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Glossary (1/2)

Average daily consumption	Daily average consumption by the population of the legal smoking age		
Bn	Billion		
C&C	Counterfeit and Contraband, including Illicit Whites		
Cigarette	Any factory-made product that contains tobacco and is intended to be burned under ordinary conditions of use		
Consumption	Actual total consumption of cigarettes in a market, including Legal Domestic Consumption (LDC) and illicit products as well as those legally purchased overseas		
Contraband	Genuine products that have been either bought in a low-tax country and which exceed legal border limits or acquired without taxes for export purposes to be illegally re-sold (for financial profit) in a higher priced market		
Counterfeit	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		
Country of origin	Country from which the packs collected are deemed to have originated. This is determined by either the tax stamp on the pack or in cases where the tax stamp is not shown, on the health warning and packaging characteristics		
Duty Free	Cigarettes bought without payment of customs or excise duties		
EPS	Empty pack survey		
EU	European Union		
EEU/Eurasian Economic Union	The Eurasian Economic Union is the trading block made up of the five countries within this study: the Republic Armenia, the Republic of Belarus, the Kyrgyz Republic, the Republic of Kazakhstan and the Russian Federation		
Eurasia Flows model	The primary methodology for measuring consumption in a market. The model has been developed by KPMG on a bespoke basis for the specific purpose of measuring inflows and outflows of cigarettes in the scope of this project		
Illicit Whites (IW)	Cigarettes that are usually manufactured legally in one country/market but which the evidence suggests have been smuggled across borders during their transit to the destination market under review where they have limited or no legal distribution and are sold without payment of tax		

Glossary (2/2)

Illicit Whites with no country- specific labelling	Packs of Illicit White cigarettes which have 'duty free' or no identifiable labelling on the packs	
IMS	In Market Sales (the primary source of legal domestic sales volumes)	
Inflows or Outflows	Inflows of non-domestic product into a market / outflows of product from a market	
LDC	Legal Domestic Consumption is defined as Legal Domestic Sales (LDS) net of outflows	
LDS	Legal Domestic Sales of genuine domestic product through legitimate, domestic channels based on In Market Sales (IMS) data	
Mn	Million	
ND	Non-Domestic product – product that originates from a different market than the one in which it is consumed	
ND(L)	Non-Domestic (Legal) – product that is brought into the market legally by consumers, such as during a cross-border trip	
Project SUN	A KPMG study of the illicit cigarette market in the European Union, Norway and Switzerland	
Smoking prevalence	The percentage of smokers in the total population of the legal smoking age	
Suspicious tax stamps	Cigarettes where further analysis has revealed that the packs may have been sold without the payment of tax, despite bearing domestic labelling	
тмо	Trademark owner	
Tobacco taxes	The sum of all types of taxes levied on tobacco products, including VAT. There are two bas methods of tobacco taxation: Normal or specific taxes are based on a set amount of tax per unit (e.g. cigarette); these taxes are differentiated according to the type of tobacco. Ad valorem taxes are assessed as a percentage mark up on a determined value, usually the retail selling price or a wholesale price and includes any value added tax	
Unspecified	Unspecified market variant refers to cigarette packs which do not bear specific market labelling or Duty Free labelling	











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Eurasian Economic Union Study **Executive Summary**

Key findings:

Illicit cigarette consumption has grown rapidly in the Eurasian Economic Union from 2015 to 2018



- Illicit cigarette consumption rose from 0.6% to 6.8% of total consumption in the past 4 years, representing over 20bn cigarettes in 2018⁽¹⁾
- Had these cigarettes been sold legally in 2018, an additional 68bn RUB would have been collected in taxes (VAT & Excise) across the Eurasian Economic Union in 2018, with 99% of the taxes lost from Russia(2)(a)
- A large proportion of the growth occurred in the Russian Federation, where non-domestic cigarette consumption increased from 0.7% to 8.7% of consumption, of which 90% was



Widening price differences between countries and free movement of goods and people are two possible drivers behind the growth in illicit cigarette consumption

- The price differences (in particular between Belarus and Russia) have increased by over 40%, making cigarettes from Belarus more affordable(c)
- In addition, the establishment of the EEU (in 2015) enabled free movement of goods and people, reducing customs inspections between countries and removing limits on goods imported for personal consumption
- The 8 billion Belarusian labelled cigarettes identified in Russia were not supported by the number of travellers buying for their own personal consumption, indicating that a high volume of cigarettes are contraband. Furthermore the seizures of millions of Belarusian labelled cigarettes in Russia indicated that these cigarettes are transported by criminal networks(3)



Distributors of illicit cigarettes have grown to exploit the price differences, reduced affordability and the lack of personal allowance guotas when travelling between EEU countries, especially from Belarus to Russia

- Belarus is the primary source of illicit cigarettes, with almost 8 billion of the 20 billion illicit cigarettes identified in this study coming from Belarusian trademark-owned manufacturers, whilst production capacity was reported at 29 billion cigarettes⁽⁴⁾ which is not supported by domestic consumption (estimated at 16 billion)
 - Belarusian labelled cigarettes were identified across Russia, indicating that they are being purchased by consumers who are not travelling across the Belarusian border
- In addition, 47% of C&C identified had no identifiable origin including counterfeit, illicit whites and cigarettes with suspicious Russian tax stamps, which have had no taxes paid in any jurisdiction. Some may be illegally manufactured inside Russia
- Illicit cigarette smuggling has been shown to help enable Organised Criminal Groups (OCGs), using similar networks to sell other products and its rapid growth in EEU is unlikely to be any different, as profits can be high whilst penalties remain low(5)

Note:

(a) Tax rates for EEU countries apart from Russia are calculated using WHO 2017 data and inflated to 2018 estimates according to 2014-2016 growth rates (b) Russian study includes additional data from a survey conducted in Dagestan (see methodology on page 42). This increases the overall percentage from the 8.4% reported in the EPS (c) For price information see page 10

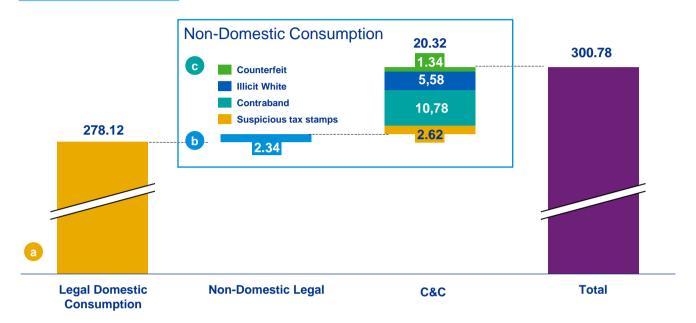
Sources:

(1) KPMG analysis; (2) Russia tax estimates supplied by PMI; (3) Sourced from the new report here: https://www.vesti.ru/video Euromonitor (5) Multiple sources refer to illicit tobacco and organised crime, including "The Link Between Illicit Tobacco Trade And Organised Crime"; Prof. Arndt Sinn, University of Osnabrück/ZEIS



