Outflows from Spain were partially driven by the 56 million tourists visiting in 2015 and price gaps between Spain and other countries
  - Flows to France stabilised in 2015, despite an increase in tourist flows, however there was increased border security between France and Spain at the end of the year
  - Outflows to the UK grew, supported by a 5% increase in tourist numbers in 2015<sup>(4)</sup>

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWSTO SPAIN								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
Gibraltar					0.37	1.27	0.89	
Duty Free labelled	1.55	1.30	1.86	1.47	1.31	1.09	0.82	
IWs with no country-specific labelling	0.00	0.01	0.20	0.65	1.06	1.36	0.82	
Andorra	0.35	0.15	0.79	0.81	0.69	0.58	0.70	
Unspecified	0.00	0.02	1.11	0.36	0.52	0.07	0.35	
Canary Islands	0.79	1.11	1.39	1.61	0.88	0.45	0.34	
Other	0.85	0.48	0.70	0.74	0.88	0.83	0.90	
<b>Total inflows</b>	<b>3.54</b>	<b>3.06</b>	<b>6.05</b>	<b>5.64</b>	<b>5.71</b>	<b>5.65</b>	<b>4.82</b>	

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM SPAIN								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	
France	2.40	2.08	1.57	2.33	1.84	2.70	2.70	
UK	1.91	1.15	0.81	1.04	0.50	0.72	0.91	
Germany	0.52	0.44	0.35	0.26	0.19	0.13	0.15	
Italy	0.20	0.22	0.06	0.13	0.06	0.08	0.09	
Netherlands	0.08	0.24	0.17	0.12	0.07	0.11	0.07	
Other	0.66	0.55	0.33	0.25	0.20	0.21	0.19	
<b>Total outflows</b>	<b>5.76</b>	<b>4.68</b>	<b>3.30</b>	<b>4.14</b>	<b>2.85</b>	<b>3.95</b>	<b>4.11</b>	

Notes: (a) In years 2012-2015 non-domestic incidence is stated on sticks basis; prior to this a packs basis was used; (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) Tobacco Commissioner (4) National Institute of Statistics, Spain (5) Euromonitor International, August 2015 (6) Spanish police crack down on Gibraltar cigarette smugglers, El Pais, March 2015

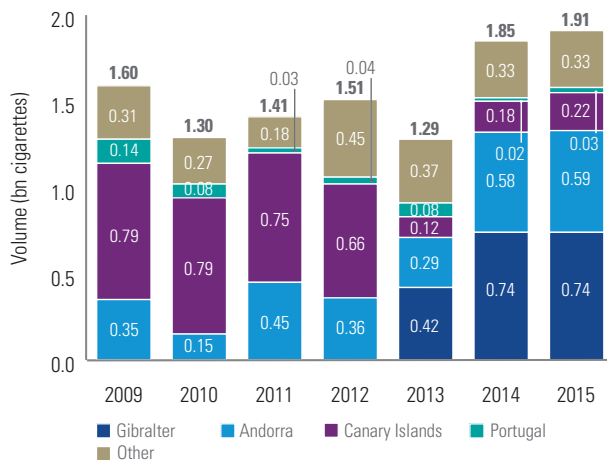




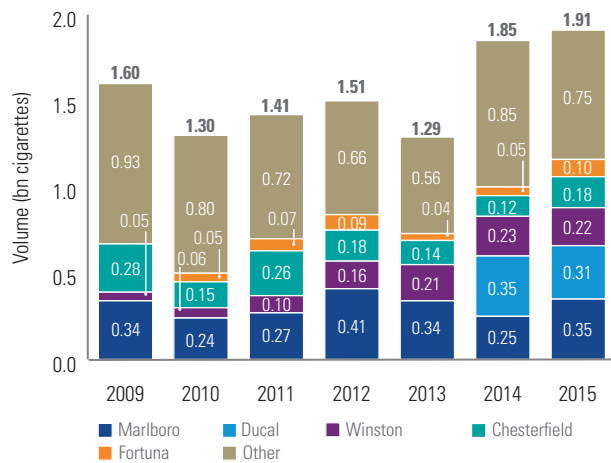
# ND(L) and C&C flows

- More than 80% of ND(L) flows came from neighbouring lower priced regions, with volumes supported by travel flows and frontier workers
- Illicit Whites brand flows with no country specific labelling and C&C Gibraltar-labelled product declined by 51% amidst an increase in the number of law enforcement operations undertaken by Spanish police<sup>(6)</sup>
  - Flows of American legend, which has no country specific labelling declined by 47%
  - C&C flows of Gibraltar-labelled Ducal declined by 43%

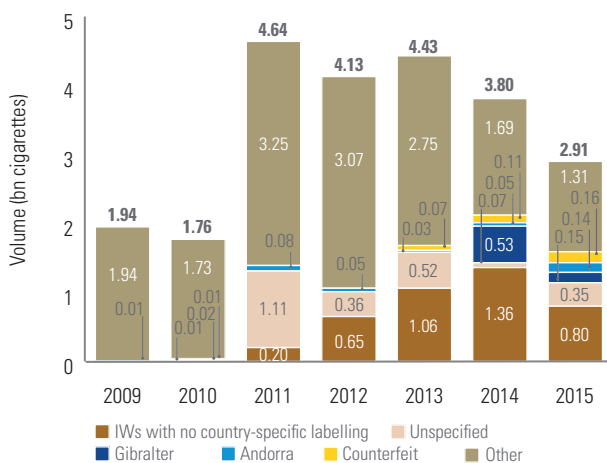
ND(L) by country of origin - 2009-2015<sup>(1)(2)(3)(4)(5)(a)(b)(c)</sup>



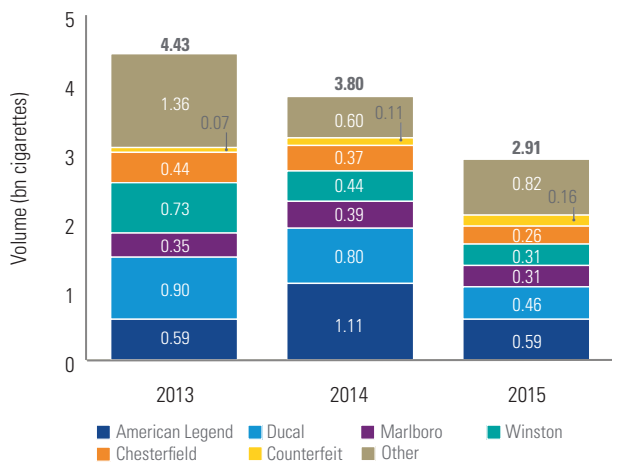
ND(L) by brand - 2009-2015<sup>(1)(2)(a)</sup>



C&C by country of origin - 2009-2015<sup>(1)(2)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(2)(a)</sup>



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) KPMG uses data on propensity to travel and purchases cigarettes in Andorra, Gibraltar and the Canary Islands instead of smoking prevalence data. Please refer to the methodology for more information

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers (2) KPMG analysis of data sources provided by manufacturers (3) Government of Gibraltar, Statistics (4) Government of Andorra Statistics (5) Istec, Canary Island visitor numbers (6) Spanish police crack down on Gibraltar cigarette smugglers, El Pais, March 2015

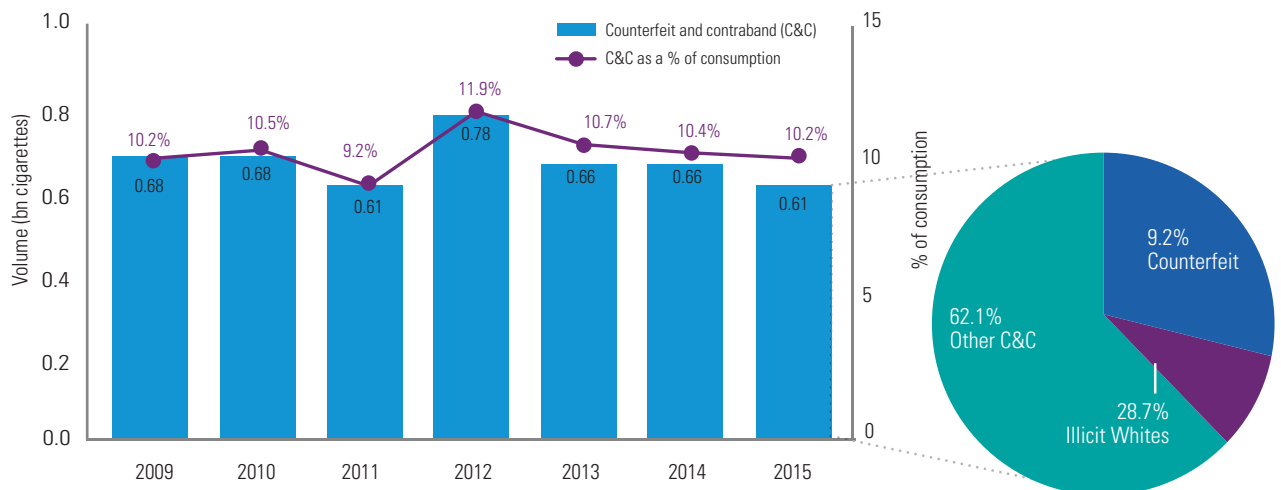


# Sweden

## Overview

- The decline in C&C followed the trend of the decline in overall consumption
- C&C volumes remained stable at 10.2% of consumption whilst Legal Domestic Sales fell against a backdrop of price increases
- ND(L) increased and therefore total non-domestic consumption increased to 15% of the overall manufactured cigarette market
- Domestic Illicit Whites continued to account for 18% of C&C consumption

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

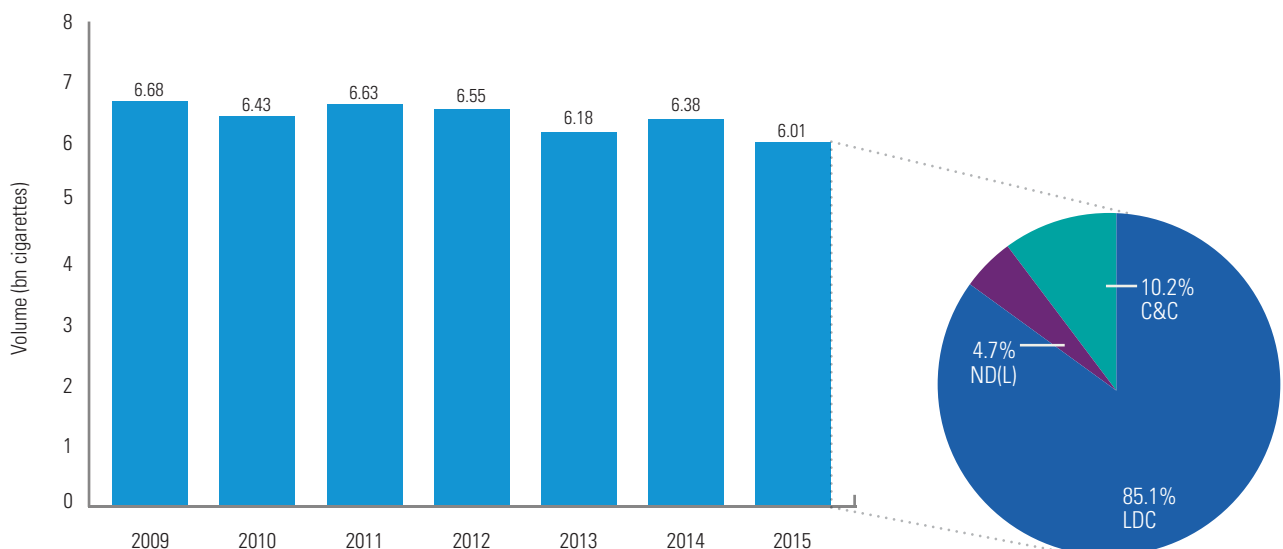


Sweden

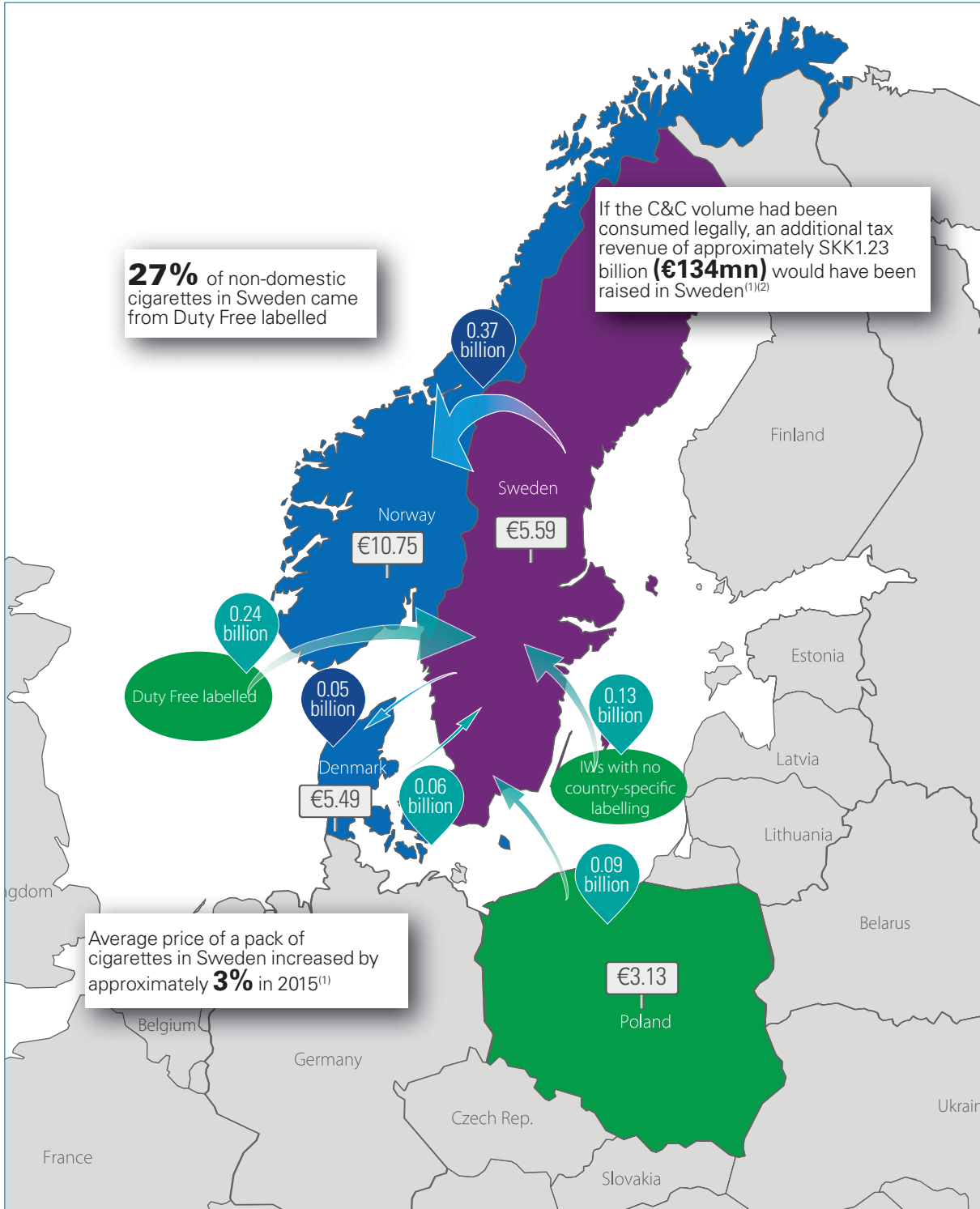


Project SUN

## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows



Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco)

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)</sup>

TOTAL SWEDEN CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	6.22	6.18	6.33	6.04	5.87	5.94	5.66	(5%)
Outflows	-0.39	-0.60	-0.48	-0.44	-0.51	-0.39	-0.54	39%
Legal domestic consumption (LDC)	5.83	5.58	5.85	5.59	5.36	5.56	5.12	(8%)
Non-domestic legal (ND(L))	0.17	0.17	0.17	0.17	0.16	0.16	0.28	78%
Counterfeit and contraband (C&C)	0.68	0.68	0.61	0.78	0.66	0.66	0.61	(8%)
Total non-domestic	0.85	0.85	0.78	0.95	0.83	0.82	0.90	9%
<b>Total consumption</b>	<b>6.68</b>	<b>6.43</b>	<b>6.63</b>	<b>6.55</b>	<b>6.18</b>	<b>6.38</b>	<b>6.01</b>	<b>(6%)</b>

- ND(L) experienced strong growth and C&C declined as Swedish consumers took advantage of purchasing cheaper cigarettes from other countries
- Inflows and outflows to Denmark are reflective of the high volume of travel between each country as prices are broadly the same depending on currency fluctuations<sup>(3)</sup>
- Duty Free volumes are likely a result of travel between Norway (a non-EU country) and Sweden
- Outflows to Norway continued to account for 68% of total flows leaving Sweden, as high volumes of Norwegians visit Norway for shopping trips and take advantage of cheaper cigarette prices

## Total inflows by country of origin - 2009-2015<sup>(1)(b)(c)</sup>

ND INFLOWS TO SWEDEN							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Duty Free labelled	0.12	0.25	0.08	0.21	0.26	0.27	0.24
IWs with no country-specific labelling	0.14	0.08	0.14	0.04	0.05	0.01	0.13
Poland	0.04	0.05	0.06	0.13	0.12	0.08	0.09
Denmark	0.03	0.05	0.01	0.03	0.01	0.01	0.06
Belarus	0.00	0.00	0.00	0.01	0.08	0.04	0.03
Other	0.51	0.43	0.48	0.52	0.30	0.41	0.34
<b>Total inflows</b>	<b>0.85</b>	<b>0.85</b>	<b>0.78</b>	<b>0.95</b>	<b>0.83</b>	<b>0.82</b>	<b>0.90</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM SWEDEN							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Norway	0.23	0.30	0.32	0.28	0.35	0.27	0.37
Denmark	0.05	0.17	0.11	0.04	0.04	0.03	0.05
Germany	0.01	0.00	0.00	0.01	0.05	0.02	0.02
Other	0.10	0.13	0.05	0.12	0.07	0.08	0.10
<b>Total outflows</b>	<b>0.39</b>	<b>0.60</b>	<b>0.48</b>	<b>0.44</b>	<b>0.51</b>	<b>0.39</b>	<b>0.54</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling

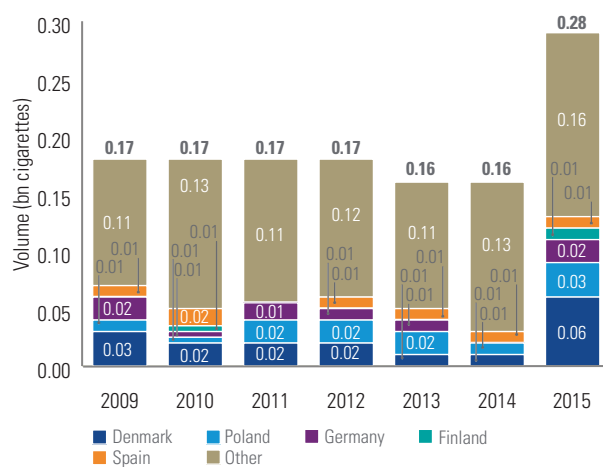
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) 2015 Euromonitor



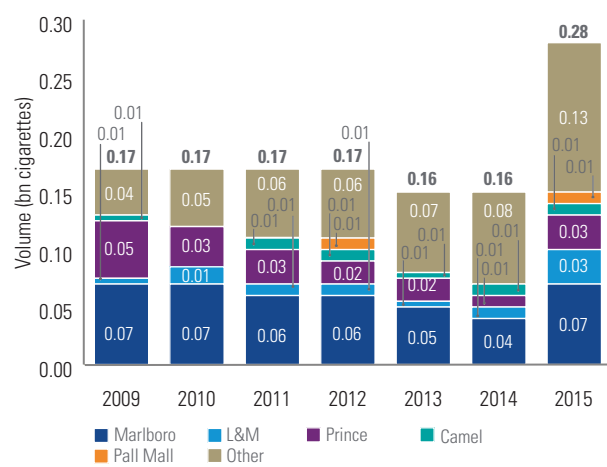
# ND(L) and C&C flows

- ND(L) increased driven partially by cross-border purchases from Denmark, which increased as prices became more expensive in Sweden compared to Denmark in 2015
- Source countries and brand flows of C&C remained similar to 2014
- Domestic Illicit Whites continued to make up almost 18% of C&C<sup>(c)</sup>
  - Domestic Illicit Whites have Swedish labelling but have no tax paid on them and no legal Swedish distribution

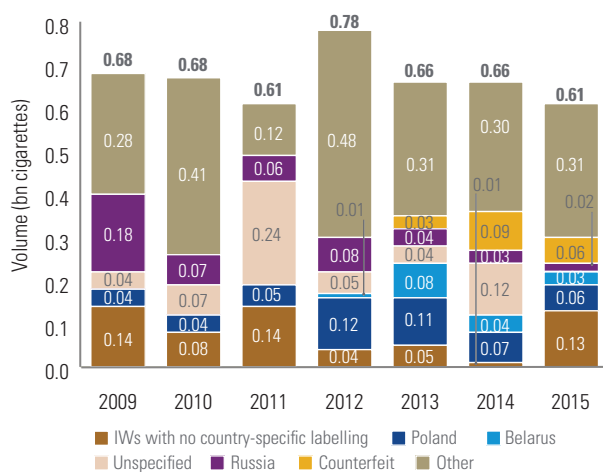
**ND(L) by country of origin - 2009-2015<sup>(1)(2)(a)(b)</sup>**



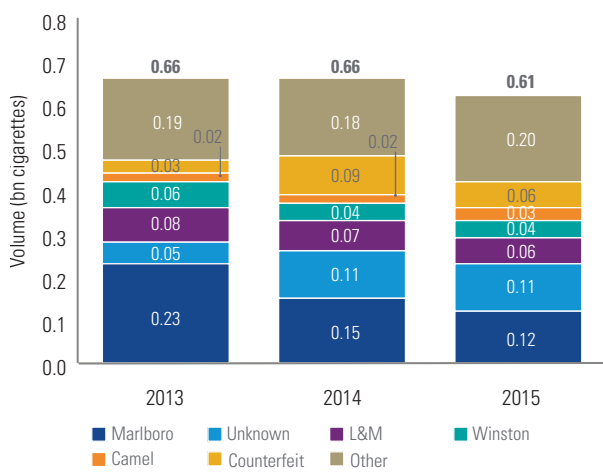
**ND(L) by brand - 2009-2015<sup>(1)(2)(a)(b)</sup>**



**C&C by country of origin - 2009-2015<sup>(1)(2)(a)</sup>**



**C&C by brand - 2013-2015<sup>(1)(2)(3)(a)</sup>**



Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) The Domestic Illicit Whites volumes were derived from a study undertaken by KPMG and the local NMA which reported Illicit White consumption as 1.9% of total consumption which, when applied to Project SUN derives a volume of 0.11 billion cigarettes

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers (2) KPMG analysis of data sources provided by manufacturers (3) Obeskattade cigaretter 2015

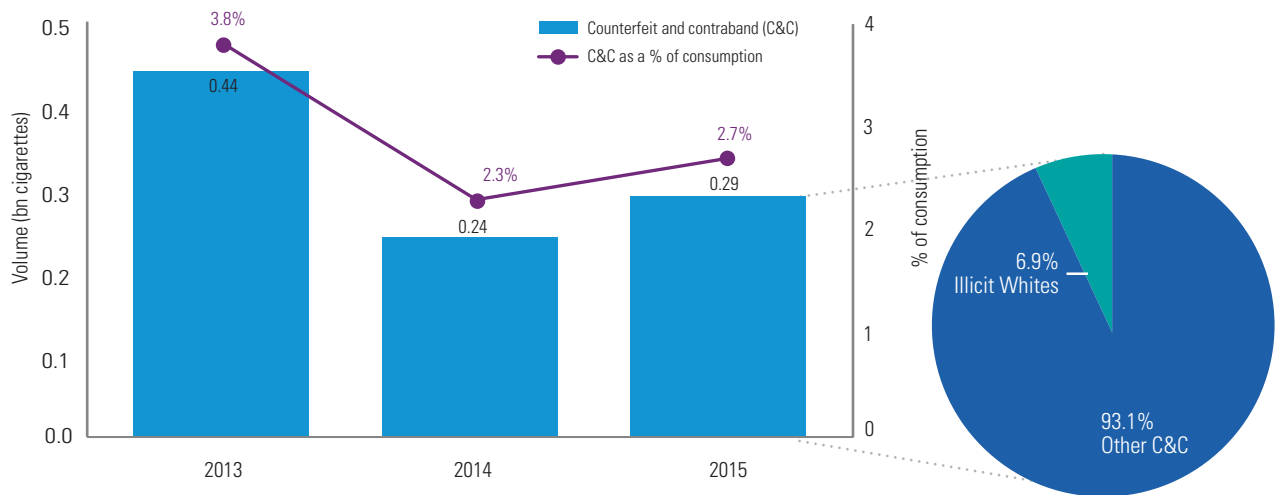


# Switzerland

## Overview

- C&C volumes in Switzerland remained low in comparison with surrounding European countries
  - C&C was 2.7% of consumption, compared to 14.6% in France, 6.0% in Germany and 5.8% in Italy
- The strengthening of the Swiss Franc compared to the Euro has widened the price gap between Switzerland and neighbouring countries, increasing non-domestic legal consumption

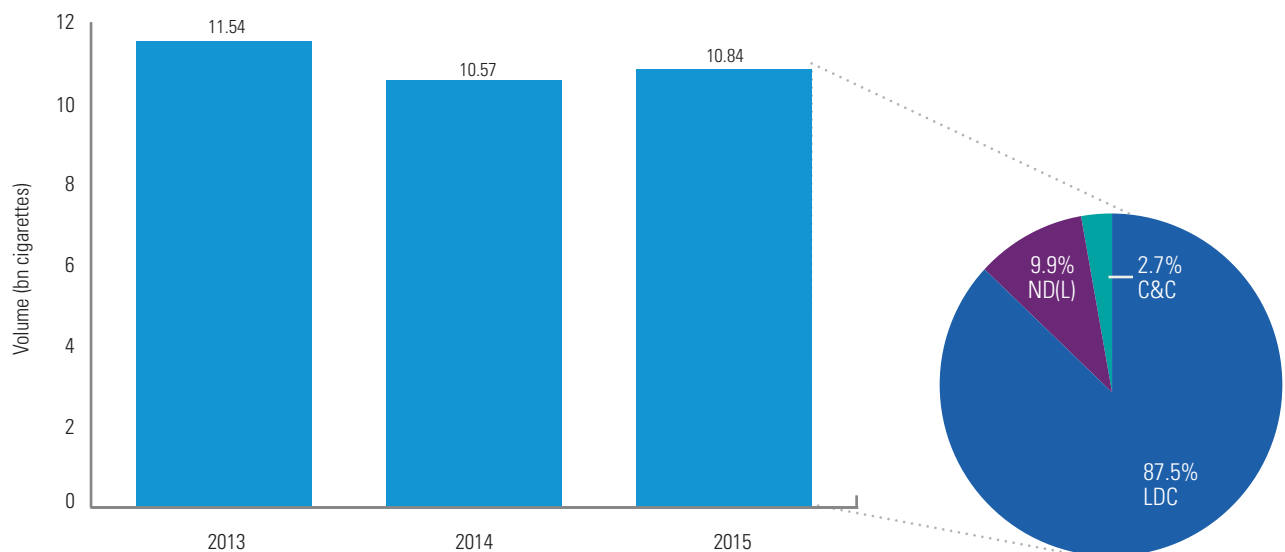
## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2013-2015



Switzerland

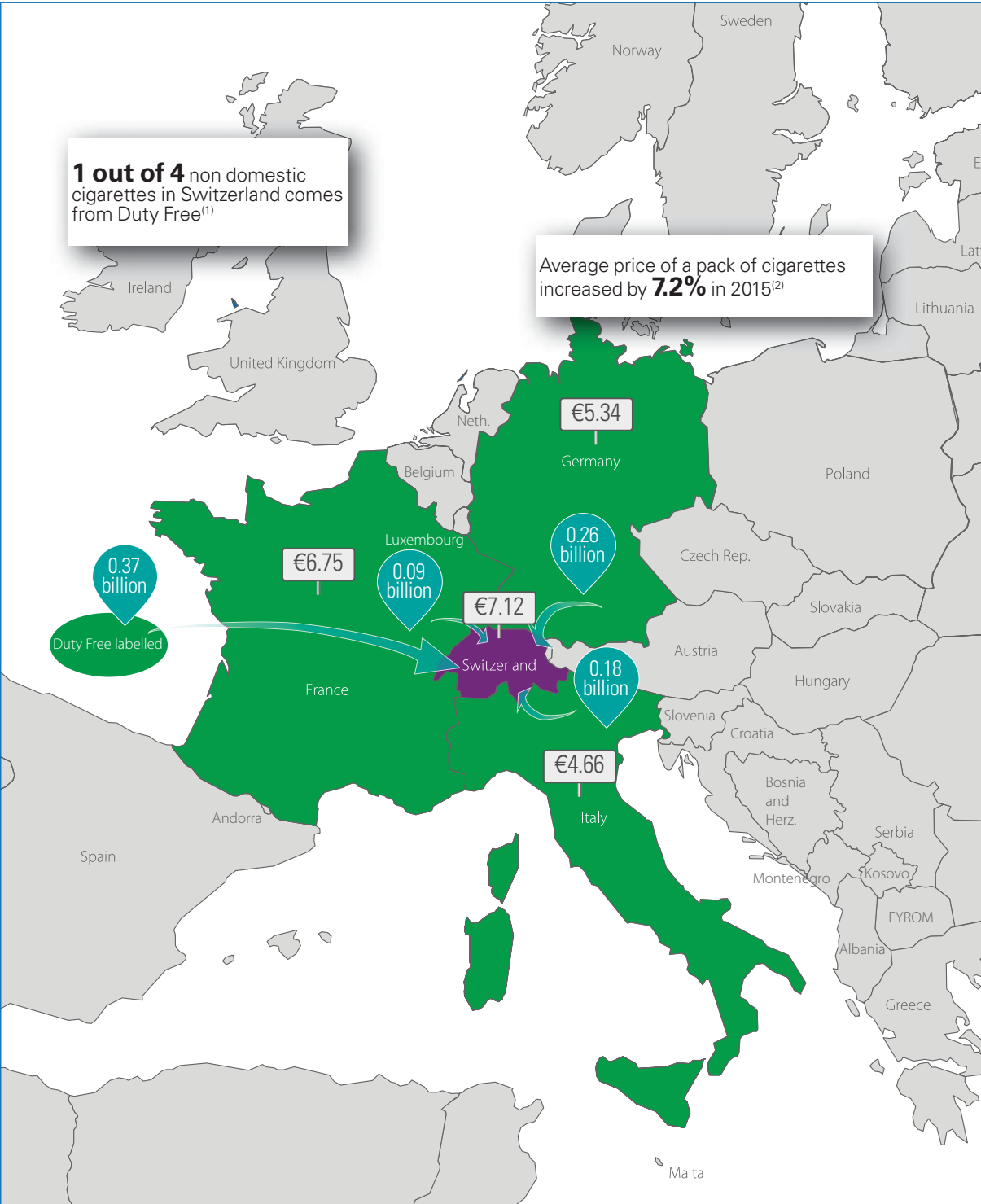


## Manufactured cigarette consumption - 2013-2015







Project SUN

# Key inflows



Switzerland  
  
 Project SUN

- Main outflow 
- Main inflow 
- Weighted average price for a pack of 20 cigarettes 
- Number of cigarettes 

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow

Sources: (1) KPMG EU Flows Model (2) EC Excise Duty tables (Part III – Manufactured Tobacco) and average price of most popular brand for non-EU countries

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2013-2015<sup>(1)(2)(a)(d)</sup>

TOTAL SWITZERLAND CONSUMPTION				
Billion cigarettes	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	10.57	10.12	9.76	(4%)
Outflows	-0.35	-0.47	-0.28	(40%)
Legal domestic consumption (LDC)	10.22	9.65	9.48	(2%)
Non-domestic legal (ND(L))	0.88	0.68	1.07	58%
Counterfeit and contraband (C&C)	0.44	0.24	0.29	20%
Total non-domestic	1.32	0.92	1.36	48%
<b>Total consumption</b>	<b>11.54</b>	<b>10.57</b>	<b>10.84</b>	<b>3%</b>

- Inflows from surrounding countries were mainly reflected by lower prices abroad, a high number of border crossings and daily commuters
  - Border shopping in general increased by 6% in 2015 as Swiss consumers took advantage of the stronger Swiss Franc against the Euro<sup>(3)</sup>
- Duty Free inflows account for a higher proportion of non-domestic consumption in Switzerland compared with EU countries as it is a non-EU country, therefore all international travellers are entitled to a Duty Free allowance when entering Switzerland from any country, as such all product is categorised as non-domestic legal
- Inflows from Serbia may relate to immigrants from the Balkan region; the Balkan emigrant population is estimated to total 300,000<sup>(4)</sup>
- The significant reduction of outflows are also reflective of the stronger Swiss Franc compared to the Euro with fewer travellers likely to take cigarettes out of Switzerland

## Total inflows by country of origin - 2013-2015<sup>(1)(b)(c)(d)</sup>

ND INFLOWS TO SWITZERLAND			
Billion cigarettes	2013	2014	2015
Duty Free labelled	0.32	0.22	0.37
Germany	0.21	0.17	0.26
Italy	0.12	0.12	0.18
France	0.10	0.04	0.09
Serbia	0.07	0.05	0.07
Other	0.50	0.31	0.39
<b>Total inflows</b>	<b>1.32</b>	<b>0.92</b>	<b>1.36</b>

## Total outflows by destination country – 2013-2015<sup>(1)(d)</sup>

OUTFLOWS FROM SWITZERLAND			
Billion cigarettes	2013	2014	2015
Germany	0.03	0.12	0.10
Italy	0.05	0.13	0.04
Netherlands	0.08	0.07	0.04
Other	0.18	0.16	0.09
<b>Total outflows</b>	<b>0.35</b>	<b>0.47</b>	<b>0.28</b>

Notes: (a) In years 2013-2015 non-domestic incidence is stated on a sticks basis  
 (b) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology  
 (c) The Duty Free labelled and Unspecified inflows exclude Illicit Whites which have Duty Free labelling and unspecified labelling (d) Switzerland was included in the study for the first time in 2014, but 2013 is reflective of a study that KPMG undertook for Switzerland using the Project SUN methodology

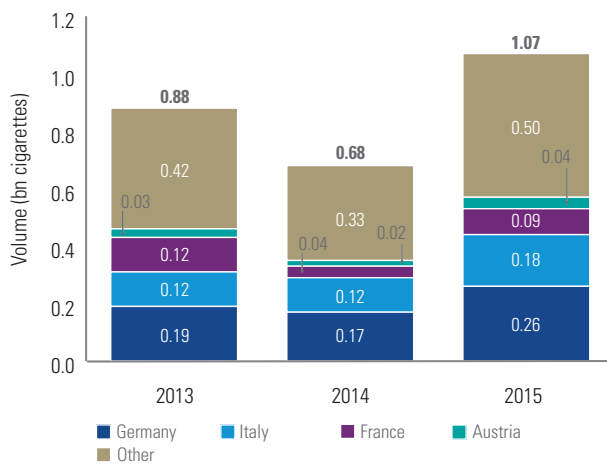
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 (3) Auslandseinkäufe 2015, GfK Switzerland, February 2016 (4) Swiss Federal Statistics Office



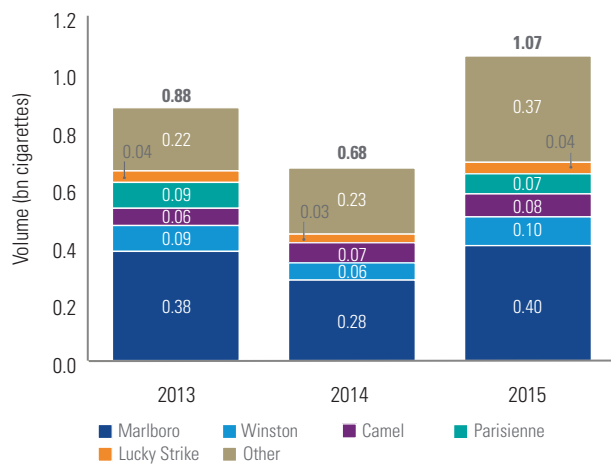
# ND(L) and C&C flows

- High ND(L) volumes are reflective of the opportunities presented by Duty Free shopping when leaving or entering the country with increases accounted for by border shopping, increased usage of Duty Free shopping and daily commuters from Germany, Italy and France
- C&C in Switzerland was 2.7% compared to 14.6% in France, 6.0% in Germany and 5.8% in Italy
  - C&C from Serbia, Kosovo, Bosnia and Herzegovina and FYROM may relate to immigrants from the Balkan region; the Balkan emigrant population is estimated to be around 300,000<sup>(2)</sup>

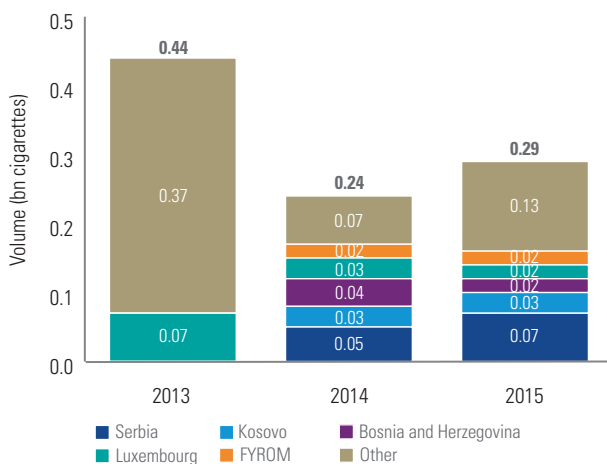
**ND(L) by country of origin - 2013-2015<sup>(1)(a)(b)(c)</sup>**



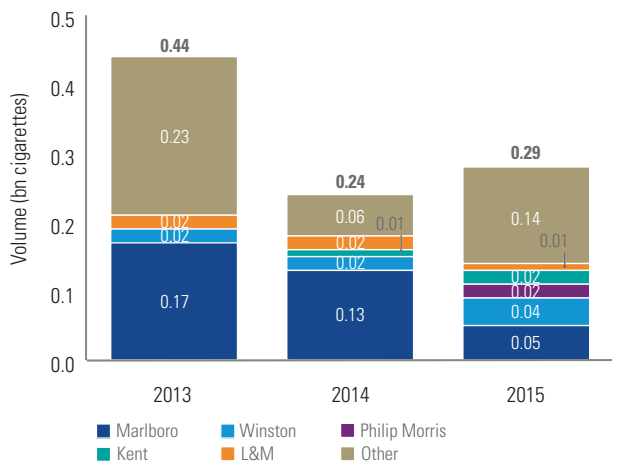
**ND(L) by brand - 2013-2015<sup>(1)(a)(b)(c)</sup>**



**C&C by country of origin - 2013-2015<sup>(1)(a)(c)</sup>**



**C&C by brand - 2013-2015<sup>(1)(a)(c)</sup>**



**Notes:** (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014 and 2015 the ND(L) analysis was undertaken using border crossings and regional sales data provided by manufacturers; detail surrounding methodology changes is provided in the appendix (c) Switzerland was included in the study for the first time in 2014, but 2013 is reflective of a study that KPMG undertook for Switzerland using the Project SUN methodology

**Sources:** (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers (2) Swiss Federal Statistics Office

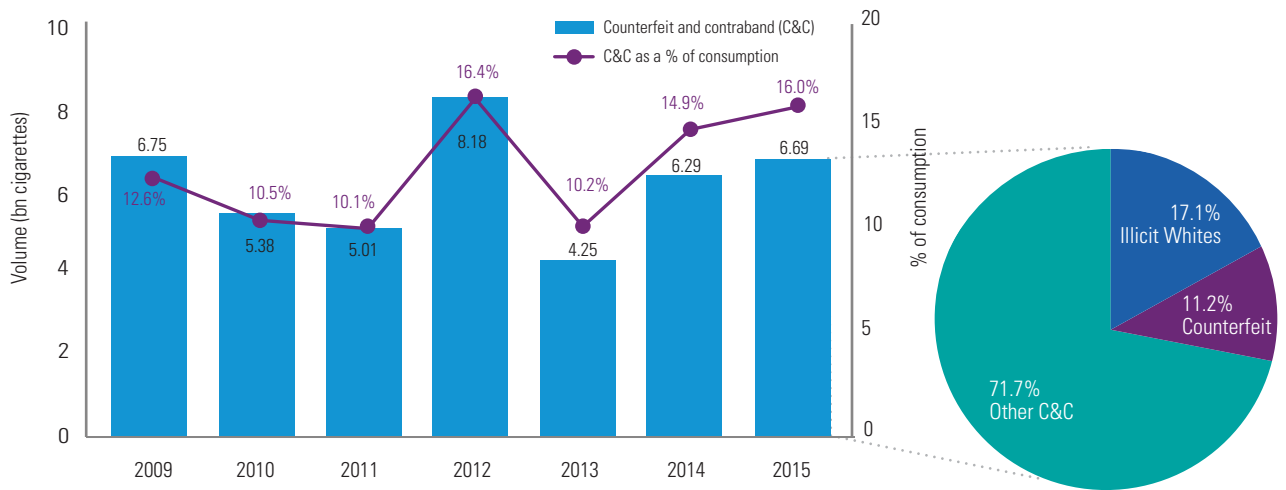


# UK

## Overview

- C&C consumption continued to increase to 16% of total consumption, making the UK one of the highest in the EU
- The largest C&C increases came from lower priced EU countries and a 0.5 billion increase in counterfeit cigarettes, largely with Duty Free labelling
- C&C continued to originate from Poland and Pakistan with an additional 0.4 billion cigarettes from Romania in 2015