Non-domestic cigarette consumption represented 7.5% of the total consumption

Manufactured cigarette consumption by type, 2018(1)



Throughout the report, our analysis has focussed on the following categories of cigarette consumption:

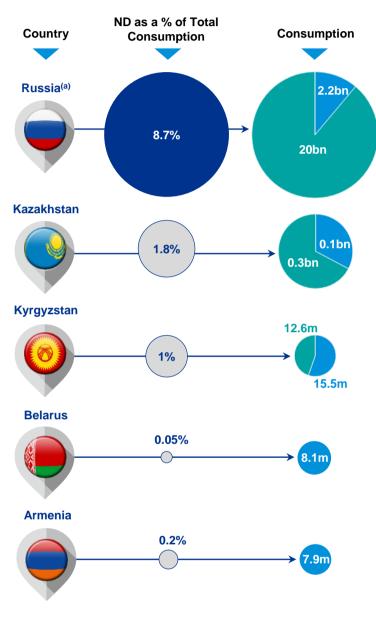
- a Legal domestic consumption
 - Cigarettes legally purchased and consumed within the country of study, based on In Market Sales data provided by the tobacco industry
- **b** Non-domestic legal (ND(L))
 - ND(L) represents cigarettes which are purchased in another country but legally consumed in the country of study, through cross-border or tourism purchases. This represents 0.8% of total consumption in the EEU
- c Illicit consumption divided into three components:
 - Illicit Whites: Cigarettes that are usually manufactured 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
 - Contraband (Other): Cigarettes where the tax was paid legally in one country, but the cigarettes were taken
 to another country and re-sold without any applicable tax, mainly when the excise tax regimes in the
 source country are lower than the destination country. Many of these cigarettes originated from an EEU
 country and whilst they were legally transported (due to no legal personal allowance limits) they were then
 re-sold illegally
 - Counterfeit: Cigarettes that deliberately copy a legally traded brand, deceiving consumers who believe that
 they are purchasing this brand. Counterfeit was only identified by participating trademark owners in the
 Empty Pack Survey
 - Russian suspicious tax stamps: Cigarettes where further analysis has revealed that the packs may have been sold without the payment of tax, despite bearing domestic labelling

Source: (1) KPMG Flows model



Russia had the highest non-domestic volumes and the highest incidence of illicit

EEU non-domestic consumption, 2018^{(1)(a)}



Key:

(ND as a % of Total Consumption)



- Non-Domestic Legal (ND(L))
- Counterfeit & Contraband (C&C)

Note: Size of pie chart indicates relative volume of non-domestic consumption

95% of non-domestic flows identified in the study were to Russia

- 90% of Russia's non-domestic flows were identified as C&C, representing over 20 billion cigarettes^(a)
- 33% of the C&C flows had no legally identifiable labelling or tax stamps, whilst 39% had Belarusian labelling, with a large proportion estimated to be illicit consumption as there was not enough travel between countries to support significant non-domestic legal flow
- Similarly the volume of flows from lowerpriced Kazakhstan into Russia was not supported by travel between each country

Kazakhstan experienced C&C flows from surrounding lower-priced countries

 67.3% of Kazakhstan's non-domestic flow was illicit, mainly from neighbouring countries where again, travel numbers did not support the volume of cigarettes identified in the country

The remaining countries in the EEU had less than 1% non-domestic consumption and limited C&C

- The low prices in Belarus, Kyrgyzstan and Armenia compared with other countries in the EEU, coupled with limited travel into and out of the countries help to explain the low levels of non-domestic consumption
 - The majority of non-domestic flows in these countries are assumed to be legal, as the source countries were mainly markets with higher prices and explained by travel flows

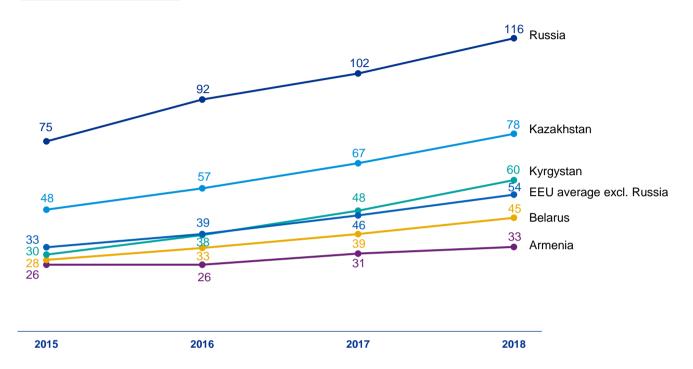
(a) Percentage includes Russian suspicious tax stamps – cigarettes which may have been manufactured in Russia but not part of the legal market

Source: (1) KPMG Flows model



Price gaps between the highest and lowest priced countries grew from 2015 to 2018

Nominal price per pack of most sold brands in RUB, 2015-2017^(a,1,2)



The five countries in the study experienced price increases of, on average, 50% between 2015 to 2018

- The price increases in Russia, predominantly through tax increases, have resulted in it being almost 50% more expensive than the next highest priced market (Kazakhstan) in the EEU
- The increasing price difference between Russia and Belarus demonstrates the incentive to smuggle cigarettes between each country
 - Price difference between Russia and Armenia almost doubled during the period
- In Russia, real disposable income per capita increased by 12.6% from 2010 to 2016 while real cigarette prices increased by 150%, making cigarettes less affordable(1) and incentivising illicit consumption



(a) For all countries apart from Russia, the 2014 RUB price was used as the base with price inflation as per the CAGR in the countries' domestic currencies

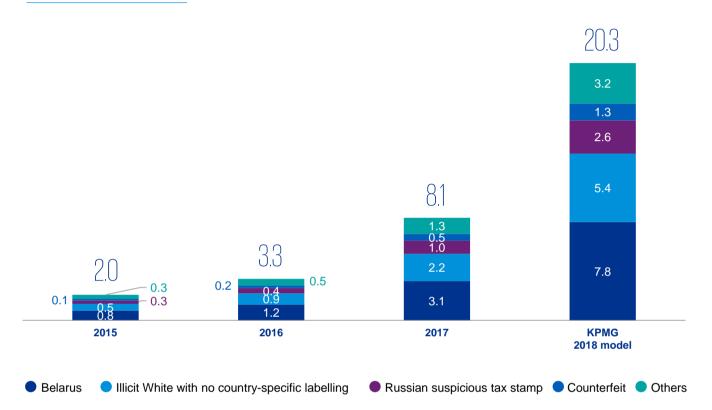
Sources: (1) WHO 2017 for all countries excluding Russia; (2) PMI for Russia

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Whilst Belarus was the largest C&C source country, there were many others

Source countries of illicit cigarette consumption, 2015-2018^(1,2,a,b)