## Manufactured cigarette C&C volumes and share of overall cigarette consumption - 2009-2015

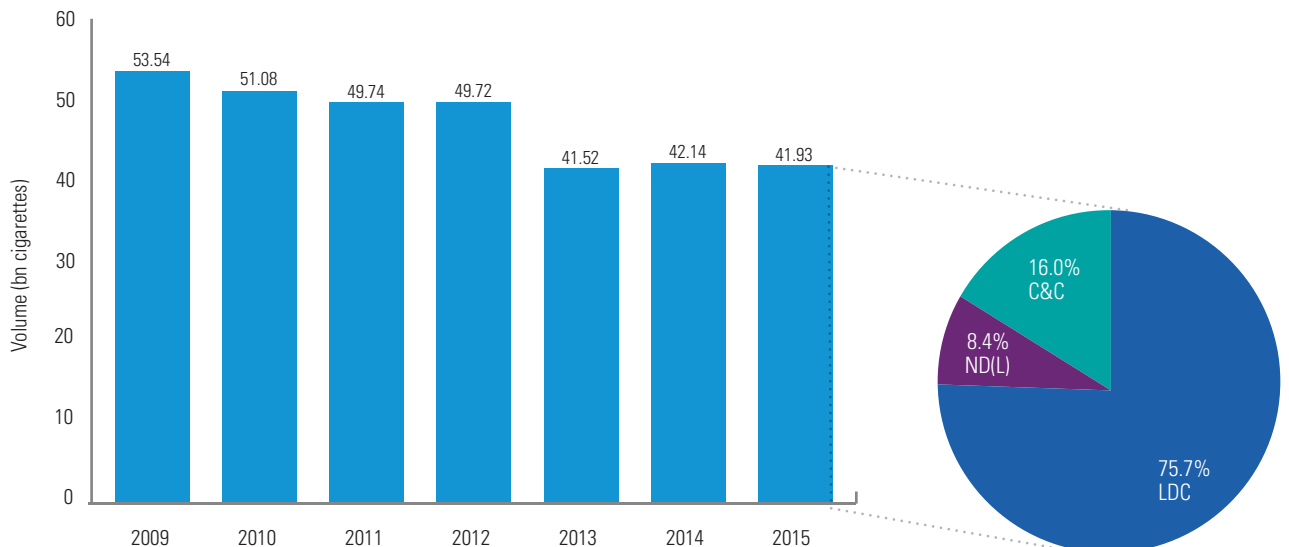


UK

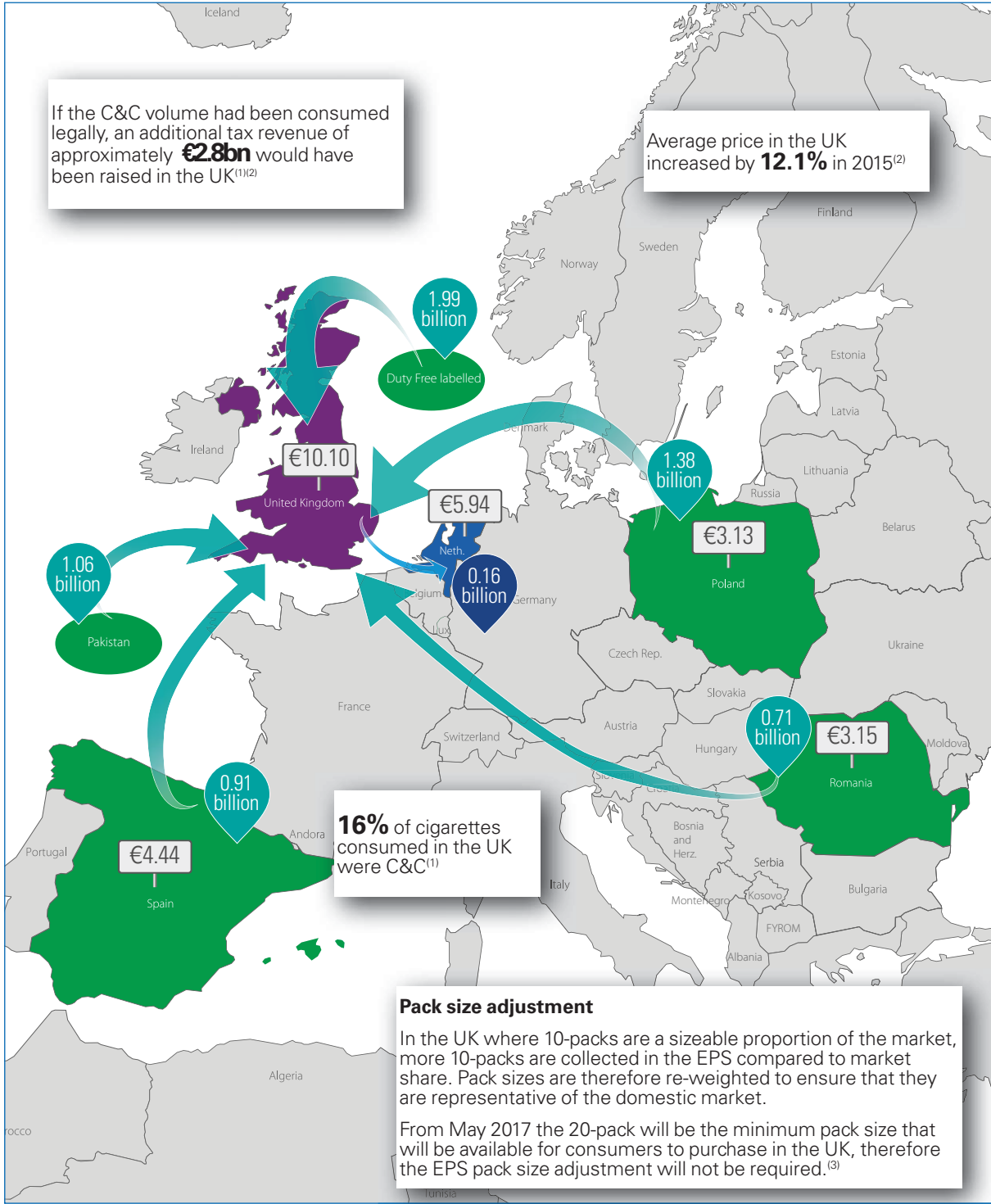


Project SUN

## Manufactured cigarette consumption - 2009-2015



# Key inflows and outflows



Main outflow ■  
Main inflow ■  
Weighted average price for a pack of 20 cigarettes   
Number of cigarettes ●

Note: (a) Map shows major flows. Countries which are both source and destination countries are coded according to the larger flow  
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) EC Excise Duty tables (Part III – Manufactured Tobacco) (3) UK Department of Health, Consultation on implementation of the revised Tobacco Products Directive (2014/40/EU), July 2015

# Manufactured cigarette consumption, inflows and outflows

## Total manufactured cigarette consumption – 2009-2015<sup>(1)(2)(a)(b)</sup>

TOTAL UK CONSUMPTION								
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015	2014-15 %
Legal domestic sales (LDS)	45.27	44.85	43.89	40.55	35.77	33.78	32.06	(5%)
Outflows	-0.57	-0.50	-0.49	-0.37	-0.28	-0.31	-0.33	6%
Legal domestic consumption (LDC)	44.70	44.35	43.40	40.19	35.49	33.47	31.73	(5%)
Non-domestic legal (ND(L))	2.10	1.35	1.32	1.36	1.78	2.39	3.51	47%
Counterfeit and contraband (C&C)	6.75	5.38	5.01	8.18	4.25	6.29	6.69	6%
Total non-domestic	8.85	6.73	6.33	9.54	6.03	8.67	10.20	18%
<b>Total consumption</b>	<b>53.54</b>	<b>51.08</b>	<b>49.74</b>	<b>49.72</b>	<b>41.52</b>	<b>42.14</b>	<b>41.93</b>	<b>(1%)</b>

- A 1.7 billion decline in legal domestic sales was partially offset by a 1.5 billion increase in non-domestic consumption, resulting in a total consumption decline of 0.2 billion cigarettes
- Inflows increased by 18%, mainly from the lower priced EU countries of Romania and Poland, and Duty Free flows
  - Average prices in Romania and Poland were €3.15 and €3.13, whilst UK prices remain among the highest in the EU, increasing from €9.01 to €10.10 between 2014 and 2015<sup>(3)</sup>
  - An estimated 16% increase in trips made from Romania and Poland to the UK supports the increase in ND(L) from these countries<sup>(2)</sup>
- Outflows were stable at 0.3 billion and remained among the lowest in the EU, reflecting the high UK prices

## Total inflows by country of origin - 2009-2015<sup>(1)(c)(d)</sup>

ND INFLOWS TO THE UK							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Duty Free labelled	0.65	0.33	0.81	0.91	0.77	1.55	1.99
Poland	1.01	0.86	0.96	1.72	0.89	1.23	1.38
Pakistan	0.09	0.20	0.20	0.35	0.57	1.19	1.06
Spain	1.91	1.15	0.81	1.04	0.50	0.72	0.91
Romania	0.30	0.37	0.32	0.19	0.05	0.17	0.71
Belarus	0.03	0.03	0.03	0.14	0.22	0.99	0.61
IWs with no country-specific labelling	0.26	0.67	0.58	0.94	0.91	0.50	0.33
Other	4.60	3.11	2.63	4.24	2.13	2.33	3.21
<b>Total inflows</b>	<b>8.85</b>	<b>6.73</b>	<b>6.33</b>	<b>9.54</b>	<b>6.03</b>	<b>8.67</b>	<b>10.20</b>

## Total outflows by destination country – 2009-2015<sup>(1)</sup>

OUTFLOWS FROM THE UK							
Billion cigarettes	2009	2010	2011	2012	2013	2014	2015
Netherlands	0.11	0.20	0.14	0.15	0.14	0.16	0.16
Ireland	0.35	0.20	0.24	0.14	0.06	0.08	0.08
Italy	0.03	0.02	0.02	0.02	0.00	0.01	0.02
Other	0.09	0.08	0.10	0.07	0.07	0.07	0.07
<b>Total outflows</b>	<b>0.57</b>	<b>0.50</b>	<b>0.49</b>	<b>0.37</b>	<b>0.28</b>	<b>0.31</b>	<b>0.33</b>

Notes: (a) In years 2012-2015 non-domestic incidence is stated on a sticks basis; prior to this a packs basis was used (b) In 2014, KPMG changed its approach to analysing ND(L) by reviewing border crossings and regional sales data provided by manufacturers. In prior years, a consumer survey approach was used. KPMG updated some of those data sources in 2015. Detail surrounding methodology changes is provided in the appendix (c) Illicit Whites with no country specific labelling comprise Illicit Whites labelled as "Duty free labelled" and "Unspecified". Data from previous years reflects the same definition; please refer to the appendix for full methodology (d) The Duty Free labelled inflow excludes Illicit Whites which have Duty Free labelling

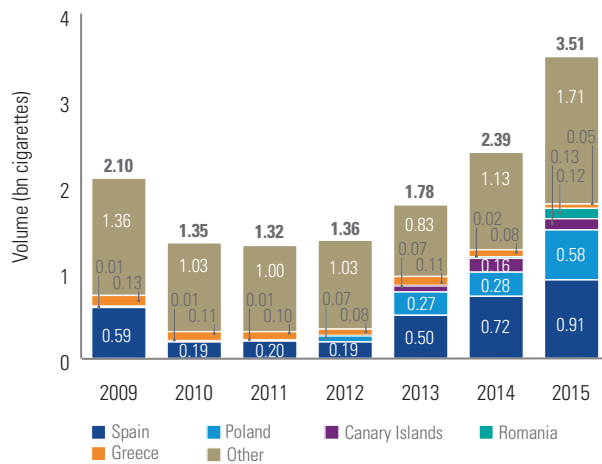
Sources: (1) KPMG EU Flows Model and analysis of data sources provided by manufacturers (2) KPMG analysis of UNWTO Factbook 2009-2014 and UK ONS (3) EC Excise Duty tables (Part III – Manufactured Tobacco) – January 2015 and January 2016



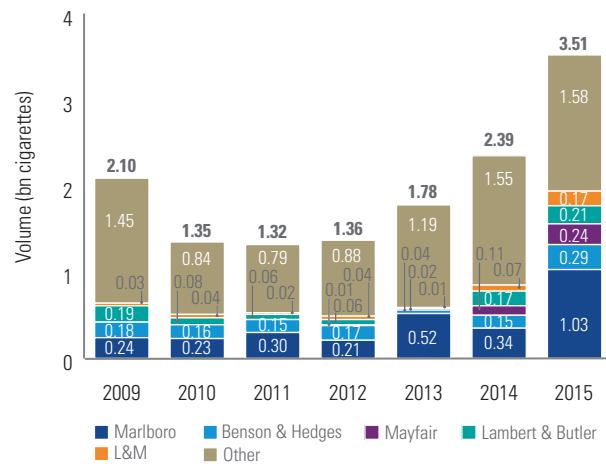
# ND(L) and C&C flows

- ND(L) increased as a proportion of total consumption from 5.7% to 8.4% between 2014 and 2015 as travellers took advantage of cheaper cigarettes from lower priced EU countries
  - Increases from Spain, Poland and Romania, where average prices are at least 50% lower than that of the UK, are supported by the number of trips made between each country<sup>(1)</sup>
  - Trips made from Poland and Romania to the UK are estimated to have increased by 16% to 2.3 million in total between 2014 and 2015<sup>(1)</sup>
- C&C increased by 0.4 billion due largely to increases in counterfeit and volumes from Romania
  - The largest C&C volumes are from Pakistan, Poland, Belarus and Romania; the travel volumes and the legal allowance for cigarettes per trip do not support the cigarette volumes identified
  - Counterfeit cigarettes increased by 0.49 billion to 0.75 billion in 2015 and 78% of counterfeit had Duty Free labelling

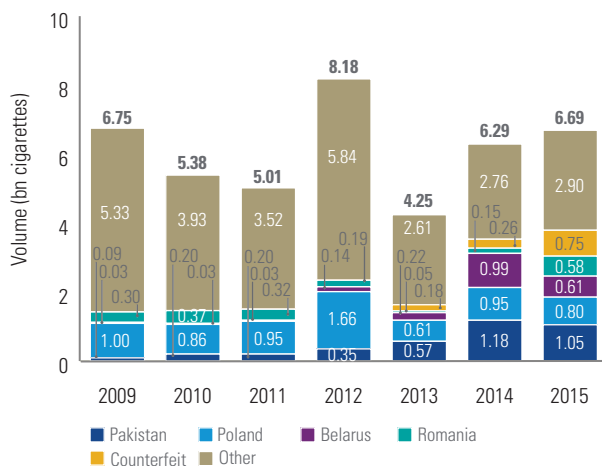
ND(L) by country of origin - 2009-2015<sup>(1)(a)(b)</sup>



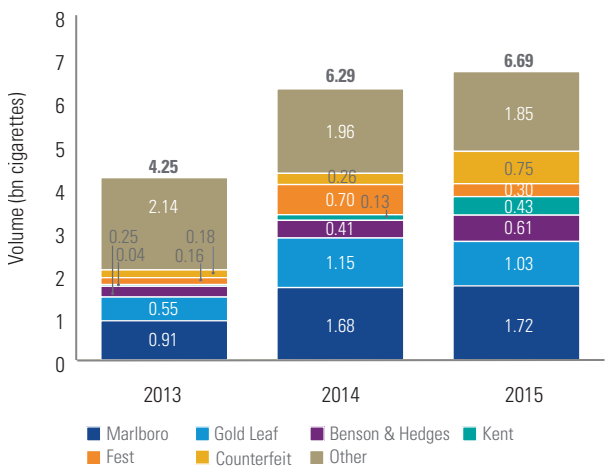
ND(L) by brand - 2009-2015<sup>(1)(a)</sup>



C&C by country of origin - 2009-2015<sup>(1)(a)</sup>



C&C by brand - 2013-2015<sup>(1)(a)</sup>



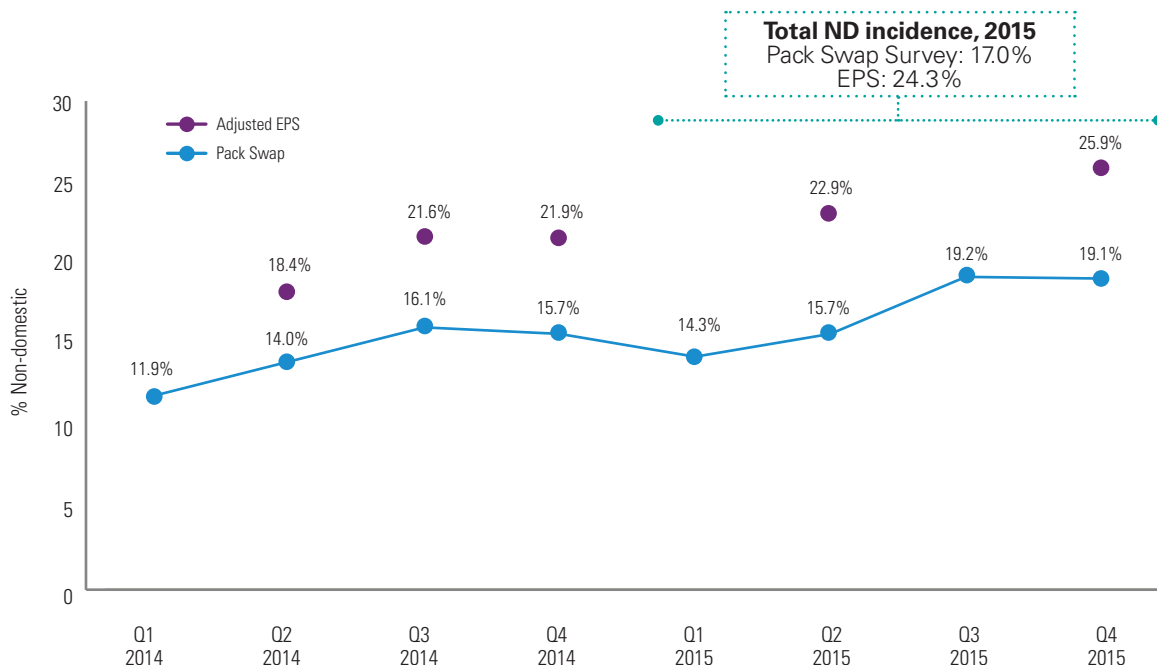
Notes: (a) KPMG calculates the split between C&C and ND(L) by calculating the ND(L) volumes and subtracting from the total inflows (b) In 2014, KPMG changed its approach to analysing ND(L) by reviewing border crossings and regional sales data provided by manufacturers. In prior years, a consumer survey approach was used. KPMG updated some of those data sources in 2015. Detail surrounding methodology changes is provided in the appendix

Sources: (1) KPMG analysis of UNWTO Factbook 2009-2014, EU flows model and data sources provided by manufacturers



# UK Appendix - alternative estimates for non-domestic incidence

## UK – ND from Pack Swap vs. Project SUN adjusted EPS – 2015<sup>(1)(2)</sup>



### The Pack Swap survey is a household sampling programme commissioned by JTI, which gives an alternative estimate for the UK non-domestic cigarette market

- It is designed to provide a statistically representative sample of smokers over the age of 18 who are interviewed about their smoking habits in their own homes and asked if they are willing to provide their current pack of cigarettes
  - Around two thirds agreed to exchange their empty packs when asked, leading to approximately 5,700 empty packs being analysed

### Whilst the Pack Swap survey non-domestic incidence is lower than that identified by EPS there are similarities in both the trend of increasing non-domestic consumption and the main non-domestic brands identified