Flows from Belarus represented 38% of total illicit flows

- Illicit flows from Belarus totalled 7.8 billion (growing by 77% from 2017), split between flows identified with Belarusian labelling and those with no country-specific labelling, but where the brand was trademark-owned by a Belarussian manufacturer(c)
- The second largest illicit flow was from Illicit Whites with no country-specific labelling. These products came from trademark owners with no specific country of origin and were not sold legally in any capacity. Some are misleadingly labelled with Duty Free labelling, but are not legally sold in any Duty Free shops
- The third largest illicit flow came from brands with Russian labelling but suspicious tax stamps. Analysis of the trademark owners suggests that approximately 14% of these may originate from Bulgaria, 13% from within Russia and the remainder was of unidentified origin(2)

Sources: (1) KPMG Flows model; (2) Empty Pack Survey, 2015-18

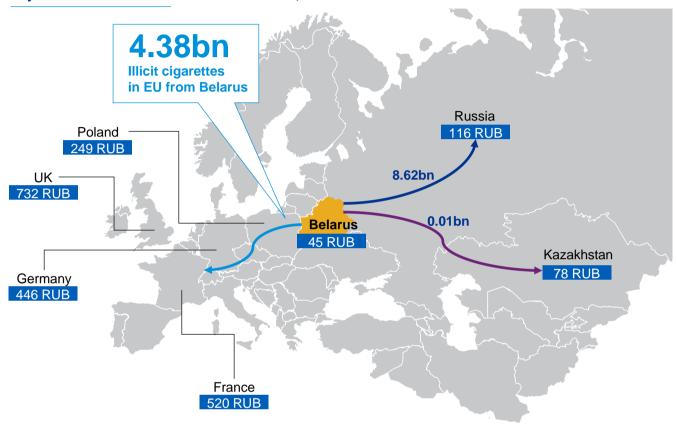


Russian and Kazakhstan data from historical EPS was used to analyse non-domestic flows. Data from 2018 is used to calculate proportions for non-domestic volumes for Notes: Armenia, Belarus and Kyrgyzstan due to unavailability of historical data; (b) 2018 illicit and country of origin proportions have been applied across prior years for apportionment; (c) Any non-country labelled cigarette brands may be counterfeit; Belarus LDS has been used as reported for historical years whereas it has been calculated separately for 2018 as evident on page 29

Belarus is a major source of illicit cigarette consumption for both the EEU and the EU

Methodology

Key outflows from Belarus to other countries, 2018^{(1)(a)}



The large flows from Belarus to other countries are explained by its estimated production capacity which exceeds its local consumption demand by more than est. 100%

- Cigarettes in Belarus are some of the lowest-priced in both the European Union and the Eurasian Economic Union
- Output capacity is estimated at approximately 40 billion cigarettes, based on the country's investment in manufacturing machinery(b)
- KPMG's analysis of flows from Belarus to the EEU and the EU indicates a total outflow of 13 billion, whilst consumption in Belarus is estimated at 16 billion cigarettes, which is also the remainder of Belarus' reported production quota(2)(c)
- Whilst outflows from Belarus to the EU have fallen from 7.7bn sticks in 2014 to 4.4bn in 2017, the production capacity appears to have increased and volumes identified in Russia have grown. Whilst there have been additional law enforcement measures put in place to prevent flows to the EU, the free trade arrangement between EEU countries means that unlimited quantities of cigarettes can cross borders without any customs checks
- Belarusian factories also have an output quota, which in 2017 was 29 billion sticks⁽²⁾ however this does not appear to include any production which had no country-specific labelling and was identified outside of Belarus, including 2bn cigarettes with no country-specific labelling that was trademark-owned by Belarusian producers(d)

(a) Flows from Project Sun 2017 have used to illustrate Belarus to EU flows

(b) Belarusian production line information available on tabak.by, 40bn estimate is based upon each line producing 2.5bn sticks per annum

(c) See methodology on page 44

(d) As the producers did not take part in the survey, they have not analysed their packs to determine if such products were counterfeit or not

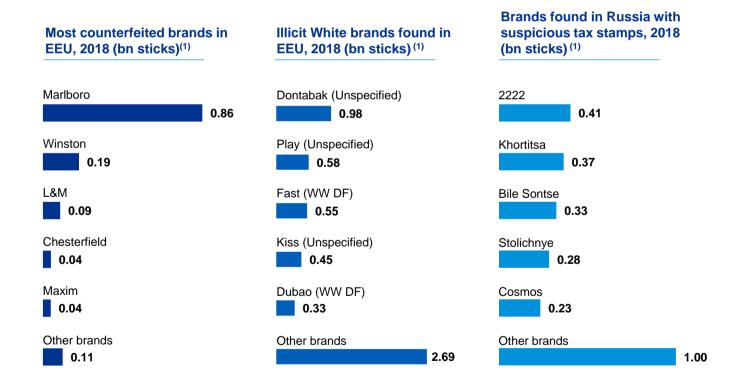
(1) KPMG Flows Model: (2) Euromonitor



47% of illicit cigarette consumption had no identifiable country of origin

Some packs identified in the survey had no country-specific labelling, contained suspicious tax stamps or appeared counterfeit, meaning that these brands are unlikely to have been purchased legally in any country. The main types of cigarettes identified were:

- Illicit Whites (5.58bn): Cigarettes legally manufactured in one country with no legal distribution in destination country and are sold without payment of tax
 - Although 67 different brands of Illicit Whites were identified, 52% of total Illicit White flows were made up of the top 5 brands
 - The main Illicit Whites destination country is Russia although some were also identified in Kyrgyzstan and Kazakhstan
- Russian suspicious tax stamps (2.62bn): packs with Russian labelling, but where the tax stamp on the pack is either missing or appears to have been copied
 - 0.37 billion were suspected to come from Bulgarian trademark owners, 0.34 billion from within Russia with the remaining 1.91 billion from unidentified trade mark owners
- Counterfeit (1.34bn): Cigarettes illegally manufactured and sold by a party other than the original TMO
 - Only found in Russia (1.31 billion) and Kazakhstan (0.02 billion)
 - Of 1.3 billion counterfeit sticks, 62% had Duty Free labelling

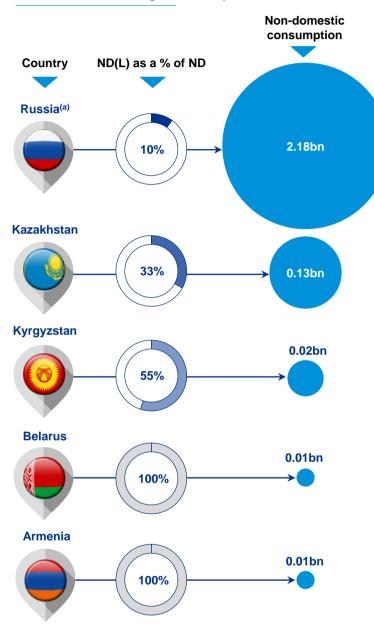


Source: (1) KPMG Flows model



ND(L) represents 10% of total non-domestic consumption across the region

EEU non-domestic legal consumption, 2018⁽¹⁾



Key:

(ND(L) as a percentage of ND)

>0%	>2%	>4%	>6%	>8%
Country	ND(L) total	Non-EEU	EEU border	EEU non-border
Armenia	0.008	0.003	0.000	0.005
Belarus	0.008	0.002	0.002	0.004
Kazakhstan	0.127	0.026	0.026	0.075
Kyrgyzstan	0.016	0.010	0.002	0.003
Russia	2.181	0.926	0.931	0.324
Total	2.340	0.968	0.961	0.411

ND(L) can be split into 3 categories

- Non-EEU: Legal flows of non-domestic cigarettes which originate outside of the EEU
 - Flows where smokers purchase cigarettes when travelling outside of the EEU up to their legal allowance. In many cases, these may be flows from inbound tourists as well, given that the prices are often higher
 - Cigarettes arriving from higher priced countries such as Germany or Sweden are considered legal as there is no price incentive to transport above the legal allowance. For example, the ND(L) flow from Germany and Sweden to Russia, both estimated at 13.5m in 2018, were treated as completely legal
- EEU border: Legal flows of non-domestic cigarettes travelling across EEU borders
 - Within the Eurasian Economic Union, to account for the free movement of goods, a border analysis was undertaken that considered the populations living within 50km of EEU land borders
 - This analysis saw the largest flows between the Russian–Kazakh and Russian–Belarusian borders, with 0.7bn sticks coming from Belarus and 0.3bn from Kazakhstan
- EEU non-border: Legal flows of ND sticks originating within the EEU found far from borders
 - For EEU non-borders, the amount of ND(L) was estimated based on the proportion of travel undertaken by aeroplane. Here it is assumed that each smoker travelling to lower-priced countries will bring back 400 cigarettes⁽²⁾. The remaining flow from each of these countries is treated as illicit consumption

Sources: (1) KPMG Flows model; (2) Tobacco industry interviews



Regulatory drivers which may restrict illicit cigarette consumption (1/2)

The EEU is implementing and seeking to implement several new regulations relating to the movement and distribution of tobacco products, intended to help lower illicit cigarette consumption across the EEU



Eurasian Economic Community (EEC) agreement on the 'identification of goods' -2nd February 2018⁽¹⁾



Eurasian Union member states signed an agreement in Almaty on regulations involving the marking and identification of goods within the union, in effect implementing track and trace of products

- This will enable member states to implement regulations which follow Framework Convention for Tobacco Control (FCTC), resulting in the tracking of tobacco products throughout the supply chain, with the aim of making it harder for products to be diverted from one country to another
- The Council of the Eurasian Economic Commission will maintain a unified register and determine the means of identification, information required, format and composition of labelling
- The marking of goods will be introduced by the decision of the EEU Council based on proposals by Eurasian Union member states, each state can apply the marking in accordance to it's own national legislation



Russian Government Decree on Labelling of Tobacco Products – 28th Feb 2019 (Decree #224)(2)



Regulations were published for the mandatory labelling and identification of tobacco products and the implementation of data and monitoring systems, again replicating part of FCTC but in Russia rather than across the Eurasian Economic Union. The intention of this legislation is to help prevent any diversion of products by manufacturers or distributors without the payment

- The rules state that manufacturers and importers of tobacco products have to ensure a means of identification on the packaging of cigarettes, such that any movement of cigarettes must be recorded into a centralised monitoring system through reading a unique
- Participants in the manufacturing and distribution are to register with the monitory information system by June 30th 2019

Sources: (1) EEC legal portal, EAEC agreement February 2, 2018 "Agreement on the marking of goods by means of identification in the Eurasian Economic Union"

Government of the Russian Federation Decree, February 28, 2019 #224 "On Approval of Regulations For Labelling of Tobacco Products by Identification Means and On Specifics of the Implementation of the State Information System for Monitoring the Circulation of Goods Subject to Mandatory Labelling with Means of Identification, in Relation to Tobacco Products'



Regulatory drivers which may restrict illicit cigarette consumption (2/2)

The EEU is implementing and seeking to implement several new regulations relating to the movement and distribution of tobacco products, intended to help lower illicit cigarette consumption across the EEU



EEC draft agreement on excise tax harmonisation on tobacco and alcohol(1)



The EEC issued two separate draft agreements on the 28th November 2018 which still requires in-country approval, the objective being to create a tax system for cigarettes and alcohol which ensures that prices across the EEU are similar, to prevent the incentive to smuggle goods from one EEU member state to another

- Member states set individual rates in their national currency and converted into Euro rates to control for currency fluctuations
- The parties must agree the harmonisation measures by 2022 to start in 2024
- The formula for the tobacco agreement is intended to be 35 euros per 1,000 cigarettes for excise tax, although member states may diverge by 20% on this rate



Related laws within the EEU, intended to limit movement and supply of products and which could serve as a model across the EEU more widely(2)(3)(4)



Administrative Code of the Russian Federation "Illegal movement of alcoholic beverages by individuals" and "Turnover of alcoholic or tobacco products without marking." Criminal Code of the Russian Federation "Prohibits turnover of alcohol or cigarettes products without Russian excise stamps"

Limits the production, supply and purchase of alcohol on amounts exceeding personal consumption quotas. Applies marking laws for alcohol and tobacco products in Russia as well as mandatory excise tax stamps

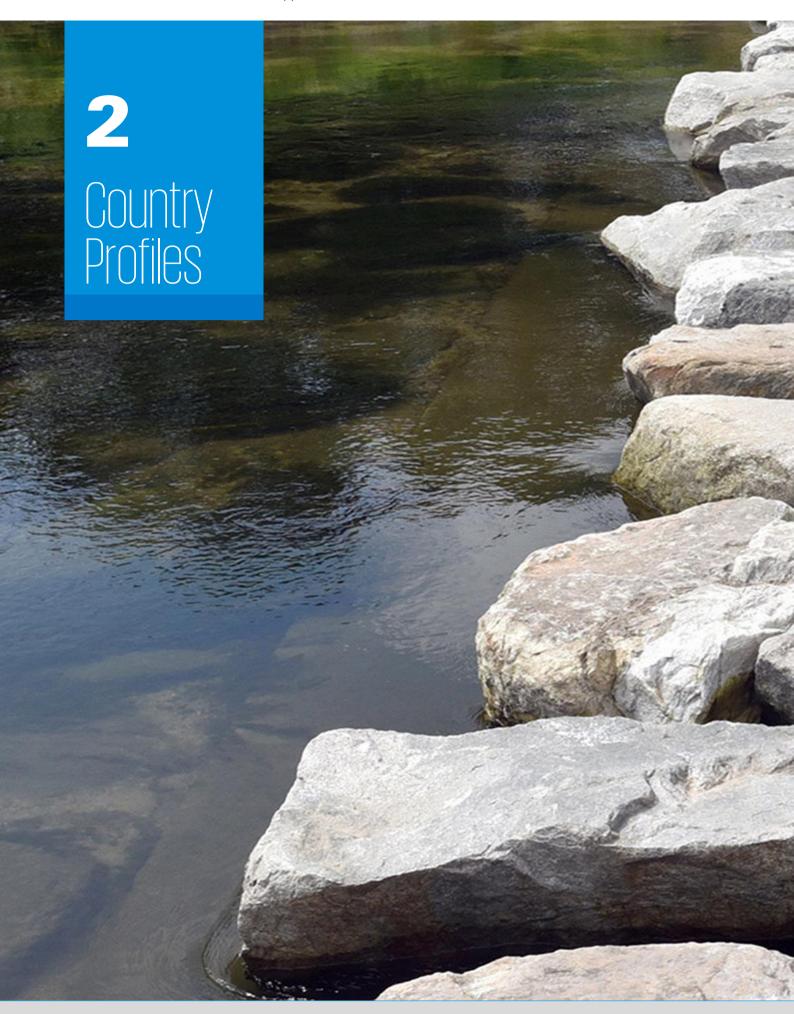
Administrative Code of the Republic of Belarus "Illegal movement, storage of tobacco products and alcoholic beverages, production, processing and storage"