- In the Pack Swap survey overall non-domestic incidence for 2015 was 17.0%, compared to 24.3% for the EPS
  - The difference in estimated non-domestic incidence is indicative of the different methods used to collect data – street collection or home visits
- The increasing trend in the percentage of non-domestic consumption reported by Project SUN was corroborated by the Pack Swap data, giving an increase of 18.5% in non-domestic consumption between 2014 and 2015, compared with an increase of 17.9% reported in Project SUN.
- Of the top 10 non-domestic brands and countries of origin identified in the Pack Swap, approximately 80% of brands and 70% of source countries were consistent with the top 10 non-domestic legal brands and source countries identified in the KPMG EU Flows model, which is driven by the EPS

UK



Project SUN

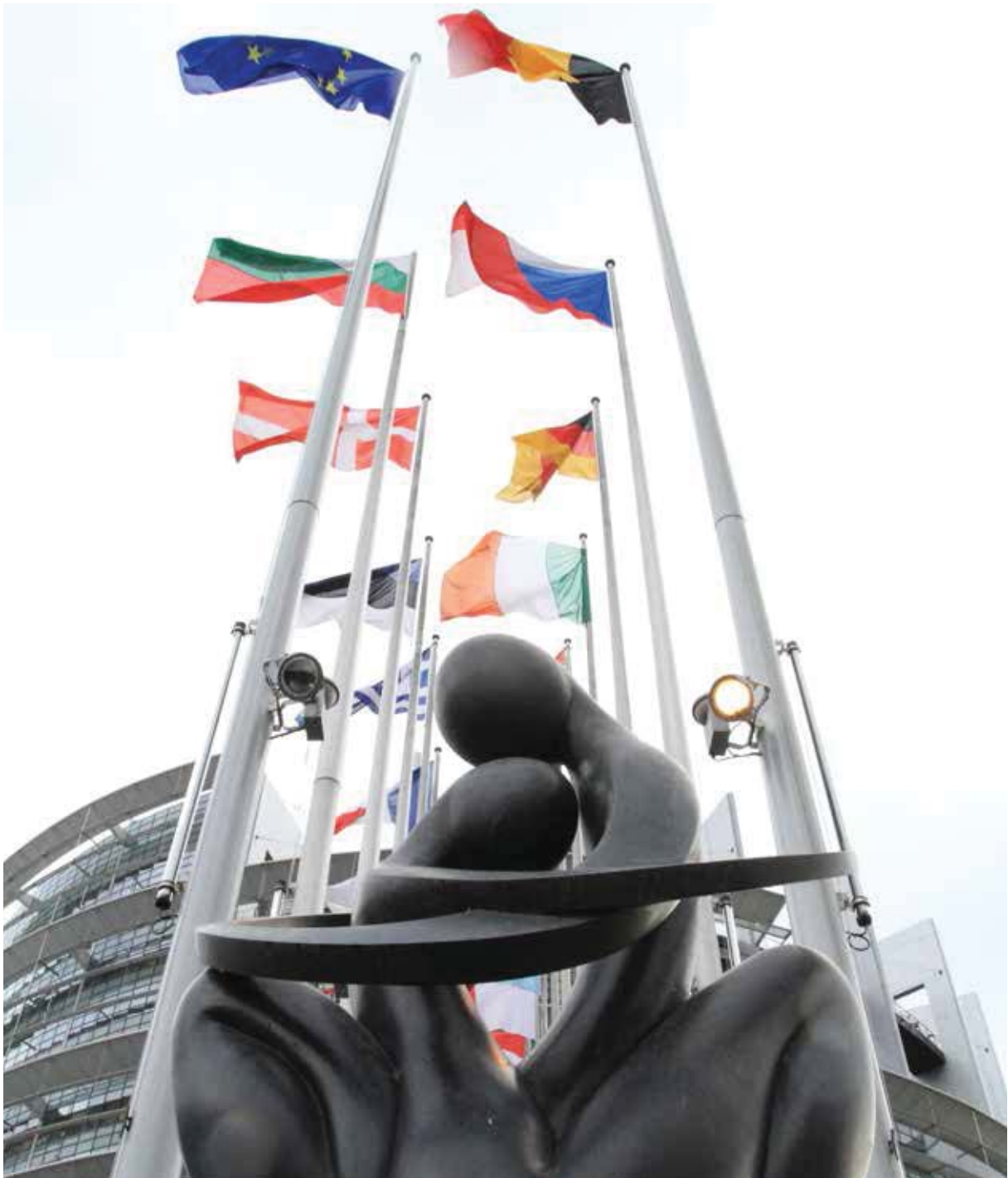
Sources: (1) KPMG EU Flows model (2) JTI Pack Swap Survey, 2014 and 2015

UK



Project SUN

# Methodology and Appendices 2015





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# Methodology

## Overview

<p><b>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</b></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"> <li>• Our approach integrated multiple sources and custom-built analytical tools</li> <li>• Since 2013, Project SUN has been 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 was 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 and 2015 reports</li> </ul>
<p><b>The methodology is based primarily on objective evidence from LDS and EPS results, which are inputted to the bespoke EU Flows Model</b></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"> <li>• 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</li> <li>• 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</li> <li>• Non-domestic inflows from other countries are then added in to give an estimate for the total consumption within a market</li> <li>• 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</li> </ul>
<p><b>EPS results provide a robust indication of the incidence of non-domestic and counterfeit packs and country of origin</b></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"> <li>• 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</li> <li>• Over 500,000 packs were collected in 2015 as part of this research<sup>(a)</sup></li> <li>• 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</li> </ul>
<p><b>Tourism &amp; travel trends are used to quantify legal non-domestic cigarette purchases</b></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"> <li>• World Tourism Organisation<sup>(1)</sup> data is the primary source used to identify travel trends, supplemented with other publicly available data</li> <li>• European Commission releases<sup>(2)</sup> 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</li> </ul>

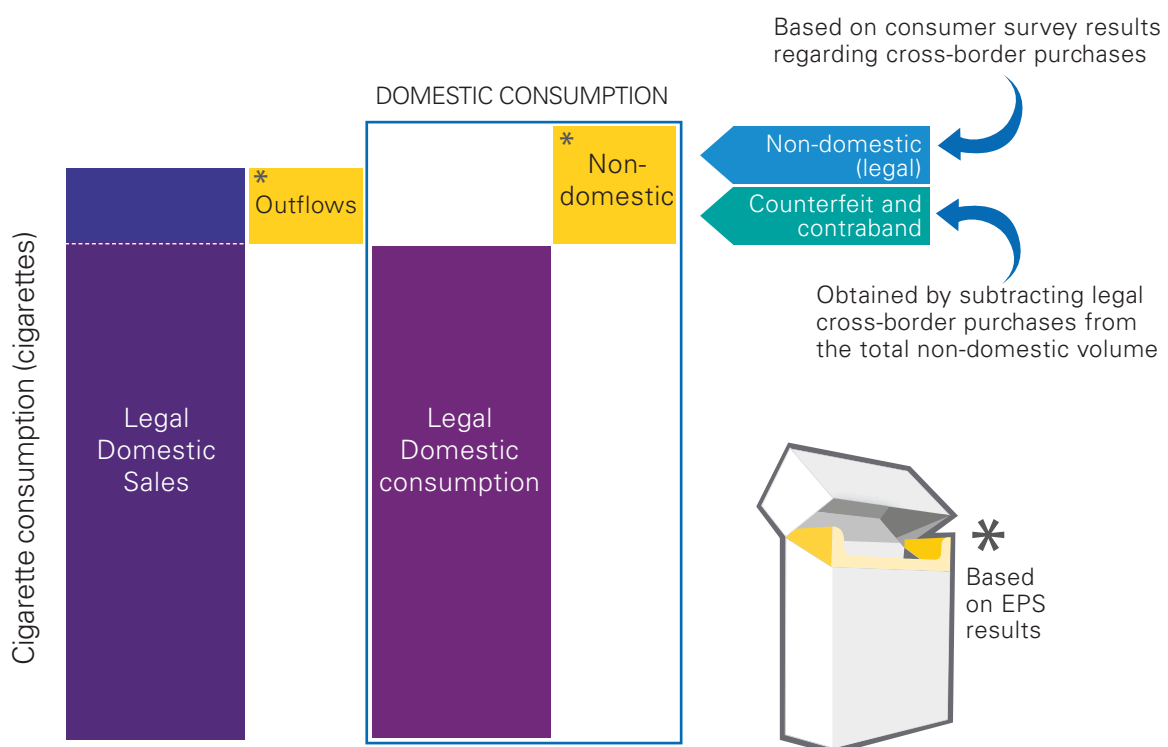
Note: (a) Over 500,000 packs were collected as part of the YBS in Germany; however once weighted, the survey is presented in 120,000 data lines

Sources: (1) UN WTO Tourism Factbook 2008-14  
(2) European Commission Excise Duty tables (Part III – Manufactured Tobacco)

# Methodology - Overview

<p><b>There are some specific limitations in the Project SUN methodology</b></p>	<p>Given the complexity of measuring C&amp;C, we recognise there are some limitations within the methodology</p> <ul style="list-style-type: none"> <li>• There are broadly two types of limitations: scope exclusions and source limitations           <ul style="list-style-type: none"> <li>- 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</li> <li>- 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</li> </ul> </li> </ul>
<p><b>To help improve the accuracy of results, some minor refinements were necessary at a country level</b></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"> <li>• 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</li> </ul>

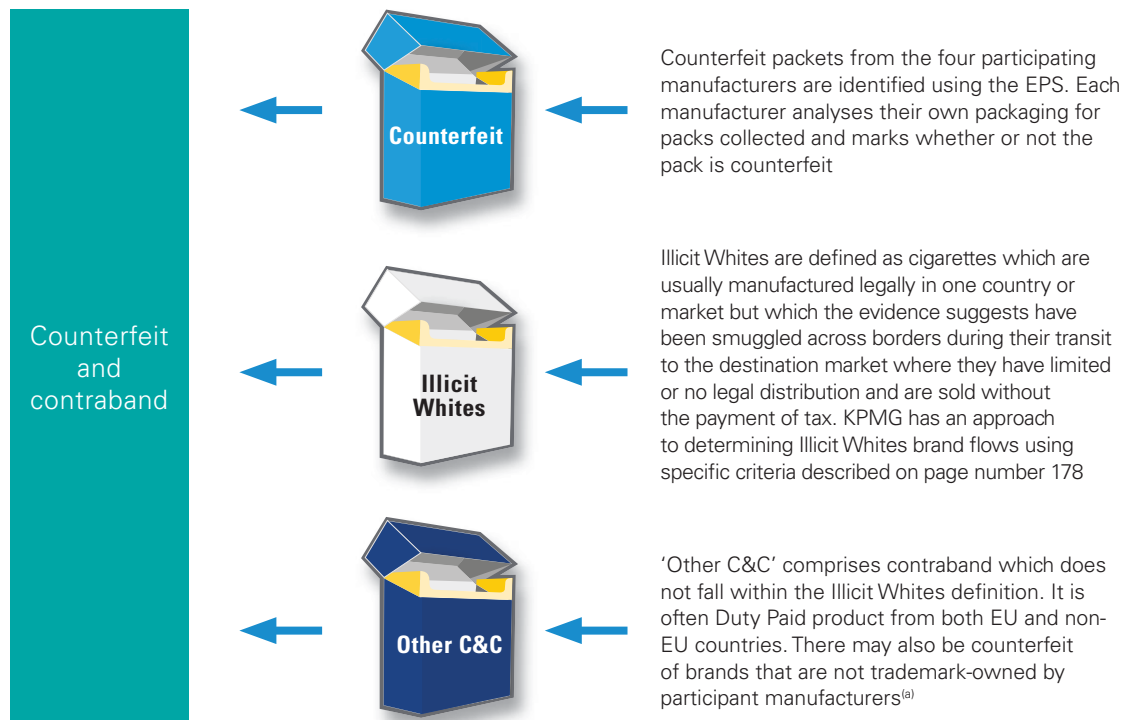
**Project SUN uses LDS, EPS results and other consumer research to estimate the volume of C&C cigarettes consumed in the EU**



**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 illicit product identified within the SUN report is defined as 'other C&C'. However, when compared to OLAF notifiable seizures (50,000 cigarettes or more) 'other C&C' only accounts for 2% - 3% the total volume seized<sup>(1)</sup>

#### 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

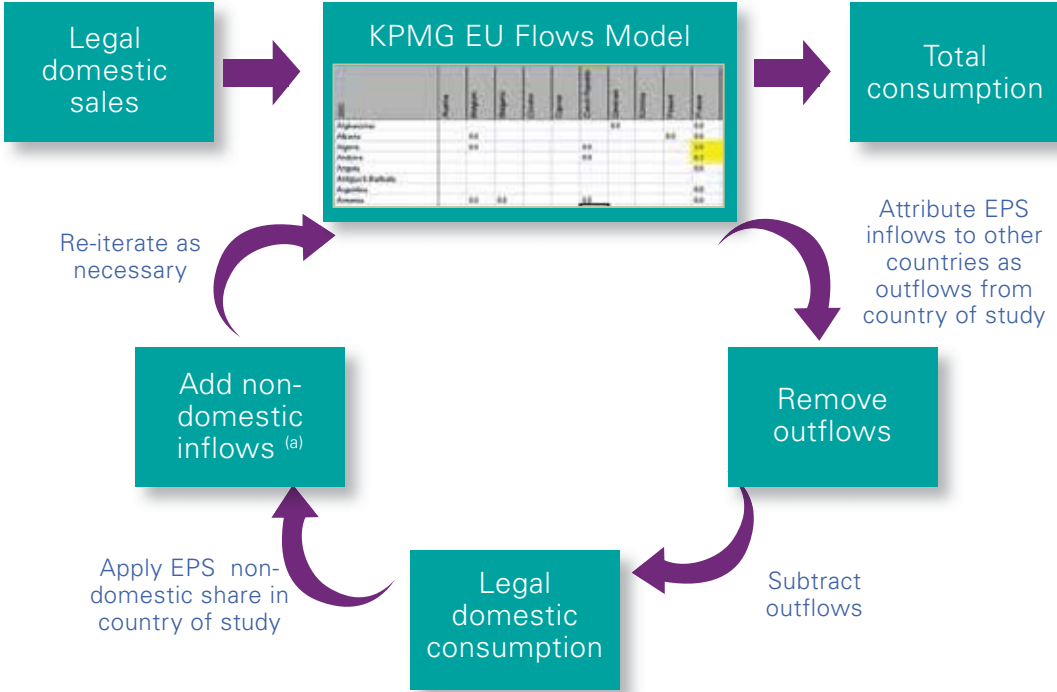
Source: (1) OLAF, Q&A Fighting the illicit trade of tobacco products, 14 August 2015

# 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 was derived from brand sales data provided by all four manufacturers (BAT, ITL, JTI and PMI)

- Where available, each manufacturer's LDS estimates were used for both the total market volumes and for their own sales
- KPMG uses the manufacturer's own sales to build up the market and then compares this to each manufacturer's market estimates.
- 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
- KPMG uses either Nielsen estimates or publicly available sources for brands not owned by BAT, JTI, ITL or PMI

## Example LDS methodology <sup>(1)(a)</sup>

Country 1	BAT		ITL		JTI		PMI		Nielsen	Section	Combined	
	LDS (bn sticks)	Market share (%)	LDS (bn sticks)	Market share (%)	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	15.0%				JTI	3.80	15.2%
Brand D			3.10	12.5%						ITL	3.10	12.4%
Brand E			2.40	9.7%						ITL	2.40	9.6%
Brand F					2.20	8.7%				JTI	2.20	8.8%
Brand G	1.50	6.1%								BAT	1.50	6.0%
Brand H									1.00	Nielsen	1.00	4.0%
Brand I							0.75	3.0%		PMI	0.75	3.0%
Brand J			0.50	2.0%						ITL	0.50	2.0%
Total market (bn sticks)	24.50		24.75		25.25		25.30				25.00	100.0%

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

*Nielsen data used for brands not owned by BAT, ITL, JTI or PMI*

*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:
  - Belgium: figures from official "Released for Consumption" data
  - Bulgaria: figure reported by the Customs Agency
  - Czech Republic: figure reported by PwC
  - France: figure reported by Logista
  - Italy: figure reported by Logista
  - Poland: figure reported by the Ministry of Finance
  - 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 four manufacturers.



# Methodology - EPS

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# Methodology – EPS

<p><b>Overview</b></p>	<p><b>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</b></p> <ul style="list-style-type: none"> <li>• 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</li> <li>• 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</li> <li>• Results are not subject to respondent behaviour and are therefore less prone to sampling errors than many other alternative methodologies</li> <li>• Results reflect actual overall non-domestic share and provide a good snapshot of brands consumed</li> </ul>
<p><b>Process</b></p>	<p><b>EPSs rely purely on physical evidence, avoiding the variability of consumer bias in interview-based methods</b></p> <ul style="list-style-type: none"> <li>• The independent market research agencies randomly collect empty packs of any brand and market variant from streets and easy access bins</li> <li>• 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</li> <li>• 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"> <li>– 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 we record these as unspecified</li> </ul> </li> <li>• For brands belonging to the participating 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</li> <li>• 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</li> <li>• 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</li> </ul>
<p><b>Coverage</b></p>	<p><b>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</b></p> <ul style="list-style-type: none"> <li>• Large surveys (10,000 packs or more collected): Austria, Bulgaria, Czech Republic, France, Germany, Greece, Hungary, Italy, Lithuania, Netherlands, Poland, Romania, Slovakia, Spain, Sweden, UK</li> <li>• Medium surveys (5,000-9,999 packs): Belgium, Denmark, Estonia, Finland, Ireland, Latvia, Norway, Switzerland</li> <li>• Small surveys (300-4,999 packs): Croatia, Cyprus, Luxembourg, Malta, Portugal, Slovenia</li> </ul>

## Calculation of non-domestic incidence on a stick basis in 2012 – 2015

<b>Overview</b>	<p><b>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 and 2015</b></p> <ul style="list-style-type: none"> <li>• 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</li> </ul>
<b>Process</b>	<p><b>EPS results provide the number of cigarettes in each packet</b></p> <ul style="list-style-type: none"> <li>• 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</li> </ul>
<b>Impact</b>	<p><b>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</b></p> <ul style="list-style-type: none"> <li>• The average pack contains 20 cigarettes</li> <li>• In countries where the average domestic pack size was less than 20 cigarettes (for example, in Italy, 10 or 20 cigarette packs represent most of LDS, giving an average domestic pack size of less than 20 cigarettes), 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</li> <li>• In countries where the average domestic pack size is greater than 20 cigarettes (for example in Luxembourg domestic packs typically contain 20, 25 or 30 cigarettes), then the conversion to a sticks basis is likely to increase the proportion of domestic cigarettes in the EPS sample, giving a lower non-domestic incidence than estimating on a pack basis</li> </ul>

# 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. In Paris, 1,260 packs are collected, 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 is 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 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 the participating 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
<b>1. Brand oversampling</b>	Domestic packs collected by brand in the EPS deviate significantly from the domestic brand shares	<ul style="list-style-type: none"> <li>Premium brands may be oversampled, this can be checked through a comparison with LDS</li> <li>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</li> </ul>	France, Ireland, Netherlands, Belgium, Norway, Slovenia, Sweden, Switzerland
<b>2. Adjustments to specific country flows</b>	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"> <li>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</li> <li>For example, if a survey is undertaken before a price increase which may impact sales between a country, 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</li> <li>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</li> </ul>	France, UK and Luxembourg
<b>3. Pack size adjustment</b>	Certain domestic pack sizes are often over-sampled, resulting in an overstating of non-domestic product	<ul style="list-style-type: none"> <li>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</li> <li>The domestic 10-packs and other pack sizes collected are re-weighted by KPMG to ensure that they are representative of the domestic market</li> </ul>	UK and Italy
<b>4. Sweden "domestic whites" EPS adjustments</b>	Addition of "domestic whites" volume to non-domestic consumption	<ul style="list-style-type: none"> <li>In Sweden an adjustment is made to the non-domestic percentage based on the amount of "domestic whites" as reported by HUI Research and outlined in the Sweden report</li> </ul>	Sweden