Individuals with more than 200 cigarettes, 50 cigars, 250g of tobacco or other tobacco products not legally marked with excise stamps of the Republic of Belarus without documents confirming legality are legible to be fined

Sources: (1) Order of the Board of the Eurasian Economic Commission of November 28, 2018 N 184 "On draft agreements on the principles of tax policy excise duties on alcohol and

- (2) Code of Administrative Offences of the Russian Federation. Articles 14.17: 'Unlawful Production, Supply or Purchase of Ethyl Alcohol'. 15.12 "Turnover of alcohol or tobacco products without marking.." WIPO 2019
- Criminal Code of the Russian Federation. Articles 171.1: "Turnover of alcohol or tobacco products without Russian excise tax stamps.." WIPO 2019
- Code of Administrative Offences of the Republic of Belarus. Articles 12.27: 'Illegal movement, storage of tobacco and alcohol beverages, production, processing, storage...'. WIPO 2019



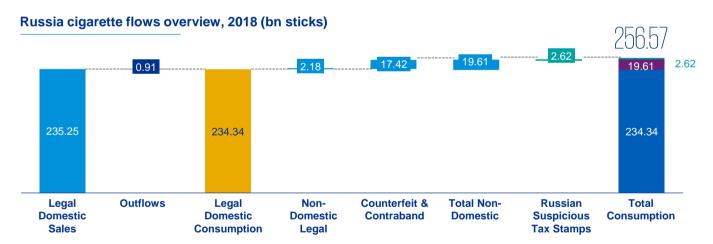






COUNTRY PROFILES

Cigarette consumption, inflows and outflows



- In 2018, almost 8.7% of cigarettes in Russia had not been sold through Russian legal channels over 90% of these were identified as illicit
- The largest flow was from Belarus which as an EEU country had no personal allowance restrictions, meaning that unlimited amounts of cigarettes could be transported across the border
- Cigarettes with fraudulent or suspicious tax stamps were also not sold legally in Russia, but may have been manufactured outside of Russia and therefore pose a similar threat as illicit whites

Sources: KPMG Flows model



Country profiles Methodology **Executive summary**



Cigarette consumption, inflows and outflows (cont.)

ND Inflows to Russia, 2018

ND Inflows to Russia		
bn sticks		2018
Belarus	Some Illicit	8.614
Illicit White with no country-specific labelling	White brands	5.307
Russian suspicious tax stamp	identified also had Duty Free	2.620
Counterfeit	labelling (see	1.314
Kyrgyzstan	methodology	1.112
Others	on page 39)	3.259
Total Inflows		22.225

Outflows from Russia, 2018

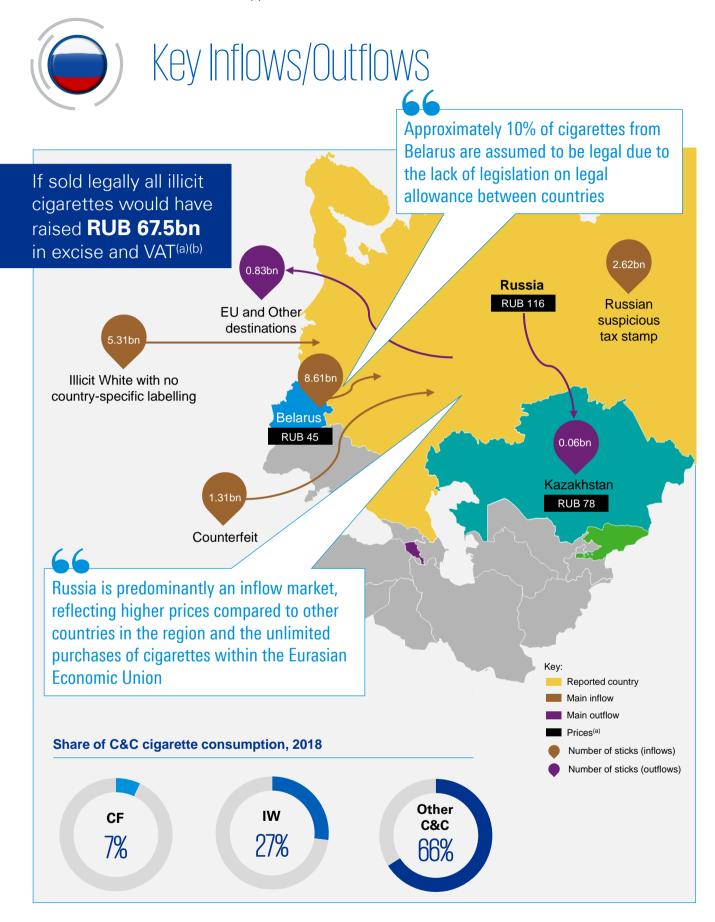
Outflows from Russia	
bn sticks	2018
Kazakhstan	0.062
Belarus	0.006
Armenia	0.005
Kyrgyzstan	0.003
Kyrgyzstan Others ^(a,b)	0.831
Total Outflows	0.907

Others include outflows to 28 European Union countries, Switzerland and Norway; (b) Project Sun's model has been used to calculate outflows from Russia; Outflows from 2017 have been used for 2018 calculations

Project SUN results, 2015-17, KPMG







(a) For all countries apart from Russia, the 2014 RUB price was used as the base with price inflation as per the CAGR in the countries' domestic currencies Notes:

(b) Russia tax rates supplied by PMI

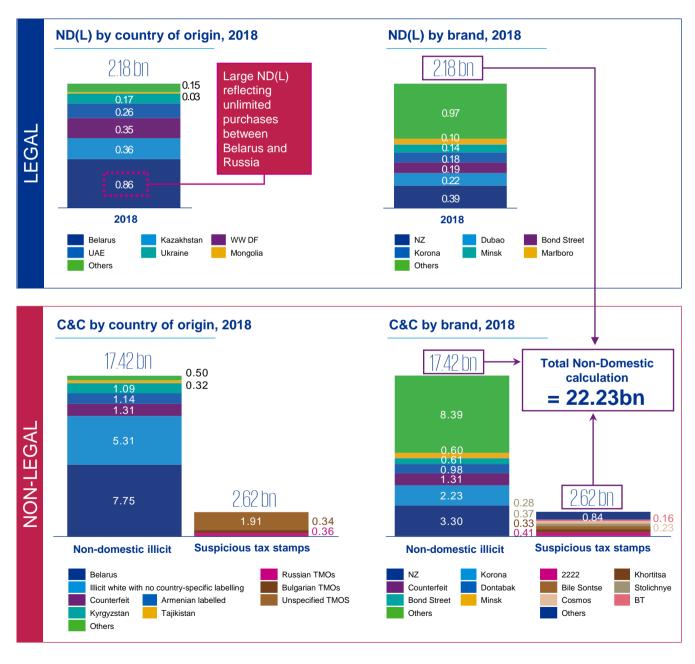
Sources: (1) KPMG Flows model; (2) WHO 2017 for all countries excluding Russia; (3) PMI for Russia





ND(L) and C&C flows

- Belarusian labelled cigarettes accounted for 39% of non-domestic Russian consumption
 - Of the ND(L) flows from Belarus, almost 76% were consumed within border regions, reflecting the unlimited personal allowances that allows quantities of cigarettes in excess of the number of consumers to cross the
 - These cigarettes become illicit when they are re-sold in Russia, such as those identified away from the Belarus border
- Russian products with suspicious tax stamps comprised 13% of illicit flows, with key brands being 2222, Khortitsa, Bile Sontse, Stolichnye and Cosmos



Source: (1) KPMG Flows model



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Executive summary

Country profiles

Methodology



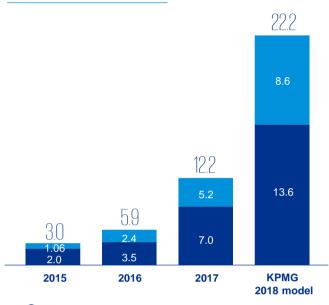
Domestic vs. non-domestic consumption over time

Total manufactured cigarettes (bn sticks), 2015-18^(a)



- Domestic
- Non-domestic including Russian suspicious tax stamps

Non-domestic manufactured cigarettes (bn sticks), 2015-18^(a)

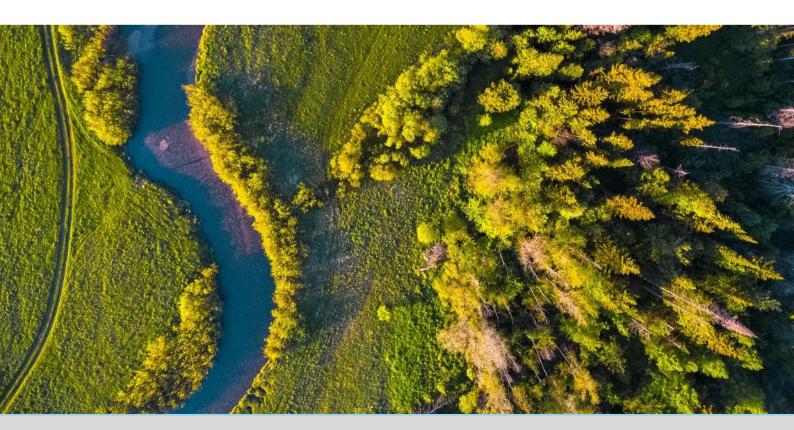


- Flows from Belarus
- Flows from other countries including Russian suspicious tax stamps

Note: (a) Proportions from historical EPSs have been used to calculated the volumes for 2015, 2016 and 2017

Sources: (1) KPMG Flows model

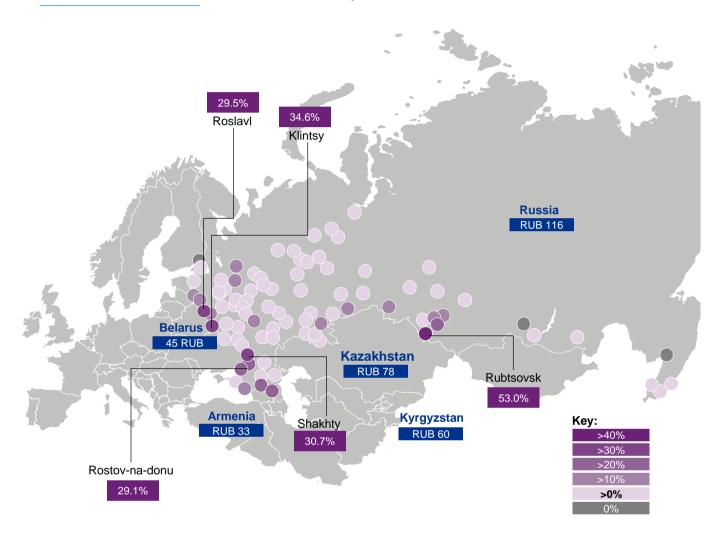
(2) Empty Pack Survey, 2015-18







Counterfeit and contraband as % of total consumption in Russian cities, 2018^{(1)(a)}



- Whilst illicit cigarette consumption was identified across Russia, it does appear that a large amount of consumption takes place closer to the border of lower-priced countries, especially Belarus and Kazakhstan
 - Here cigarettes can be taken across the border in unlimited quantities and then either consumed legally or re-sold illegally

Percentage was determined by calculating the non-domestic percentage in each city based on the EPS before multiplying by the overall Russian Note: percentage of C&C

(1) KPMG analysis Source:



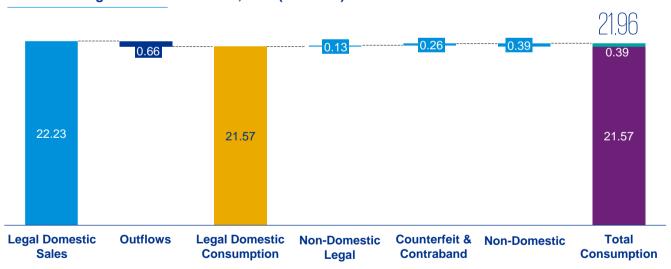


COUNTRY PROFILES

Cigarette consumption, inflows and outflows

Kazakhstan cigarette flows overview, 2018 (bn sticks)

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- The largest flows into Kazakhstan were from Tajikistan most of the flow was illicit due to limited movement of people between countries
- Approximately 44% of Kazakh outflows to Russia were ND(L) due to near-border consumption and unlimited purchasing limits

Sources: KPMG Flows model



Country profiles Methodology **Executive summary**



Cigarette consumption, inflows and outflows (cont.)