# Methodology - EPS

## EPS adjustments

Country	Sample dates	Packs collected	Number of cities	Adjustment	Impact
<b>Austria</b>	Q2: Jun-Jul Q4: Nov-Dec	13,000	24	None	n/a
<b>Belgium</b>	Q2: April-May Q4: Oct-Nov	5,600	18	<b>Brand adjustment</b> Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.16bn of non-domestic Marlboro
<b>Bulgaria</b>	Q2: April Q4: Oct	13,000	26	None	n/a
<b>Croatia</b>	Q4: Oct	3,000	8	None	n/a
<b>Cyprus</b>	Q4: Oct	1,000	4	None	n/a
<b>Czech Republic</b>	Q2: April Q4: Sep	21,004	30	None	n/a
<b>Denmark</b>	Q2: April	5,500	9	None	n/a
<b>Estonia</b>	Q2: April Q4: Sep	6,600	14	<b>Adjustment to country flows</b> C&C inflows to Estonia declined in 2014 and 2015. EPS data showed a decline in the volume of C&C in each survey since 2014, suggesting a quarter-on-quarter decline in C&C Based on the assumption that the decline in C&C occurred throughout the year, Q2 EPS results were used to represent the first three quarters of 2015, and Q4 to represent the fourth quarter	C&C increased from 0.22bn to 0.25bn
<b>Finland</b>	Q2: April	5,794	13	None	n/a
<b>France</b>	Q2: Apr-May Q4: Oct-Nov	22,998	118	<b>Brand adjustment</b> Marlboro was over-sampled and therefore re-weighted according to its domestic share <b>Adjustment to country flows</b> An analysis of the EPS showed an increase in flows from Belgium, which was not supported by Legal Domestic Sales data in Belgium. In addition, the timing of the EPS second wave during a price increase in Belgium may have led to additional purchases which were not representative of the entire year Inflows from Spain were adjusted as the EPS was undertaken in April and November, not taking account of the summer months where sales are higher. This adjustment was made based on the increase in sales volumes provided by industry participants The volume of flows identified from Algeria was higher than possible given consumption in Algeria, possibly caused by oversampling of Marlboro in France	The brand adjustment reduced flows of non-domestic Marlboro by 1.68 billion a) Inflows from Belgium reduced from 1.95 billion to 1.69 billion b) Inflows from Spain increased from 1.89 billion to 2.70 billion c) Inflows from Algeria decreased from 4.5 billion to 3.22 billion

# Methodology - EPS

## EPS adjustments

Country	Sample dates	Packs collected	Number of cities	Adjustment	Impact
Germany	Every month	120,000	24 stations and other areas covered	None There was a change in the methodology for Germany in 2014, see report page 162 <sup>(a)</sup>	n/a
Greece	Q2: Mar-April Q3: Sep	14,000	31	None	n/a
Hungary	Q2: May-Jun	19,905	53	None	n/a
Ireland	Q2: April Q4: Oct	9,999	22	<b>Brand adjustment</b> Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.14bn of non-domestic Marlboro
Italy	Q1: Feb Q2: Mar-Jun Q3: Jul-Aug Q4: Oct-Nov	39,982	42	<b>10-pack adjustment</b> 40% of domestic packs collected were 10-packs whilst 13% of the market was represented by 10-packs, as a result the domestic 10-packs were downweighted and the 20-packs were upweighted, resulting in more domestic sticks and a lower percentage of non-domestic	Reduction of non-domestic share from 8.45% to 7.32%
Latvia	Q2: April Q4: Sep	9,800	25	None	n/a
Lithuania	Q2: April Q3: Jul Q4: Sep	19,200	26	None	n/a
Luxembourg	Q2: Apr Q4: Nov	399	2	Flows from Belgium appeared to be unrealistic. Analysis of the EPS showed that a collection took place during All Saints day weekend in Luxembourg and flows were overestimated	Reduction of 0.14 billion of Belgian flows
Malta	Q4: Oct	1,000	8	None	n/a
Netherlands	Q2: Feb, Apr-May Q4: Sep-Oct	21,000	52	<b>Brand adjustment</b> Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.18bn of non-domestic Marlboro
Norway	Q2: May	5,000	8	<b>Brand adjustment</b> Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.1bn 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

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

# Methodology - EPS

## EPS adjustments

Country	Sample dates	Packs collected	Number of cities	Adjustment	Impact
<b>Romania<sup>(a)</sup></b>	W1: Jan W2: Mar W3: May W4: Jul W5: Sep W6: Nov	15,126	594	Use of alternative data source	Use of Novel face to face interviews instead of EPS
<b>Slovakia</b>	Q2: April Q4: Nov-Dec	12,800	39	None	n/a
<b>Slovenia</b>	Q4: Oct	3,000	8	<b>Brand adjustment</b> Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.02bn of non-domestic Marlboro
<b>Spain</b>	Q2: April-May Q4: Oct-Nov	29,997	58	None	n/a
<b>Sweden</b>	Q2: April	10,032	29	<b>Addition of domestic whites</b> Addition of "domestic whites" as reported by HUI Research in Sweden <b>Brand adjustment</b> Marlboro was over-sampled and therefore re-weighted according to its domestic share	1.8% was added to the overall non-domestic consumption in order to include "domestic whites" Reduction of 0.04bn of non-domestic Marlboro
<b>Switzerland</b>	Q2: May-Jul	6,600	25	<b>Brand adjustment</b> Marlboro was over-sampled and therefore re-weighted according to its domestic share	Reduction of 0.08bn of non-domestic Marlboro
<b>UK</b>	Q2: Apr-May Q4: Sep-Oct	25,400	105	<b>1. Pack size adjustment</b> Whilst 10-packs represented 32% of the market, 60% 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. <b>2. Adjustments to country flows</b> 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.	1.Reduction of non-domestic share from 27.5% to 24.3% 2.Inflows from Spain increased from 0.36 billion to 0.91 billion

Note: (a) Romania Novel pack collection conducted in six waves (W)

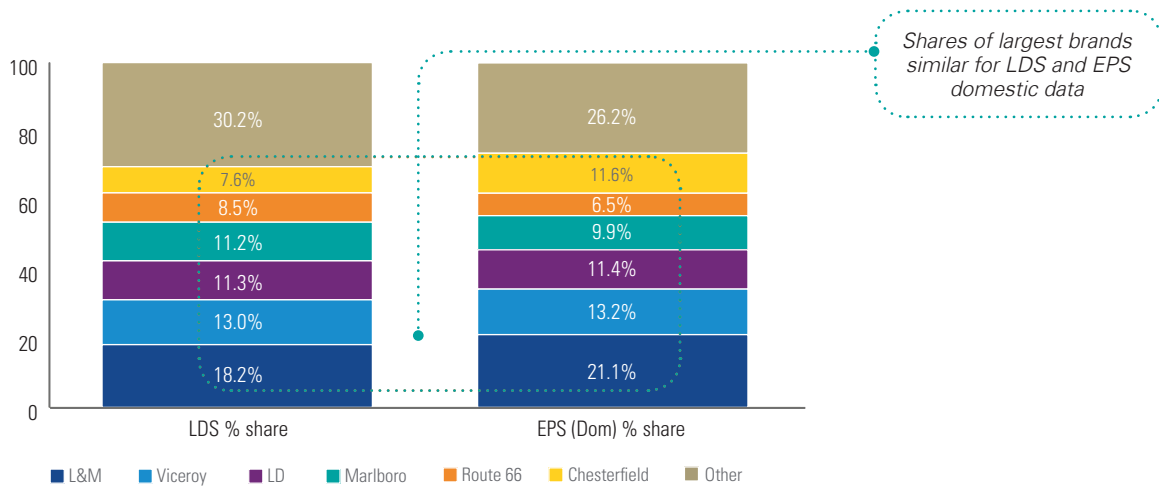


# Methodology - EPS

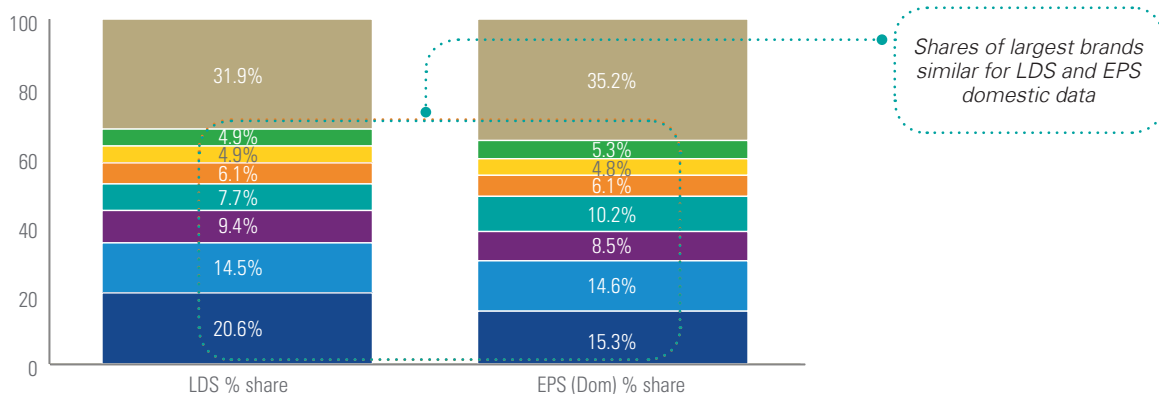
## As collateral for the EPS, the brand shares of domestic origin packs collected during the EPSs closely reflect the brand shares seen in the LDS data

- 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<sup>(a)</sup>



### Comparison of LDS and domestic EPS brand share, using illustrative data – Austria<sup>(a)</sup>



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

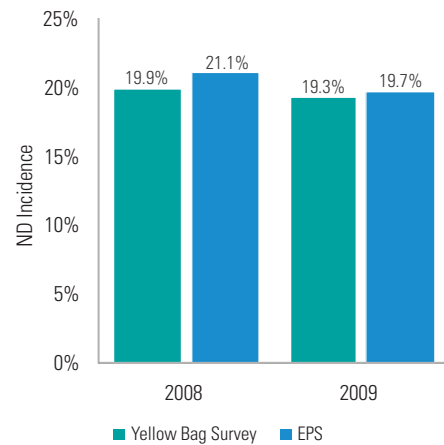
# Methodology - EPS

## EPS comparison

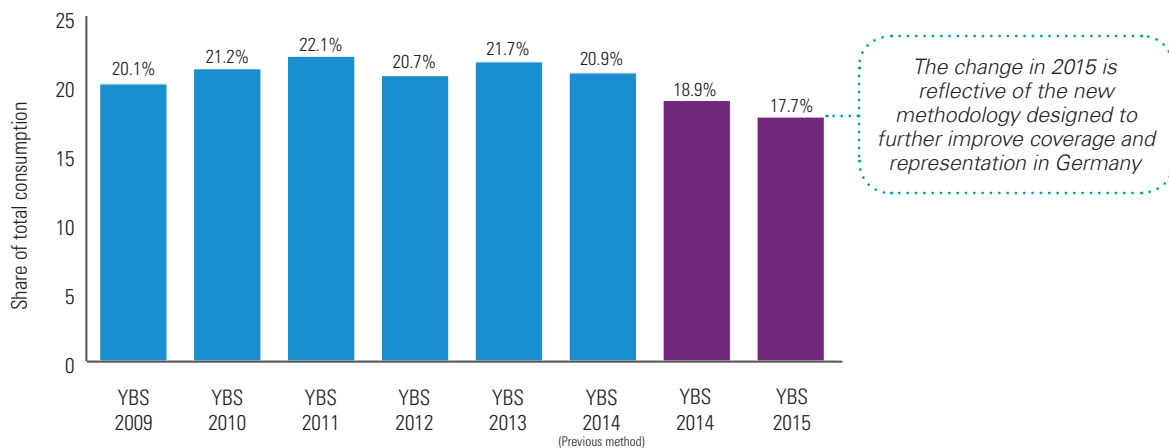
### Validation of empty pack survey analysis

- 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<sup>(1)(2)(a)</sup>**



**Germany historical Yellow Bag Surveys<sup>(2)(a)</sup>**



### Improvement of German pack analysis in 2014 and 2015

- 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 change in methodology resulted in a reduction of the non-domestic incidence by approximately 2 percentage points compared to the collection in previous years.
- The same methodology was used in 2015, therefore 2014 and 2015 results are directly comparable

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) MSIIntelligence Research, Germany Empty pack survey report, Q2 2009 (2) Ipsos Empty Pack Surveys, 2008-2009.

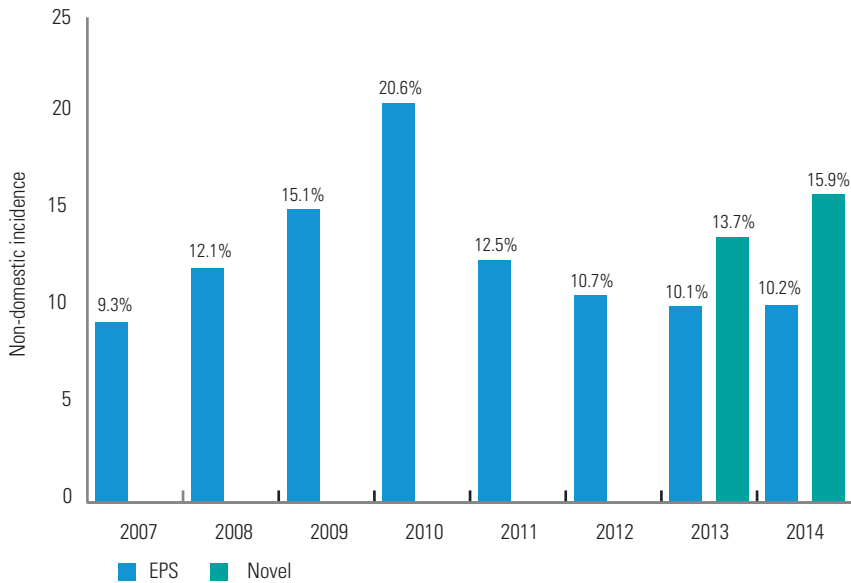
# Methodology - EPS

## Romania Novel Study – Results and EPS corroboration

### In 2013 and 2014 a comparison was undertaken between the EPS and Novel methodologies

- Novel combines a pack collection with a face to face interview
  - 574 localities were covered across 6 waves in 2014. The EPS study covered 50 localities in one wave in 2014
- Compared to the EPS street collection, the Novel study results in a greater number of packs collected from a greater number of sources
  - In 2014 Novel collected 15,000 packs compared to 9,300 in the EPS
  - Novel also collects packs monthly, which adjusts for any seasonal variations
- The non-domestic incidence measured by the EPS was 10.2% in 2014, compared to 15.9% in Novel; in 2013 EPS non-domestic incidence was 10.1%, compared to 13.7% in Novel
- The Novel study has tended to produce results showing a higher non-domestic incidence compared to the EPS as it also samples rural areas, which tend to have higher non-domestic incidence than urban areas.
  - Approximately 46% of the population of Romania lives in rural areas<sup>(1)</sup>

### Romania historical Empty Pack Surveys and Novel<sup>(2)(3)</sup>



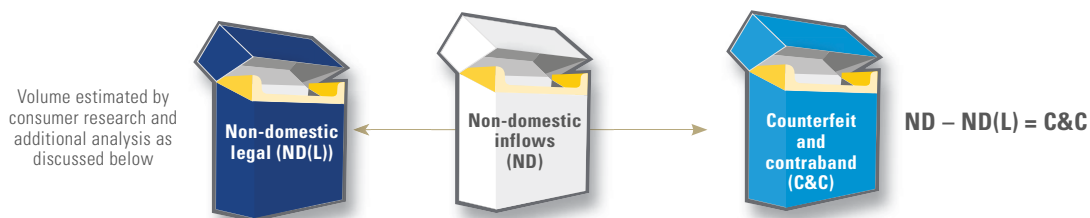
Sources: (1) KPMG analysis of the World Bank population tables, 2011-2015  
(2) Novel study, 2012 & 2014  
(3) Empty Pack Surveys, 2007 to 2014

# 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) 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

## 2) 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

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

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

### 2 Travel flows analysis

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

Example using Illustrative data

1 COUNTRIES WHERE ND(L) IS 100% OF TOTAL								
Country	ND 2015 (bn sticks) <sup>(1)</sup>						2015 ND(L) (bn sticks)	% of ND
Belgium	0.62						0.62	100%

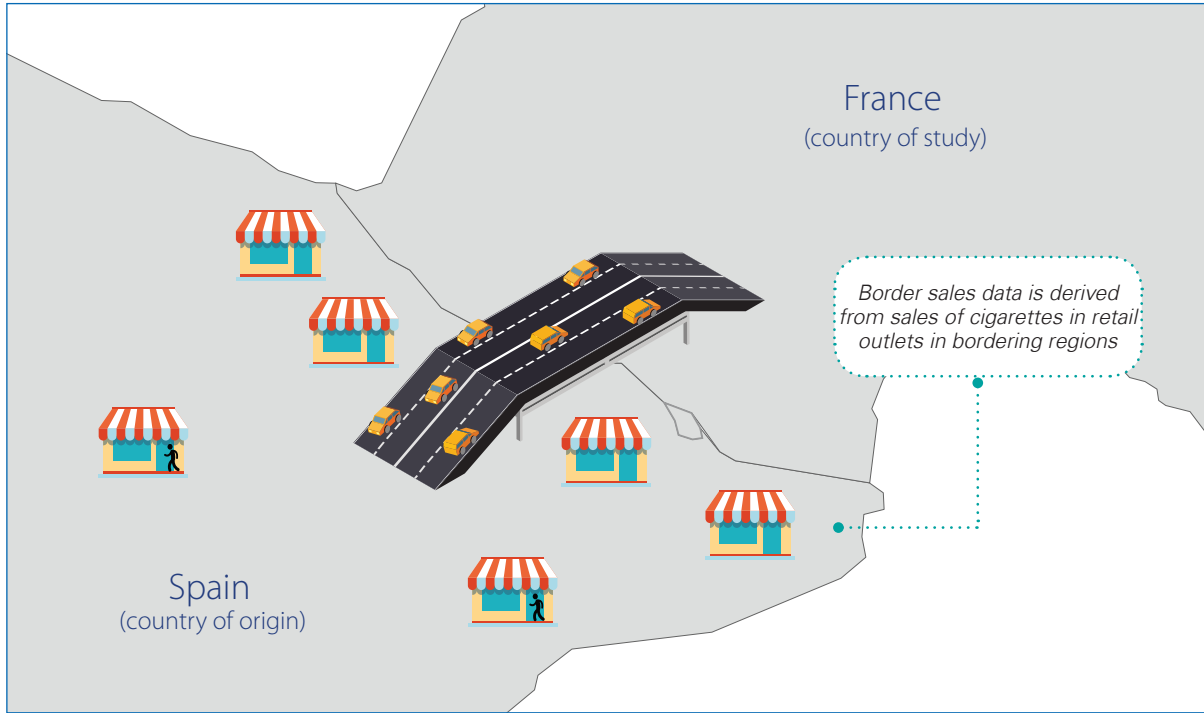
2 USE OF CONSUMER RESEARCH AND ANY ADJUSTMENTS FOR 2015 DATA								
Country	ND 2015 (bn sticks) <sup>(1)</sup>	Number of border crossings (m) <sup>(2)(3)</sup>	Population 18+ <sup>(2)</sup>	Smoking prevalence	Trips where cigarettes purchased	Cigarettes per trip	2015 ND(L) (bn sticks)	% of ND
Belgium	0.62	8.63 <sup>(b)</sup>	10	90.40		1.81	0.62	90%

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

Percentage split of border sales by brand



X

Total volume of cigarettes purchased



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 participating manufacturers in a range of formats:
  - Sales data from participating manufacturers 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
- This border sales data is 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)
Slovenia	Outbound								0.42bn
	Inbound								
Czech Republic	Outbound								0.41bn
	Inbound								
Hungary	Outbound								0.25bn
	Inbound								
Germany	Outbound								0.06bn
	Inbound								
Others									0.28bn
<b>Total</b>									<b>1.41bn</b>

BELGIUM									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Luxembourg	Outbound								0.17bn
	Inbound								
France	Outbound								0.10bn
	Inbound								
Netherlands	Outbound								0.10bn
	Inbound								
Poland	Outbound	0.37mn	80%	20%	0.06mn	40	800	0.05bn	0.05bn
	Inbound	0.09mn	82%	28%	0.06mn	2	40	0.00bn	
Others									0.29bn
<b>Total</b>									<b>0.71bn</b>

BULGARIA									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Turkey	Outbound								0.01bn
	Inbound								
Germany	Outbound								0.01bn
	Inbound								
Serbia	Outbound								0.00bn
	Inbound								
Greece	Outbound	0.06mn	84%	38%	0.02mn	10	200	0.00bn	0.00bn
	Inbound	0.49mn	83%	30%	0.12mn	2	40	0.00bn	
Others									0.03bn
<b>Total</b>									<b>0.06bn</b>