ND Inflows to Kazakhstan, 2018

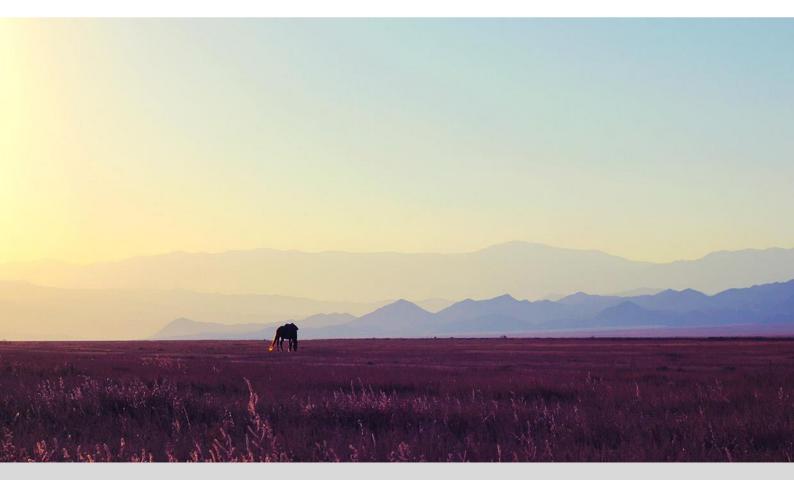
ND Inflows to Russia	
bn sticks	2018
Tajikistan	0.110
Illicit White with no country-specific labelling	0.099
Russia	0.062
WW DF	0.037
Kyrgyzstan	0.037
Others	0.044
Total Inflows	0.388

Outflows from Kazakhstan, 2018

Outflows from Russia		
bn sticks	2018	
Russia	0.630	
Kyrgyzstan	0.004	
Others ^(a,b)	0.028	
Total Outflows	0.661	

Others include outflows to 28 European Union countries, Switzerland and Norway; (b) Project Sun's model has been used to calculate outflows from Notes: Kazakhstan; Outflows from 2017 have been used for 2018 calculations

Project SUN results, 2015-17, KPMG







Key Inflows/Outflows



(a) For all countries apart from Russia, the 2014 RUB price was used as the base with price inflation as per the CAGR in the countries' domestic currencies

(b) Tax rates for EEU countries apart from Russia are calculated using WHO 2017 data and inflated to 2018 estimates according to 2014-2016 growth rates

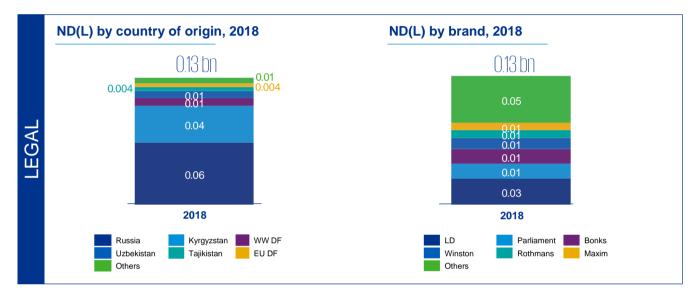
Sources: (1) KPMG Flows model; (2) WHO 2017 for all countries excluding Russia; (3) PMI for Russia

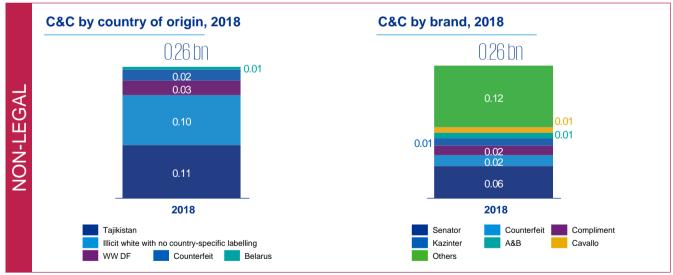




ND(L) and C&C flows

- In 2018, within Kazakhstan, Tajikistan was the primary source country for non-domestic consumption, with 97% of the flow being illicit and the remainder justified by the number of people crossing the border
 - Of the products identified with Tajikistan labelling, 60% were the brand Senator
- Packs identified as illicit whites with no country-specific labelling contributed 26% of non-domestic consumption with the main brands being Compliment, A&B, Cavallo, Fast and Oscar





Source: (1) KPMG Flows model



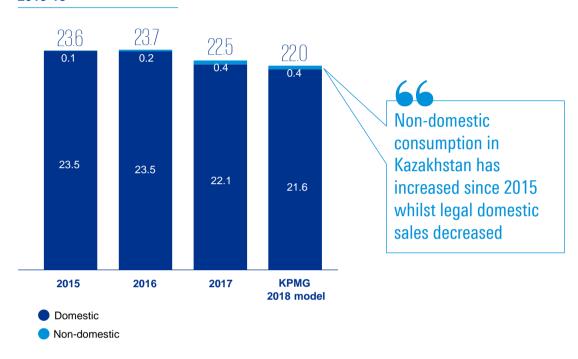
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Executive summary Country profiles Methodology



Domestic vs. non-domestic consumption over time

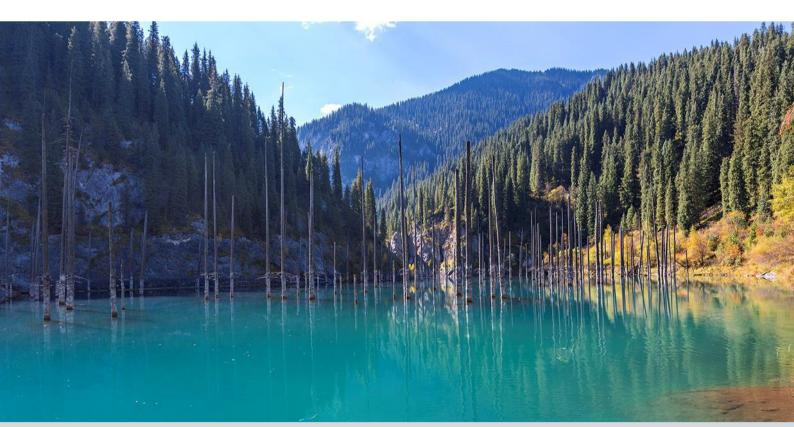
Kazakhstan, Total manufactured cigarettes (bn sticks), 2015-18^(a,b)



Note: (a) Proportions from historical EPSs have been used to calculated the volumes for 2015, 2016 and 2017

Sources: (1) KPMG Flows model

(2) Empty Pack Survey, 2015-18



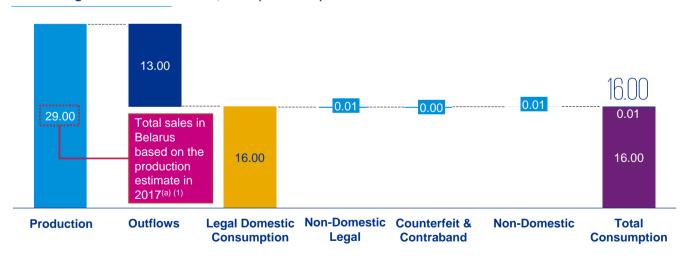




COUNTRY PROFILES

Cigarette consumption, inflows and outflows

Belarus cigarette flows overview, 2018 (bn sticks)



- Belarus is a major outflow country, with 45% of its domestic sales appearing to leave the country, with approximately
 two thirds of these to Russia and one third to the European Union
- The Legal Domestic Consumption estimate has been calculated using the Belarus production quota and outflows and triangulated based on consumption estimates in Belarus^{(1)(2)(a)}
- No official export data was available for Belarus

(a) See Methodology on page 38 for detail; (b) Others include outflows to 28 European Union countries, Switzerland and Norway

Sources: (1) Euromonitor; (2) KPMG Flows model;



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Cigarette consumption, inflows and outflows (cont.)