# 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)
Slovenia	Outbound								0.01bn
	Inbound								
All flows considered legal									
Bosnia and Herzegovina	Outbound	0.07mn	82%	28%	0.02mn	10	200	0.003bn	0.01bn
	Inbound	0.23mn	83%	31%	0.06mn	2	40	0.002bn	
Czech Republic	Outbound								0.01bn
	Inbound								
All flows considered legal									
Italy	Outbound								0.00bn
	Inbound								
All flows considered legal									
Others									0.02bn
<b>Total</b>									<b>0.04bn</b>

CYPRUS									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Bulgaria	Outbound								0.003bn
	Inbound								
All flows considered legal									
Malta	Outbound								0.002bn
	Inbound								
All flows considered legal									
Romania	Outbound								0.002bn
	Inbound								
All flows considered legal									
Belgium	Outbound								0.001bn
	Inbound								
All flows considered legal									
Others									0.007bn
<b>Total</b>									<b>0.015bn</b>

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								0.03bn
	Inbound								
All flows considered legal									
Slovakia	Outbound								0.03bn
	Inbound								
All flows considered legal									
Germany	Outbound								0.02bn
	Inbound								
All flows considered legal									
Austria	Outbound								0.01bn
	Inbound								
All flows considered legal									
Others									0.09bn
<b>Total</b>									<b>0.19bn</b>



# 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								0.05bn
	Inbound								
Germany	Outbound								0.02bn
	Inbound								
Poland	Outbound								0.02bn
	Inbound								
Czech Republic	Outbound	0.09mn	79%	20%	0.01mn	40	800	0.01bn	0.01bn
	Inbound	0.00mn	82%	25%	0.00mn	2	40	0.00bn	
Others									0.10bn
<b>Total</b>									<b>0.20bn</b>

ESTONIA									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Finland	Outbound								0.01bn
	Inbound								
Latvia	Outbound								0.00bn
	Inbound								
Lithuania	Outbound								0.00bn
	Inbound								
Russia	Outbound	0.31mn	81%	27%	0.07mn	10	200	0.00bn	0.00bn
	Inbound	0.28mn	81%	36%	0.08mn	2	40	0.00bn	
Others									0.01bn
<b>Total</b>									<b>0.03bn</b>

FINLAND									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Estonia	Outbound	0.96mn	80%	18%	0.14mn	40	800	0.11bn	0.12bn
	Inbound	1.19mn	81%	27%	0.26mn	2	40	0.01bn	
Russia	Outbound	1.48mn	80%	18%	0.22mn	10	200	0.04bn	0.04bn
	Inbound	5.91mn	81%	36%	1.70mn	2	40	0.00bn	
Sweden	Outbound								0.02bn
	Inbound								
Germany	Outbound								0.01bn
	Inbound								
Others									0.11bn
<b>Total</b>									<b>0.31bn</b>

# 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	11.12mn	78%	28%	2.43mn	40	800	1.94bn	1.99bn
	Inbound	6.02mn	82%	21%	1.04mn	2	40	0.04bn	
Belgium	Outbound								1.69bn
	Inbound								
Luxembourg	Outbound								0.93bn
	Inbound								
Italy	Outbound								0.32bn
	Inbound								
Others									2.74bn
<b>Total</b>									<b>7.67bn</b>

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	47.84mn	84%	26%	10.51mn	21	420	4.41bn	4.42bn
	Inbound	0.48mn	82%	25%	0.10mn	2	40	0.00bn	
Poland	Outbound	32.20mn	84%	26%	7.07mn	25	500	3.54bn	3.54bn
	Inbound	0.99mn	82%	28%	0.22mn	2	40	0.01bn	
Luxembourg	Outbound								0.31bn
	Inbound								
Croatia	Outbound								0.27bn
	Inbound								
Others									2.71bn
<b>Total</b>									<b>11.26bn</b>

GREECE									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Bulgaria	Outbound								0.04bn
	Inbound								
Albania	Outbound	0.47mn	83%	36%	0.14mn	10	200	0.03bn	0.03bn
	Inbound	0.50mn	76%	-	-	2	40		
Romania	Outbound								0.02bn
	Inbound								
Turkey	Outbound								0.01bn
	Inbound								
Others									0.14bn
<b>Total</b>									<b>0.24bn</b>

# 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)
Austria	Outbound								0.02bn
	Inbound			All flows considered legal					
Romania	Outbound								0.02bn
	Inbound			All flows considered legal					
Slovakia	Outbound								0.02bn
	Inbound			All flows considered legal					
Czech Republic	Outbound								0.01bn
	Inbound			All flows considered legal					
Others									0.10bn
<b>Total</b>									<b>0.17bn</b>

IRELAND									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
UK	Outbound								0.08bn
	Inbound			All flows considered legal					
Spain	Outbound								0.05bn
	Inbound			All flows considered legal					
Poland	Outbound	0.25mn	74%	22%	0.04mn	40	800	0.03bn	0.03bn
	Inbound	0.13mn	82%	28%	0.03mn	2	40	0.00bn	
Italy	Outbound								0.03bn
	Inbound			All flows considered legal					
Others									0.19bn
<b>Total</b>									<b>0.38bn</b>

ITALY									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Slovenia	Outbound								0.21bn
	Inbound			All flows considered legal					
France	Outbound								0.10bn
	Inbound			All flows considered legal					
Spain	Outbound								0.09bn
	Inbound			All flows considered legal					
Germany	Outbound								0.09bn
	Inbound			All flows considered legal					
Others									0.68bn
<b>Total</b>									<b>1.16bn</b>

# 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								0.00bn
	Inbound								
All flows considered legal									
Russia	Outbound	0.34mn	82%	27%	0.08mn	10	200	0.00bn	0.00bn
	Inbound	0.71mn	81%	36%	0.21mn	2	40	0.00bn	
Belarus	Outbound	0.00mn	82%	27%	0.00mn	10	200	0.00bn	0.00bn
	Inbound	0.22mn	81%	25%	0.05mn	2	40	0.00bn	
Poland	Outbound								0.00bn
	Inbound								
All flows considered legal									
Others									0.01bn
<b>Total</b>									<b>0.02bn</b>

LITHUANIA									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Latvia	Outbound								0.01bn
	Inbound								
All flows considered legal									
Poland	Outbound								0.00bn
	Inbound								
All flows considered legal									
Russia	Outbound	0.46mn	82%	23%	0.09mn	10	200	0.00bn	0.00bn
	Inbound	0.23mn	81%	36%	0.07mn	2	40	0.00bn	
Estonia	Outbound								0.00bn
	Inbound								
All flows considered legal									
Others									0.02bn
<b>Total</b>									<b>0.04bn</b>

LUXEMBOURG									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
France	Outbound								0.02bn
	Inbound								
All flows considered legal									
Belgium	Outbound								0.02bn
	Inbound								
All flows considered legal									
Netherlands	Outbound								0.01bn
	Inbound								
All flows considered legal									
Germany	Outbound								0.01bn
	Inbound								
All flows considered legal									
Others									0.02bn
<b>Total</b>									<b>0.07bn</b>

# 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								0.00bn
	Inbound								
All flows considered legal									
Poland	Outbound	0.00mn	82%	20%	0.00mn	40	800	0.00bn	0.00bn
	Inbound	0.05mn	82%	28%	0.01mn	2	40	0.00bn	
Romania	Outbound	0.00mn	82%	20%	0.00mn	40	800	0.00bn	0.00bn
	Inbound	0.02mn	81%	26%	0.00mn	2	40	0.00bn	
Germany	Outbound								0.00bn
	Inbound								
All flows considered legal									
Others									0.00bn
<b>Total</b>									<b>0.01bn</b>

NETHERLANDS									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Belgium	Outbound								0.27bn
	Inbound								
All flows considered legal									
Germany	Outbound								0.27bn
	Inbound								
All flows considered legal									
UK	Outbound								0.16bn
	Inbound								
All flows considered legal									
Italy	Outbound								0.13bn
	Inbound								
All flows considered legal									
Others									0.77bn
<b>Total</b>									<b>1.60bn</b>

POLAND									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Germany	Outbound								0.07bn
	Inbound								
All flows considered legal									
Belarus	Outbound	0.00mn	0.82	0.28	0.00mn	10.00	200.00	0.00bn	0.03bn
	Inbound	4.14mn	0.81	0.25	0.85mn	2.00	40.00	0.03bn	
Bulgaria	Outbound								0.03bn
	Inbound								
All flows considered legal									
Russia	Outbound	2.26mn	82%	28%	0.51mn	10	200	0.02bn	0.02bn
	Inbound	2.88mn	81%	36%	0.83mn	2	40	0.00bn	
Others									0.28bn
<b>Total</b>									<b>0.44bn</b>

# 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								0.03bn
	Inbound			All flows considered legal					
Angola	Outbound	0.34mn	82%	20%	0.06mn	10	200	0.01bn	0.01bn
	Inbound	0.00mn	46%	-	-	2	40		
France	Outbound								0.01bn
	Inbound			All flows considered legal					
Brazil	Outbound								0.01bn
	Inbound			All flows considered legal					
Others									0.07bn
<b>Total</b>									<b>0.13bn</b>

ROMANIA									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Ukraine	Outbound	0.50mn	0.81	0.26	0.10mn	10.00	200.00	0.02bn	0.02bn
	Inbound	0.70mn	0.82	0.22	0.13mn	2.00	40.00	0.00bn	
Russia	Outbound								0.01bn
	Inbound			All flows considered legal					
Italy	Outbound								0.01bn
	Inbound			All flows considered legal					
Bulgaria	Outbound								0.00bn
	Inbound			All flows considered legal					
Others									0.06bn
<b>Total</b>									<b>0.10bn</b>

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								0.04bn
	Inbound			All flows considered legal					
Ukraine	Outbound	0.39mn	0.82	0.32	0.10mn	10.00	200.00	0.02bn	0.02bn
	Inbound	0.07mn	0.82	0.22	0.01mn	2.00	40.00	0.00bn	
Hungary	Outbound								0.01bn
	Inbound			All flows considered legal					
Poland	Outbound								0.01bn
	Inbound			All flows considered legal					
Others									0.04bn
<b>Total</b>									<b>0.12bn</b>

# 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								0.04bn
	Inbound			All flows considered legal					
Italy	Outbound								0.01bn
	Inbound			All flows considered legal					
Austria	Outbound								0.01bn
	Inbound			All flows considered legal					
Serbia	Outbound	0.06mn	83%	24%	0.01mn	10	200	0.00bn	0.00bn
	Inbound	0.08mn	83%	30%	0.02mn	2	40	0.00bn	
Others									0.02bn
<b>Total</b>									<b>0.07bn</b>

SLOVENIA									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Gibraltar	Frontier Workers	1.80mn	100%	39%	0.70mn	4	80	0.003bn	0.74bn
	Border Crossings	7.80mn	78%	61%	3.68mn	10	200	0.74bn	
Andorra	Border Crossings	3.92mn	83%	60%	1.952mn	15	300	0.59bn	0.59bn
Canary Islands	Border Crossings	1.57mn	90%	78%	1.10mn	10	200	0.22bn	0.22bn
Portugal	Outbound								0.03bn
	Inbound			All flows considered legal					
Others									0.33bn
<b>Total</b>									<b>1.91bn</b>

SWEDEN									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Denmark	Outbound								0.06bn
	Inbound			All flows considered legal					
Poland	Outbound	0.36mn	80%	13%	0.04mn	40	800	0.03bn	0.03bn
	Inbound	0.49mn	82%	28%	0.11mn	2	40	0.00bn	
Germany	Outbound								0.02bn
	Inbound			All flows considered legal					
Finland	Outbound								0.01bn
	Inbound			All flows considered legal					
Others									0.16bn
<b>Total</b>									<b>0.28bn</b>

# Methodology – Non-domestic legal analysis

## Primary information sources and tools – Non-domestic Legal major flow calculations

UK <sup>(a)</sup>									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Spain	Outbound								0.91bn
	Inbound			All flows considered legal					
Poland	Outbound	1.76mn	79%	26%	0.36mn	40	800	0.28bn	0.58bn
	Inbound	1.65mn	82%	30%	0.40mn	37	740	0.30bn	
Canary Islands	Outbound								0.13bn
	Inbound			All flows considered legal					
Romania	Outbound	0.16mn	79%	19%	0.02mn	40	800	0.02bn	0.12bn
	Inbound	0.63mn	81%	26%	0.13mn	40	800	0.10bn	
Others									1.76bn
<b>Total</b>									<b>3.51bn</b>
NORWAY									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Sweden	Outbound								0.37bn
	Inbound			All flows considered legal					
Denmark	Outbound								0.02bn
	Inbound			All flows considered legal					
Poland	Outbound	0.89mn	78%	13%	0.09mn	10	200	0.02bn	0.02bn
	Inbound	0.01mn	82%	28%	0.00mn	2	40	0.00bn	
Germany	Outbound	0.43mn	78%	13%	0.04mn	10	200	0.01bn	0.01bn
	Inbound	0.15mn	84%	26%	0.03mn	2	40	0.00bn	
Others									0.38bn
<b>Total</b>									<b>0.80bn</b>
SWITZERLAND									
Country		# of border crossings	Population 18+	Smoking prevalence	Smoker trips	Packs per trip	# of cigarettes	ND(L) volume	Total ND(L)
Germany	Outbound								0.26bn
	Inbound			All flows considered legal					
Italy	Outbound								0.18bn
	Inbound			All flows considered legal					
France	Outbound								0.09bn
	Inbound			All flows considered legal					
Austria	Outbound								0.04bn
	Inbound			All flows considered legal					
Others									0.50bn
<b>Total</b>									<b>1.07bn</b>

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 have grown at a CAGR of 16% between 2009 and 2015 and now account for 35% of total C&C volumes in the EU

- Illicit Whites are defined as
  - Cigarettes that are usually manufactured legally in one country/market, but which the evidence suggests have been smuggled across borders during their transit to their 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 illicit volumes represented >99% of total consumption, the brand is an Illicit White
  - 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

### 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*

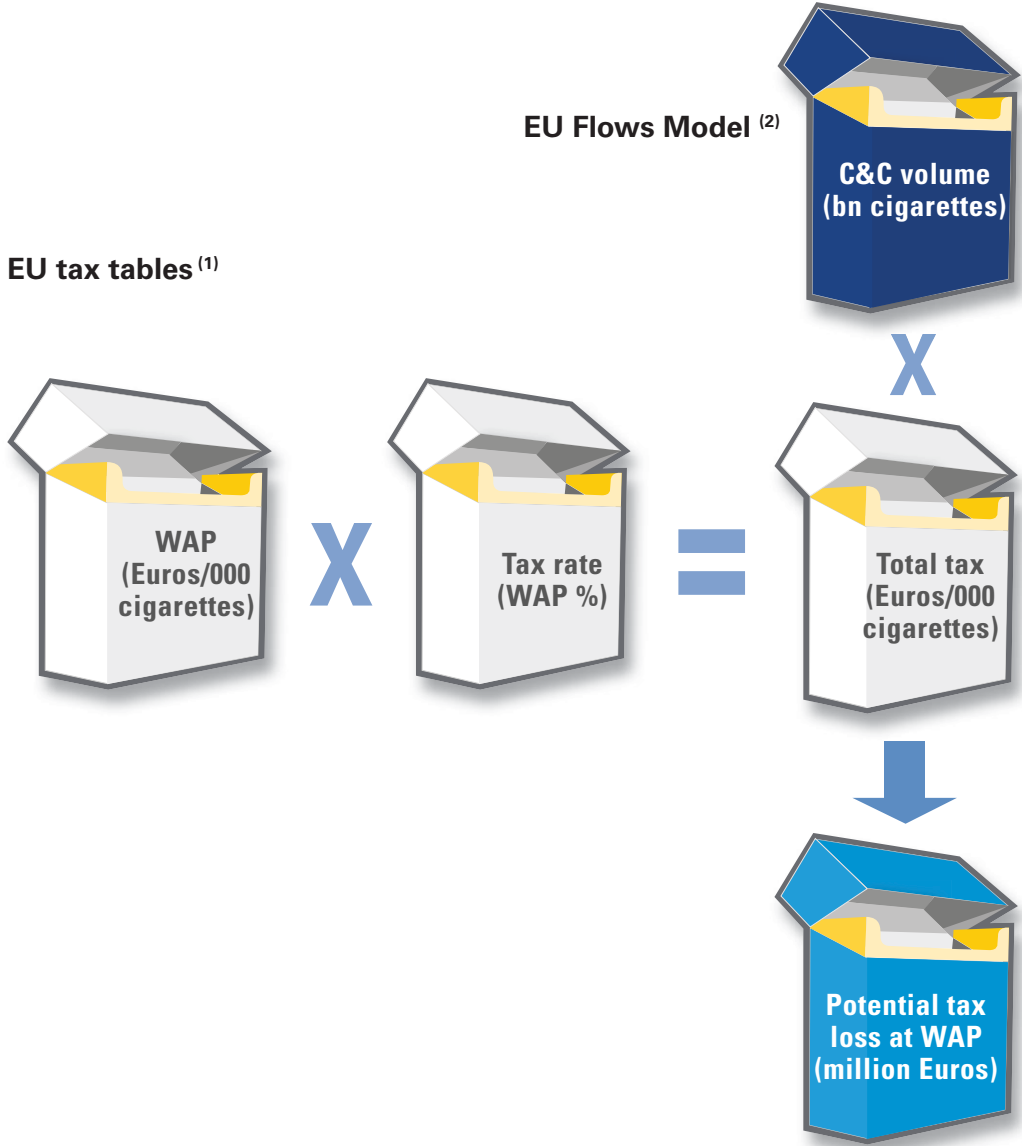
# Methodology – EU Tax Loss Calculation

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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<sup>(a)</sup> for cigarettes in January 2016
  - 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 €11.3bn in 2015. This represents a decrease versus prior year (2014: €11.5bn)
- 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 20 cigarettes  
 Sources: (1) EC Excise Duty tables (Part III – Manufactured Tobacco) as at January 2016  
 (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
<b>Geographic coverage</b>	<ul style="list-style-type: none"> <li>We have limited our geographic coverage in some markets where the inclusion of additional territories would impact confidence levels in the ND(L) research</li> <li>In some instances (e.g. Greek islands), LDS data is also insufficient for the purposes of this study</li> </ul>	<ul style="list-style-type: none"> <li>Spanish results only cover mainland Spain and do not include the Canary Islands, Balearic Islands or Ceuta &amp; Melilla</li> <li>French results cover only mainland France and do not include Corsica. As a result, LDS from Corsica are not included in France consumption figures</li> <li>Portuguese results only cover mainland Portugal and do not include Madeira or the Azores</li> <li>Greek results only cover mainland Greece and do not include the Greek islands</li> <li>UK results only cover Great Britain and Northern Ireland and do not include the Channel Islands or Isle of Man</li> </ul>	Not adjusted for
<b>Non-major manufacturer counterfeit</b>	<ul style="list-style-type: none"> <li>EPS results do not identify counterfeit packs that have been made by manufacturers other than British American Tobacco plc, Imperial Tobacco Limited, JT International SA and Philip Morris International Management SA as only the manufacturer / trademark owner can confirm whether their brand packs are genuine</li> </ul>	<ul style="list-style-type: none"> <li>In some instances, the volume of legal domestic consumption may be overstated where domestic counterfeit variants exist, leading to corresponding understatements of C&amp;C volumes for some brands (although the impact is likely to be minimal)</li> <li>We cannot distinguish non-participating manufacturer brand counterfeit (non-domestic variants) and contraband product, although this will not impact the overall volume of C&amp;C</li> <li>Illicit Whites volumes may include counterfeit</li> </ul>	Not adjusted for
<b>OTP</b>	<ul style="list-style-type: none"> <li>EPSs collect cigarette packs only</li> <li>Non-domestic consumption for OTP cannot be measured via EPS results</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	Not adjusted for
<b>Non-EU outflows</b>	<ul style="list-style-type: none"> <li>In order to calculate consumption, we have assumed no outflows of LDS outside the 30 countries of study</li> </ul>	<ul style="list-style-type: none"> <li>With the exception of Bulgaria to Turkey, 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</li> </ul>	Partially adjusted for

# Appendices - Limitation of Results

Source	Limitation
EPSs	<ul style="list-style-type: none"> <li>• 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"> <li>– the sample is more heavily weighted towards populous, urban areas and therefore may not be fully representative of consumption habits in rural regions</li> <li>– homes and workplaces or public spaces are not covered</li> </ul> </li> <li>• 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 162 for details)<sup>(a)</sup></li> <li>• 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"> <li>– 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</li> <li>– 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</li> </ul> </li> <li>• 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</li> <li>• 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"> <li>– 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</li> </ul> </li> <li>• 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"> <li>– 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</li> <li>– The study also does not take account of other duty free channels (for example, military, diplomats etc.) that exist for some travel within the EU</li> </ul> </li> </ul>

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

# Appendices - Limitation of Results

Source	Limitation
LDS	<ul style="list-style-type: none"> <li>• 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 (for example, in Bulgaria)</li> <li>• AC Nielsen Retail Audit data is derived from retail sales information but may exclude particular sales channels or retailers               <ul style="list-style-type: none"> <li>– In markets where we have used Retail Audit data, AC Nielsen have calculated an appropriate uplift to derive total market sales, including volumes not accounted for in Retail Audit data</li> </ul> </li> <li>• 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</li> </ul>
ND(L)	<ul style="list-style-type: none"> <li>• From 2014, we have used business and tourism travel data from sources such as the World Tourism Organization and national statistics office to calculate the number of trips made</li> <li>• 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</li> <li>• This may over-weight ND(L) volume as a proportion of the total non-domestic flow</li> <li>• 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</li> <li>• 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.</li> <li>• Where border sales data is not available and the EPS cannot be used, the brands are categorized as "other"</li> </ul>
































# Appendices – EPS results by country

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# Appendices - EPS results by country

## EPS results for EU 28 countries

EU 28 countries, Norway and Switzerland		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Austria		25,485	12,811	13,000	20%	16%	14%
Belgium		5,600	5,600	5,600	17%	13%	13%
Bulgaria		13,000	12,700	13,000	19%	21%	13%
Croatia		3,000	3,000	3,000	5%	10%	5%
Cyprus		1,000	1,000	1,000	6%	5%	7%
Czech Republic		21,004	21,004	21,004	5%	4%	4%
Denmark		5,300	5,500	5,500	6%	5%	6%
Estonia		6,600	6,600	6,600	22%	20%	15%
Finland		5,000	5,000	5,794	21%	16%	18%
France		34,500	23,000	22,998	25%	25%	30%
Germany		120,000	120,000	120,000	21%	19%	18%
Greece		7,000	13,000	14,000	20%	21%	21%
Hungary		24,709	19,910	19,905	9%	12%	11%
Ireland		10,000	10,000	9,999	28%	24%	25%
Italy		40,000	40,000	39,982	5%	8%	8%
Latvia		9,800	9,800	9,800	30%	30%	28%
Lithuania		12,800	19,200	12,800	29%	30%	21%
Luxembourg		400	400	399	8%	7%	18%
Malta		1,000	1,000	1,000	15%	10%	12%
Netherlands		14,000	21,000	21,000	22%	21%	19%
Poland		51,000	51,000	51,000	15%	17%	18%
Portugal		3,000	3,000	3,000	2%	2%	4%
Romania		18,600	15,072	15,126	10%	16%	16%
Slovakia		5,000	12,800	12,800	3%	1%	9%
Slovenia		3,000	3,000	3,000	11%	9%	10%
Spain		29,404	29,997	29,983	11%	12%	10%
Sweden		10,000	19,909	10,031	13%	11%	13%
UK		38,099	38,100	25,400	15%	24%	28%
Norway		-	5,000	5,000	-	47%	46%
Switzerland		-	6,600	6,600	-	9%	14%
<b>Total</b>		<b>518,302</b>	<b>535,003</b>	<b>508,321</b>	<b>15.50%</b>	<b>13.00%</b>	<b>16.72%</b>

# Appendices - EPS results by country

Austria EPS results by region, 2013-15<sup>(1)(2)</sup>

Austria		Number of packs collected			ND incidence in EPS		
		2013	2014	2015	2013	2014	2015
Region							
Burgenland		2,987	1,544	440	15%	14%	17%
Kärnten		5,546	2,402	850	35%	23%	21%
Niederösterreich		3,871	1,555	2,484	19%	16%	15%
Oberösterreich		3,180	1,993	2,179	22%	18%	13%
Salzburg		1,663	759	816	9%	10%	12%
Steiermark		2,398	1,146	1,853	13%	15%	16%
Tirol		1,581	779	1,104	6%	6%	6%
Vorarlberg		308	658	574	2%	7%	9%
Wien		3,951	1,975	2,700	20%	20%	14%
<b>Total</b>		<b>25,485</b>	<b>12,811</b>	<b>13,000</b>	<b>20%</b>	<b>16%</b>	<b>14%</b>

Source: (1) Austria Chamber of Commerce Empty Pack Surveys, 2013-2015  
(2) CPM, Vienna, 2015

# Appendices - EPS results by country


Belgium EPS results by region, 2013-15<sup>(1)</sup>

Belgium	Number of packs collected			ND incidence in EPS		
Region	2013	2014	2015	2013	2014	2015
Aalst	100	200	200	6%	19%	10%
Anderlecht	120	240	240	9%	30%	10%
Antwerp	550	1,100	1,100	12%	7%	14%
Antwerpen	550			14%		
Arlon	160	160	160	44%	44%	37%
Brugge	240	240	240	19%	11%	7%
Brussels	500	380	380	18%	15%	8%
Charleroi	460	460	460	13%	12%	12%
East Flanders	100			18%		
Genk	200	200	200	20%	7%	15%
Gent	500	500	500	12%	11%	11%
Hasselt	200	200	200	25%	11%	18%
Kortrijk	200	200	200	20%	12%	10%
Leuven	200	200	200	13%	5%	29%
Liege	440	440	440	31%	13%	14%
Mechelen	200	200	200	20%	13%	6%
Mons	200	200	200	10%	21%	10%
Namur	240	240	240	25%	27%	14%
Sambreville	160	160	160	21%	7%	15%
Schaerbeek	280		280	16%		12%
<b>Total</b>	<b>5,600</b>	<b>5,600</b>	<b>5,600</b>	<b>17%</b>	<b>13%</b>	<b>13%</b>

Source: (1) MS Intelligence Empty Pack Surveys, 2013-2015

# Appendices - EPS results by country


Bulgaria results by region, 2013-15<sup>(1)</sup>


Bulgaria		Number of packs collected			ND incidence in EPS		
		2013	2014	2015	2013	2014	2015
Blagoevgrad			500	300		34%	32%
Burgas		660	660	660	17%	19%	10%
Dobric		300	300	300	11%	4%	7%
Gabrovo			300	300		37%	43%
Grad Sofia		3,960	3,960		20%	14%	
Haskovo		708	908	252	25%	36%	18%
Jambol		244	244	244	20%	5%	5%
Kjustendil			300	300		40%	26%
LOM				200			6%
Lovec		352	352		16%	14%	
Montana			500	300		24%	21%
Pazardzik		236	236	236	32%	40%	29%
Pernik		264	264	264	11%	10%	12%
Pleven				352			7%
Plovdiv		1,114	1,114	1,114	18%	34%	24%
Razgrad			200	200		4%	2%
Ruse		492	492	492	17%	16%	8%
Sandanski				200			14%
Silistra			200	200		4%	8%
Sliven		302	302	302	31%	66%	20%
Sofia				3,960			8%
Stara Zagora				456			10%
Sumen		266	266	266	3%	4%	3%
Svilengrad				200			41%
Svishtov				200			4%
Varna		1,102	1,102	1,102	22%	14%	8%
Veliko Tarnovo			500	300		10%	13%
Vidin				300			26%
Other		3,000					
<b>Total</b>		<b>13,000</b>	<b>12,700</b>	<b>13,000</b>	<b>19%</b>	<b>21%</b>	<b>13%</b>


Source: (1) Nielsen Empty Pack Surveys, 2013-2015.

# Appendices - EPS results by country

Croatia, Cyprus and Czech Republic EPS results by region, 2013-15<sup>(1)(2)</sup>

Croatia		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Osijek		193	193	193	20%	20%	5%
Pula		132	132	132	12%	4%	2%
Rijeka		294	294	294	1%	5%	3%
Sesvete		126	126	126	3%	15%	4%
Slavonski Brod		124	124	124	18%	46%	25%
Split		383	383	383	4%	11%	4%
Zadar		163	163	163	1%	2%	2%
Zagreb		1,585	1,585	1,585	4%	7%	5%
<b>Total</b>		<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>5%</b>	<b>10%</b>	<b>5%</b>


Cyprus		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Larnaca		150	150	150	4%	10%	4%
Limassol		300	300	300	5%	2%	4%
Nicosia		400	400	400	8%	6%	11%
Paphos		150	150	150	5%	5%	3%
<b>Total</b>		<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>6%</b>	<b>5%</b>	<b>7%</b>


Czech Republic		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Jihocesky Kraj		724	724	724	3%	2%	2%
Jihomoravsky Kraj		2,148	2,148	2,148	5%	4%	4%
Karlovarsky Kraj		300	300	300	4%	7%	8%
Kralovehradecky Kraj		526	526	526	4%	2%	2%
Liberecky Kraj		1,034	1,034	1,034	4%	3%	4%
Moravsoslezsky Kraj		3,332	3,332	3,332	6%	5%	6%
Olomoucky Kraj		1,062	1,062	1,062	5%	4%	3%
Pardubicky Kraj		510	510	510	5%	4%	3%
Plzensky Kraj		948	948	948	6%	3%	3%
Praha		7,114	7,114	7,114	5%	4%	4%
Stredocesky Kraj		636	636	636	5%	5%	5%
Ustecky Kraj		1,750	1,750	1,750	6%	5%	9%
Vysocina		496	496	496	4%	4%	3%
Zlinsky Kraj		424	424	424	5%	4%	4%
<b>Total</b>		<b>21,004</b>	<b>21,004</b>	<b>21,004</b>	<b>5%</b>	<b>4%</b>	<b>4%</b>

Sources: (1) Nielsen Empty Pack Surveys, 2013-2015.  
(2) Ultex Empty Pack Surveys, 2013-2015.

# Appendices - EPS results by country

Denmark and Estonia EPS results by region, 2013-15<sup>(1)(2)</sup>


Denmark		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Capital Region		2,593	2,612	2,612	6%	5%	6%
Mid Jutland		1,014	1,211	1,211	7%	5%	5%
North Jutland		421	422	422	6%	5%	5%
South Denmark		1,122	1,105	1,105	5%	5%	6%
Zealand		150	150	150	9%	6%	2%
<b>Total</b>		<b>5,300</b>	<b>5,500</b>	<b>5,500</b>	<b>6%</b>	<b>5%</b>	<b>6%</b>


Estonia		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Har			1,600	3,200		16%	11%
Harju		3,200	1,600		18%	15%	
Ida			550	1,100		42%	32%
Ida-Viru		1,100	550		46%	39%	
Lääne		200	200	200	27%	22%	17%
Lääne-Viru		200	200	200	24%	18%	11%
Pär			150	300		13%	11%
Pärnu		300	150		16%	12%	
Saa			100	200		19%	11%
Saare		200	100		24%	14%	
Tar			400	800		13%	13%
Tartu		800	400		13%	12%	
Val			100	200		43%	23%
Valga		200	100		41%	36%	
Vil			100	200		22%	12%
Viljandi		200	100		22%	15%	
Võr			100	200		31%	22%
Võru		200	100		22%	25%	
<b>Total</b>		<b>6,600</b>	<b>6,600</b>	<b>6,600</b>	<b>22%</b>	<b>20%</b>	<b>15%</b>

Sources: (1) Nielsen Empty Pack Surveys, 2013-2015.  
(2) MS Intelligence Empty Pack Surveys, 2013-2015.

# Appendices - EPS results by country

Finland and France EPS results by region, 2013-15<sup>(1)</sup>

<b>Finland</b>		<b>Number of packs collected</b>			<b>ND incidence in EPS</b>		
<b>Region</b>		<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Etela-Karjala				301			15%
Keski-Suomi		329	320	318	22%	18%	17%
Kymenlaakso		222	210	206	23%	20%	14%
Lappi				199			23%
Paijat-Hame		255	248	245	23%	20%	14%
Pirkanmaa		537	522	522	23%	16%	20%
Pohjois-Karjala				299			15%
Pohjois-Savo		244	252	252	22%	17%	14%
Prohiois-Pohianmaa		357	458	461	20%	16%	17%
Uusimaa		2,610	2,558	2,559	21%	15%	20%
Varsinais-Suomi		446	432	432	20%	19%	15%
<b>Total</b>		<b>5,000</b>	<b>5,000</b>	<b>5,794</b>	<b>21%</b>	<b>16%</b>	<b>18%</b>


<b>France</b>		<b>Number of packs collected</b>			<b>ND incidence in EPS</b>		
<b>Region</b>		<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Alsace Lorraine Champagne Ardennes		3,300	2,200	2,200	36%	31%	31%
Aquitaine		2,100	1,400	1,400	26%	23%	26%
Auvergne Limousin		1,500	1,000	1,000	19%	24%	24%
Basse Haute Normandie		2,400	1,600	1,600	18%	24%	23%
Bourgogne Franche Comte		3,000	2,000	2,000	21%	27%	21%
Bretagne		3,000	2,000	2,000	17%	12%	15%
Centre		1,500	1,000	1,000	22%	25%	20%
Ile De France		4,500	3,000	2,998	24%	25%	33%
Languedoc Roussillon Midi Pyrenees		2,400	1,600	1,600	24%	28%	33%
Nord Picardie		3,000	2,000	2,000	33%	42%	31%
Pays De Loire Poitou Charentes		2,400	1,600	1,600	18%	12%	24%
Provence Alpes Cote D Azur		2,400	1,600	1,600	30%	36%	52%
Rhone Alpes		3,000	2,000	2,000	26%	20%	27%
<b>Total</b>		<b>34,500</b>	<b>23,000</b>	<b>22,998</b>	<b>25%</b>	<b>25%</b>	<b>30%</b>


Source: (1) MS Intelligence Empty Pack Surveys, 2013-2015.



# Appendices - EPS results by country

Germany and Greece EPS results by region, 2013-15<sup>(1)(2)(a)</sup>

Germany		Weighted number of packs collected		ND incidence in EPS	
Region		2014	2015	2014	2015
Nielsen 1		19,810	19,349	11%	10%
Nielsen 2		26,774	26,202	11%	10%
Nielsen 3a		16,388	15,857	10%	9%
Nielsen 3b		15,368	14,886	9%	10%
Nielsen 4		17,469	17,942	25%	24%
Nielsen 5		5,583	5,957	44%	39%
Nielsen 6		10,144	10,964	39%	32%
Nielsen 7		8,464	8,843	43%	42%
<b>Total</b>		<b>120,000</b>	<b>120,000</b>	<b>19%</b>	<b>18%</b>


Greece		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Attica		2,300	4,600	4,600	25%	25%	25%
Central Greece		200	400	400	19%	18%	17%
Central Macedonia		1,500	2,700	3,000	22%	22%	23%
Crete		500	1,000	1,000	22%	26%	13%
East Macedonia/Thrace		400	400	800	25%	23%	15%
Epirus		300	500	600	16%	20%	21%
Ionian Islands		200	400	400	16%	11%	19%
South Aegean		200	400	400	9%	11%	12%
Thessaly		600	1,200	1,200	15%	17%	16%
West Greece		600	1,200	1,200	8%	11%	17%
West Macedonia		200	200	400	17%	26%	21%
<b>Total</b>		<b>7,000</b>	<b>13,000</b>	<b>14,000</b>	<b>20%</b>	<b>21%</b>	<b>21%</b>


Note: (a) The Germany data is not comparable with prior years and is therefore provided for 2014 and 2015 only. In 2015, 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

Sources: (1) Ipsos Yellow Bag Surveys, 2014 and 2015 (Germany).  
(2) Nielsen Empty Pack Surveys, 2013-2015.

# Appendices - EPS results by country

Hungary and Ireland EPS results by region, 2013-15<sup>(1)(2)</sup>


Hungary		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Bács-Kiskun		1,960	980	980	11%	12%	15%
Baranya			645	645		9%	7%
Békés		840	760	760	13%	13%	7%
Borsod-Abaúj-Zemplén		410	1,465	1,465	0%	16%	13%
Budapest		12,500	6,250	6,250	9%	10%	9%
Csongrád		410	1,310	1,310	21%	14%	13%
Fejér		430	640	640	3%	3%	6%
Győr-Moson-Sopron		1,070	935	934	7%	5%	3%
Hajdú-Bihar		2,390	1,195	1,195	11%	16%	11%
Heves		780	390	390	7%	11%	8%
Jász-Nagykun-Szolnok		409	520	520	0%	15%	9%
Komárom-Esztergom		290	440	440	9%	7%	6%
Nógrád			165	165		15%	2%
Pest		1,830	1,235	1,235	5%	6%	11%
Somogy		980	490	490	4%	4%	4%
Szabolcs-Szatmár-Bereg		410	1,100	1,099	0%	45%	50%
Tolna			145	145		2%	2%
Vas			335	335		3%	1%
Veszprém			420	417		1%	1%
Zala			490	490		6%	5%
<b>Total</b>		<b>24,709</b>	<b>19,910</b>	<b>19,905</b>	<b>9%</b>	<b>12%</b>	<b>11%</b>


Ireland		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Connacht		800	800	800	30%	24%	23%
Leinster		6,450	6,450	6,449	29%	23%	26%
Munster		2,550	2,550	2,550	27%	25%	24%
Ulster		200	200	200	29%	28%	25%
<b>Total</b>		<b>10,000</b>	<b>10,000</b>	<b>9,999</b>	<b>28%</b>	<b>24%</b>	<b>25%</b>

Sources: (1) GFK Hungary Empty Pack Surveys, 2013-2015.  
 (2) MS Intelligence Empty Pack Surveys, 2013-2015.

# Appendices - EPS results by country

Italy and Latvia EPS results by region, 2013-15<sup>(1)(2)</sup>

Italy		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Abruzzo		400	400	400	2%	2%	2%
Calabria		552	552	552	5%	4%	5%
Campania		3648	3,648	3,648	17%	26%	37%
Emilia Romagna		4416	4,416	4,413	3%	1%	2%
Friuli Venezia Giulia		608	608	608	2%	11%	26%
Lazio		7892	7,892	7,889	4%	4%	7%
Liguria		1796	1,796	1,794	3%	5%	2%
Lombardia		5284	5,284	5,283	9%	9%	6%
Marche		400	400	400	2%	3%	2%
Piemonte		3080	3,080	3,080	4%	4%	4%
Puglia		1968	1,968	1,968	3%	3%	3%
Sicilia		3920	3,920	3,915	4%	9%	9%
Toscana		2128	2128	2,126	3%	2%	5%
Trentino Alto Adige		400	400	400	2%	1%	0%
Umbria		896	896	896	2%	2%	2%
Veneto		2612	2,612	2,610	3%	3%	3%
<b>Total</b>		<b>40,000</b>	<b>40,000</b>	<b>39,982</b>	<b>5%</b>	<b>8%</b>	<b>8%</b>

Latvia		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Kurzeme		1,200	1,200	1,200	32%	28%	20%
Latgale		1,400	1,400	1,400	46%	54%	46%
Pieriga		1,400	1,400	1,400	29%	25%	27%
Riga		4,000	4,000	4,000	27%	27%	27%
Vidzeme		800	800	800	32%	19%	19%
Zemgale		1,000	1,000	1,000	25%	27%	22%
<b>Total</b>		<b>9,800</b>	<b>9,800</b>	<b>9,800</b>	<b>30%</b>	<b>30%</b>	<b>28%</b>

Sources: (1) MS Intelligence Empty Pack Surveys, 2013-2015.  
(2) Nielsen Empty Pack Surveys, 2013-2015.

# Appendices - EPS results by country

Lithuania, Luxembourg and Malta EPS results by region, 2013-15<sup>(1)(2)</sup>

Lithuania	Number of packs collected			ND incidence in EPS		
Region	2013	2014	2015	2013	2014	2015
Alytus	800	1,200	800	40%	33%	23%
Kaunas	3,000	4,500	3,000	28%	31%	21%
Klaipeda	1,600	2,400	1,600	18%	18%	16%
Marijampole	600	900	600	35%	32%	22%
Panevezys	800	1,200	800	36%	34%	23%
Siauliai	800	1,200	800	28%	32%	31%
Taurage	200	300	200	44%	42%	19%
Telsiai	800	1,200	800	31%	25%	15%
Utena	600	900	600	16%	28%	14%
Vilnius	3,600	5,400	3,600	31%	32%	21%
<b>Total</b>	<b>12,800</b>	<b>19,200</b>	<b>12,800</b>	<b>29%</b>	<b>30%</b>	<b>21%</b>


Luxembourg	Number of packs collected			ND incidence in EPS		
Region	2013	2014	2015	2013	2014	2015
Esch-Sur-Alzette	160	160	160	7%	3%	14%
Luxembourg	240	240	239	8%	9%	21%
<b>Total</b>	<b>400</b>	<b>400</b>	<b>399</b>	<b>8%</b>	<b>7%</b>	<b>18%</b>


Malta	Number of packs collected			ND incidence in EPS		
Region	2013	2014	2015	2013	2014	2015
Northern	350	350	350	14%	10%	11%
Northern Harbour	550	550	550	16%	9%	14%
Southern Harbour	100	100	100	16%	12%	8%
<b>Total</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>15%</b>	<b>10%</b>	<b>12%</b>

Sources: (1) Nielsen Empty Pack Surveys, 2013-2015.  
 (2) MS Intelligence Empty Pack Surveys, 2013-2015.

# Appendices - EPS results by country

Netherlands and Poland EPS results by region, 2013-15<sup>(1)</sup>


Netherlands		Number of packs collected			ND incidence in EPS			
		Region	2013	2014	2015	2013	2014	2015
		Drenthe	206	303	303	22%	14%	15%
		Flevoland	502	756	756	20%	23%	20%
		Friesland	334	498	498	18%	18%	15%
		Gelderland	1,088	1,626	1,626	24%	20%	19%
		Groningen	358	546	546	27%	23%	16%
		Limburg	760	1,128	1,128	24%	23%	21%
		North Brabant	1,862	2,790	2,790	25%	26%	23%
		North Holland	3,078	4,635	4,635	24%	21%	19%
		Overijssel	996	1,488	1,488	22%	21%	19%
		South Holland	3,954	5,916	5,916	19%	20%	17%
		Utrecht	862	1,314	1,314	24%	18%	17%
<b>Total</b>			<b>14,000</b>	<b>21,000</b>	<b>21,000</b>	<b>22%</b>	<b>21%</b>	<b>19%</b>


Poland		Number of packs collected			ND incidence in EPS			
		Region	2013	2014	2015	2013	2014	2015
		Dolnoslaskie	3,900	3,900	3,900	7%	8%	6%
		Kujawsko-Pomorskie	2,775	2,775	2,775	11%	12%	13%
		Lodzkie	3,375	3,375	3,375	22%	24%	20%
		Lubelskie	2,550	2,550	2,550	28%	34%	32%
		Lubuskie	1,350	1,350	1,350	4%	5%	7%
		Malopolskie	2,925	2,925	2,925	12%	13%	16%
		Mazowieckie	8,100	8,100	8,100	22%	24%	29%
		Opolskie	1,800	1,800	1,800	4%	6%	6%
		Podkarpackie	2,850	2,850	2,850	28%	28%	32%
		Podlaskie	1,425	1,425	1,425	40%	43%	39%
		Pomorskie	2,325	2,325	2,325	2%	1%	0%
		Slaskie	7,350	7,350	7,350	11%	12%	16%
		Swietokrzyskie	1,575	1,575	1,575	5%	8%	8%
		Warminsko-Mazurskie	2,400	2,400	2,400	41%	55%	58%
		Wielkopolskie	4,050	4,050	4,050	2%	2%	4%
		Zachodniopomorskie	2,250	2,250	2,250	5%	6%	5%
<b>Total</b>			<b>51,000</b>	<b>51,000</b>	<b>51,000</b>	<b>15%</b>	<b>17%</b>	<b>18%</b>


Sources: (1) MS Intelligence Empty Pack Surveys, 2013-2015.  
 (2) Almares Research Empty Pack Surveys, 2013-2015.

# Appendices - EPS results by country

Portugal, Romania and Slovakia EPS results by region, 2013-15<sup>(1)(2)</sup>

Portugal		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Center		162	200	200	0%	1%	2%
Lisboa		1,910	1,900	1,900	2%	3%	3%
North		928	900	900	3%	2%	4%
<b>Total</b>		<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>2%</b>	<b>2%</b>	<b>4%</b>


Romania		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Bucharest		5,027	1,586	1,600	8%	11%	10%
Center		2,512	1,497	1,531	2%	3%	2%
North-East		2,276	2,667	2,637	18%	33%	37%
North-West		2,278	2,087	1,891	10%	17%	20%
South		1,687	2,025	2,084	13%	5%	3%
South-East		2,573	2,087	2,062	11%	15%	11%
South-West			1,510	1,676		16%	24%
West		2,247	1,613	1,645	13%	28%	23%
<b>Total</b>		<b>18,600</b>	<b>15,072</b>	<b>15,126</b>	<b>10%</b>	<b>16%</b>	<b>16%</b>


Slovakia		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Banskobystricky Kraj		450	1,100	1,100	1%	1%	3%
Bratislavsky Kraj		1,200	2,400	2,400	1%	0%	3%
Kosicky Kraj		800	2,600	2,600	7%	3%	6%
Nitriansky Kraj		650	1,700	1,700	1%	0%	4%
Presovsky Kraj		600	2,200	2,200	7%	1%	5%
Trenciansky Kraj		400	800	800	0%	1%	4%
Trnavsky Kraj		300	800	800	3%	1%	3%
Zilinsky Kraj		600	1,200	1,200	1%	1%	4%
<b>Total</b>		<b>5,000</b>	<b>12,800</b>	<b>12,800</b>	<b>3%</b>	<b>1%</b>	<b>9%</b>

Source: (1) Nielsen Empty Pack Surveys, 2013-2015.  
 (2) Novel Study, 2014-2015.  
 (3) Ipsos Empty Pack Surveys, 2013-2015.

# Appendices - EPS results by country

Slovenia and Spain EPS results by region, 2013-15<sup>(1)</sup>

Slovenia		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Celje		211	210	210	10%	11%	9%
Koper		141	139	139	11%	2%	6%
Kranj		207	208	208	4%	9%	4%
Ljubljana		1,530	1,539	1,539	10%	11%	12%
Maribor		535	531	531	13%	7%	7%
Novo Mesto		131	130	130	7%	2%	3%
Ptuj		102	101	101	6%	8%	6%
Velenje		143	142	142	27%	18%	18%
<b>Total</b>		<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>11%</b>	<b>9%</b>	<b>10%</b>

Spain		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
Andalucia		5,070	5,174	5,172	39%	42%	33%
Aragon		1,100	1,170	1,169	1%	2%	2%
Asturias		823	858	858	6%	3%	3%
Basque Country		1,490	1,534	1,533	7%	5%	6%
Cantabria		293	304	303	5%	8%	6%
Castilla Y Leon		1,311	1,320	1,318	3%	5%	4%
Castilla-La Mancha		288	296	295	3%	8%	7%
Catalonia		5,298	5,394	5,394	8%	6%	6%
Comunidad Valenciana		2,778	2,841	2,840	4%	4%	5%
Extremadura		257	258	257	39%	45%	19%
Galicia		1,077	1,130	1,130	8%	7%	5%
La Rioja		256	262	262	5%	3%	3%
Madrid		7,928	7,992	7,988	4%	4%	6%
Murcia		1,102	1,126	1,126	5%	7%	7%
Navarra		332	338	338	3%	1%	4%
<b>Total</b>		<b>29,404</b>	<b>29,997</b>	<b>29,983</b>	<b>11%</b>	<b>12%</b>	<b>10%</b>

Sources: (1) MS Intelligence Empty Pack Surveys, 2013-2015.  
 (2) Ipsos Empty Pack Surveys, 2013-2015.

# Appendices - EPS results by country

Sweden EPS results by region, 2013-15<sup>(1)</sup>


Sweden Region	Number of packs collected			ND incidence in EPS		
	2013	2014	2015	2013	2014	2015
Blekinge	90	150	90	4%	26%	14%
Dalarna	101	150	112	4%	10%	22%
Gastrikland		190	190		4%	15%
Gävleborg	190			6%		
Götaland	84			5%		
Halland	226	304	226	4%	16%	11%
Jönköping	233	233	233	8%	9%	13%
Kalmar	97			10%		
Kronoberg	154	154	154	8%	24%	12%
Norrbottn	126	150	136	3%	1%	19%
Örebro	272	272	272	11%	5%	11%
Östergötland	500	500	500	13%	9%	8%
Skåne	1,177	11,010	1,177	26%	12%	13%
Skellefteå	90			4%		
Smaland		150	97		6%	20%
Södermanland	225	316	225	13%	8%	12%
Södertälje	167			17%		
Stockholm	3,461	3,284	3,628	12%	11%	13%
Uppsala	355	355	355	11%	11%	13%
Värmland	162	162	163	6%	2%	9%
Västerbotten	209	359	299	2%	4%	16%
Västernorrland	136	150	146	12%	6%	23%
Västmanland	296	296	296	7%	20%	13%
Västra Götaland	1,649	1,724	1,732	12%	9%	13%
<b>Total</b>	<b>10,000</b>	<b>19,909</b>	<b>10,031</b>	<b>13%</b>	<b>11%</b>	<b>13%</b>


Source: (1) HUI Research Empty Pack Surveys, 2013-2015.



# Appendices - EPS results by country

UK and Norway EPS results by region, 2013-15<sup>(1)</sup>

UK		Number of packs collected			ND incidence in EPS		
Region		2013	2014	2015	2013	2014	2015
East Midlands		2,704	3,000	2,000	15%	26%	29%
East Of England		3,492	3,300	2,200	17%	22%	27%
London		4,648	4,500	3,000	19%	24%	28%
North East England		1,630	1,500	1,000	17%	23%	26%
North West England		4,362	3,897	2,598	16%	23%	28%
Northern Ireland		1,092	1,500	1,000	12%	23%	31%
Scotland		3,281	3,297	2,198	10%	17%	15%
South East England		5,185	6,003	4,002	17%	24%	29%
South West England		3,194	2,700	1,800	16%	25%	28%
Wales		1,881	2,100	1,400	13%	28%	31%
West Midlands		3,416	3,603	2,402	15%	27%	32%
Yorkshire And The Humber		3,214	2,700	1,800	14%	25%	30%
<b>Total</b>		<b>38,099</b>	<b>38,100</b>	<b>25,400</b>	<b>15%</b>	<b>24%</b>	<b>28%</b>


Norway		Weighted number of packs collected		ND incidence in EPS	
Region		2014	2015	2014	2015
Akershus		376	376	53%	48%
Hordaland		866	866	50%	44%
Oslo		2,012	2,012	45%	46%
Ostfold		248	248	46%	46%
Rogaland		419	419	42%	48%
Sor-Trondelag		579	579	54%	45%
Vest-Adger		273	227	45%	55%
Troms		227	273	40%	41%
<b>Total</b>		<b>5,000</b>	<b>5,000</b>	<b>47%</b>	<b>46%</b>

Source: (1) MS Intelligence Empty Pack Surveys, 2013-2015.

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# Appendices - EPS results by country

Switzerland EPS results by region, 2014-15<sup>(1)</sup>

Switzerland Region		Weighted number of packs collected		ND incidence in EPS	
		2014	2015	2014	2015
Aargau			200		24%
Basel		400	400	10%	15%
Bellinzona		200		17%	
Bern		300	900	7%	11%
Biel (Bienne)		200		6%	
Chur		200		7%	
Delemont		200		5%	
Fribourg		200	200	5%	10%
Geneva		500	700	8%	18%
Grisons			200		28%
Jura			200		15%
Koniz		200		3%	
Kreuzlingen		200		13%	
La Chaux De Fonds		200		6%	
Lausanne		300		7%	
Lugano		200		25%	
Luzern		200	200	9%	8%
Neuchatel		200	400	9%	14%
Rheinfelden		200		14%	
Schaffhausen		200	200	10%	11%
Sion		200		5%	
St. Gallen		200	400	9%	16%
St. Margrethen		200		21%	
Thun		200		10%	
Thurgau			200		16%
Ticino			400		31%
Uster		200		6%	
Valais			200		7%
Vaud			300		9%
Vernier		200		19%	
Winterthur		300		6%	
Zurich		1,000	1,500	9%	8%
<b>Total</b>		<b>6,600</b>	<b>6,600</b>	<b>9%</b>	<b>14%</b>

Source: (1) MS Intelligence Empty Pack Surveys, 2013-2015.

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# Appendices – Sources

## External data sources

**The sources listed below are those used only in the 2015 analysis in this 2015 Project SUN Report. Sources for analysis and findings for previous years can be found in previous year reports**

### Other Sources

Auslandseinkäufe 2015, GfK Switzerland, February 2016
Central Statistics Office, Ireland, October 2012
Deutsche Welle, January 2014
EC average price of most popular brand for non-EU countries
EC Excise Duty tables (Part III – Manufactured Tobacco) , January 2015
EC Excise Duty tables (Part III – Manufactured Tobacco) , January 2016
EU Tax Tables and pricing information on most sold brands outside of EU
Economist Intelligence Unit, GDP and PDI data 2015
Euromonitor, 2015
European Commission memo 14-1, January 2014
European Commission Press Release, IP-15-5900, 2015
European Commission ST-6279-2016, February 2016
Finnish Statistical Office, travel data 2015
Government of Andorra Tourism Statistics, 2015
Government of Gibraltar Frontier Employment and Border Crossing Statistics, 2015
Greece Imposes Capital Controls as Fears of Grexit Grow, Bloomberg, June 2015
Greek Department of Customs, Audit and Violations, seizure data 2015
Istec, Canary Islands visitor numbers, 2015
JTI Pack Swap Survey, 2014 and 2015
OLAF Press Release No. 13, 2015
UNWTO Factbook 2009-2014
Ministry of Labour and Social Policy, Poland, work permit statistics 2015
National Institute of Statistics, Spain tourism data 2015
Northern Cyprus lifts visa requirements for Greek Cypriots, Daily Sabah, May 2015
Norwegian Statistical Office, population data 2015
The Tobacco Trade Association, Obeskattade cigaretter 2015
Personal Disposable Income 2014-15, Economics Intelligence Unit
Nielsen pricing data
Slovakian Department for Labour, Social Affairs and Family, visa statistics, 2015
Spanish police crack down on Gibraltar cigarette smugglers, El Pais, March 2015
Swiss Federal Statistics Office, migrant statistics 2015
Tobacco Commissioner, Legal Domestic Sales in Spain 2015
UK Department of Health, Consultation on implementation of the revised Tobacco Products Directive (2014/40/EU), July 2015
UK Office for National Statistics, overseas travel and tourism data, 2012-2014
VisaHQ, April 2016

# Appendices – Scope of work

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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). We will also provide a section in the report on counterfeit and contraband flows for each of the 30 countries.
3. Our analysis of the cigarette market will be based on a methodology that incorporates primary research, market analysis, local expert interview programmes, and existing industry surveys.
  - For each of the 30 countries, we will use in market sales data provided by all engaging parties to estimate legal domestic sales and estimate Legal Domestic Consumption by subtracting outflows to other countries based on the results of Empty Pack Surveys.
  - 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 all engaging parties 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 STAR/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 section 11 below) will be used to refine our analysis
4. KPMG will also conduct analysis on illicit whites which will be analysed in the same way as section 3 above. This will be reported in the consolidated section of the report.
5. Upon finalisation of our work, KPMG will provide separately to BAT, ITL, JTI and PMI data tables containing the following information:
  - Summary of EU total counterfeit and contraband inflows by source and destination market;
  - Detailed analysis of total non-domestic outflows to the EU split by destination market and brand
6. KPMG will present our initial findings to you at interim stages in the engagement as required. The KPMG Project SUN team will also be made available to support up to two other external stakeholder presentations following the completion of the report under the terms of this agreement. Additional presentations or interviews, translation costs and the costs of KPMG personnel from other KPMG network firms are outside the scope of this letter and we would agree the costs of such services with you separately and in addition to the fee as per section 5 of the Engagement Letter.

## Process

7. BAT, ITL, JTI and PMI will form a Steering Group as the primary point of contact for KPMG, which will oversee the project from the client side, and will be responsible for data provision, arranging country meetings or calls where appropriate, collating central feedback where appropriate and overseeing the timetable. Data will be provided directly to KPMG separately by each of BAT, ITL, JTI and PMI. A dashboard which tracks data provided and highlights delays will be provided each week separately to BAT, ITL, JTI and PMI, so that each of BAT, ITL, JTI and PMI can identify missing data and deadlines and be aware of potential fee implications.
8. KPMG will undertake conference calls where required with each of BAT, ITL, JTI and PMI country leaders for 10 priority countries to help build a shared understanding of: data sources and their limitations; first draft results and their possible implications for the country's anti-illicit trade activity; fact gaps and hypotheses; and additional research requirements.
  - The 10 priority markets are: [Baltics; Bulgaria; France; Germany; Greece; UK; Italy; Poland; Romania; Spain]

Note: BAT: British American Tobacco plc  
ITL: Imperial Tobacco Limited  
JTI: JT International SA  
PMI: Philip Morris International Management SA

# Appendices – Scope of work

9. KPMG will share country specific preliminary results separately with the management teams of BAT, ITL, JTI and PMI for each of the priority EU Member States as outlined in section 8 above and provide opportunity for feedback and comment from each of those management teams within the agreed timetable. Each company will be in charge of reviewing its content and commenting on it within 10 working days. We will communicate the updated results to each of those management teams and provide opportunity for one further set of comments before finalising our results.

For the remaining 20 non-priority countries, KPMG will share preliminary findings of our analysis with the management teams of BAT, ITL, JTI and PMI for each non-priority country via a central point of contact for each of BAT, ITL, JTI and PMI. Feedback from non-priority countries will be collected centrally by a point of contact for each of BAT, ITL, JTI and PMI and communicated to us within the agreed timetable. KPMG will communicate directly with the management teams of non-priority countries on an exceptions basis.

It should be noted that changes requested by BAT, ITL, JTI or PMI which KPMG agree to make will also have to be agreed with the other engaging parties. KPMG will be responsible for managing the transparency and alignment of the revision process. Each of BAT, ITL, JTI and PMI will be provided with the “pre-final” report and will be responsible for reviewing its content and commenting on it within 10 working days (including legal reviews). It should be noted that KPMG will determine which comments and amendments to make to our report.

10. In addition to the detailed report and management meetings, KPMG will also undertake to manage and lead key intervention sessions between the BAT, ITL, JTI, PMI Steering Group and KPMG team, these being: Project Kick Off (to take place week commencing 1st February 2016) to agree detailed project process and approach, reporting format and highlight potential communication considerations;
- A review of preliminary EU and country level findings for each of the 30 countries and address key challenges and actions, to take place in early March 2016;
  - A review of updated EU and country level findings for each of the 30 countries and address key challenges and actions, to take place in early April 2016.

## Data Sources

11. Information from several independent sources will be used. These sources will include:

- Tobacco industry research and statistics;
    - Sales data provided by BAT, ITL, JTI and PMI and/or Tobacco Manufacturers’ Associations. Sales data will be provided separately for BAT, ITL, JTI and PMI and will not be shared between participants. The Project SUN report will only provide aggregated sales data that cannot be attributed to any of BAT, ITL, JTI or PMI;
    - Where available, regional sales data will be provided by BAT, ITL, JTI and PMI to help corroborate cross border trends between neighbouring countries. This will be provided separately by BAT/ITL/JTI and PMI and will not be shared between participants (not to be included in the report);
    - BAT, ITL, JTI and PMI consumer survey data will be provided where available to help corroborate consumption trends arising from Project SUN results and identify further areas of analysis (e.g. extent of smokers switching to roll-your-own (RYO) products).
  - Estimates of non-domestic consumption used by BAT, ITL, JTI and PMI management teams in each market (where available). These estimates will be provided to us separately by BAT, ITL, JTI and PMI to provide evidence-based support for observed trends in each of the EU Member States, Switzerland and Norway and will remain confidential.
    - Detailed survey results will be made available by BAT, ITL, JTI and PMI to KPMG in a timely manner for analysis purposes;
    - Information regarding the methodology and sampling plan will be provided by BAT, ITL, JTI and PMI to KPMG for our work.
  - Empty Pack Surveys commissioned jointly and/or individually by BAT, ITL, JTI and PMI will be conducted by third party research providers in a majority of Member States and the results thereof will be provided to KPMG as soon as they are available to allow us to consider these alongside market-specific information provided separately by BAT, ITL, JTI and PMI.
  - 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 BAT, ITL, JTI and PMI management teams to help corroborate findings.
12. Data from external sources will be obtained on a best efforts basis. We will require access to identified BAT, ITL, JTI and PMI personnel throughout this engagement and our ability to deliver this scope depends on this access being made available.

Note: BAT: British American Tobacco plc  
ITL: Imperial Tobacco Limited  
JTI: JT International SA  
PMI: Philip Morris International Management SA

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

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