ND Inflows to Belarus, 2018

ND Inflows to Belarus	
bn sticks	2018
Russia	0.006
Ukraine	0.002
Total Inflows	0.008

Outflows from Belarus, 2018

Outflows from Belarus		
bn sticks	2018	
Russia	8.614	
Kazakhstan	0.007	
Others ^{(1)(a,b)}	4.379	
Total Outflows	13.001	

(a) Others include outflows to 28 European Union countries, Switzerland and Norway; (b) Project Sun's model has been used to calculate outflows from Kazakhstan; Outflows from 2017 have been used for 2018 calculations

Sources: (1) Project SUN results, 2015-17, KPMG







Key Inflows/Outflows



(a) For all countries apart from Russia, the 2014 RUB price was used as the base with price inflation as per the CAGR in the countries' domestic currencies

Sources: (1) KPMG Flows model; (2) WHO 2017 for all countries excluding Russia; (3) PMI for Russia

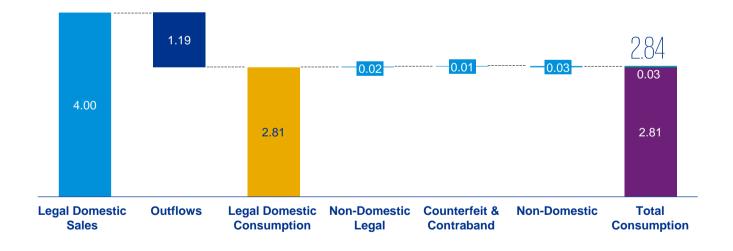




COUNTRY PROFILES

Cigarette consumption, inflows and outflows

Kyrgyzstan cigarette flows overview, 2018 (bn sticks)



- Given Kyrgyzstan's position as a lower-priced country for cigarettes and with minimal travel in and out of the country, very few non-domestic cigarettes were identified
- Approximately 30% of the cigarettes legally sold in Kyrgyzstan were identified in other countries, especially Russia



Executive summary Country profiles Methodology



Cigarette consumption, inflows and outflows (cont.)

ND Inflows to Kyrgyzstan, 2018

ND Inflows to Kyrgyzstan	
bn sticks	2018
Tajikistan	0.012
Illicit White with no country-specific labelling	0.004
Kazakhstan	0.004
Russia	0.003
WW DF	0.002
Others	0.003
Total Inflows	0.028

Outflows from Kyrgyzstan, 2018

Outflows from Kyrgyzstan	
bn sticks	2018
Russia	1.112
Kazakhstan	0.037
Others ^(a,b)	0.039
Total Outflows	1.188

Notes: (a) Others include outflows to 28 European Union countries, Switzerland and Norway; (b) Project Sun's model has been used to calculate outflows from Kazakhstan; Outflows from 2017 have been used for 2018 calculations

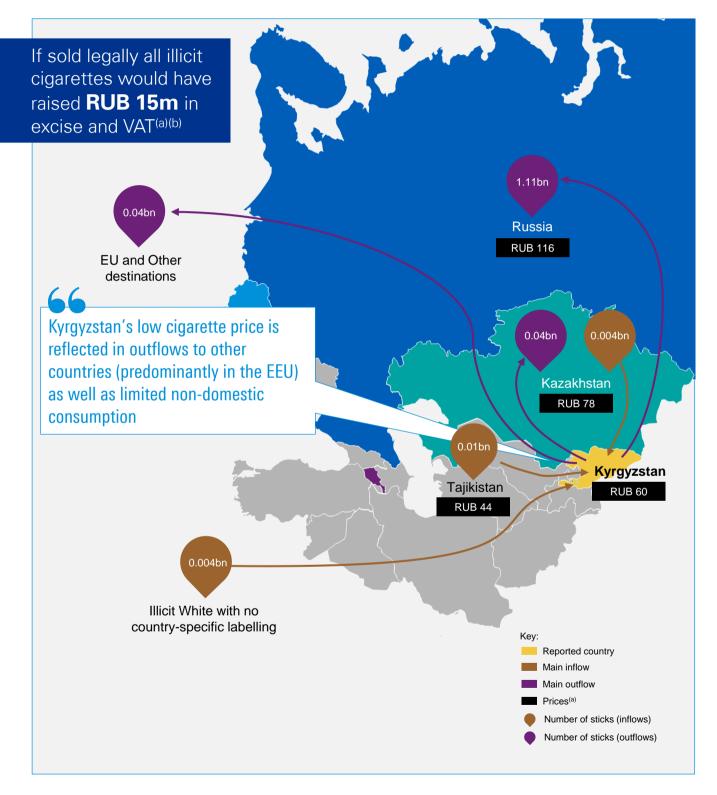
Sources: (1) KPMG Flows model; (2) Project SUN results, 2015-17, KPMG







Key Inflows/Outflows



(a) For all countries apart from Russia, the 2014 RUB price was used as the base with price inflation as per the CAGR in the countries' domestic currencies

(b) Tax rates for EEU countries apart from Russia are calculated using WHO 2017 data and inflated to 2018 estimates according to 2014-2016 growth rates

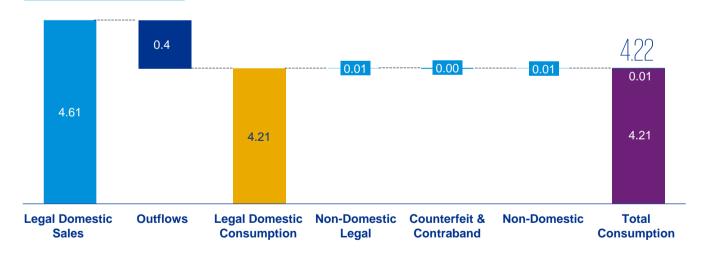
Sources: (1) KPMG Flows model; (2) WHO 2017 for all countries excluding Russia; (3) PMI for Russia





Cigarette consumption, inflows and outflows

Armenia cigarette flows overview, 2018 (bn sticks)



Armenia experienced low levels of non-domestic consumption in 2018

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- All non-domestic consumption was legal as the flows came from higher priced countries of Russia and Georgia and are explained by travel flows
- Outflows reflect the large Armenian migrant population, predominantly in Russia^{(1)(a)}

About 0.8bn Armenian flows were identified in Russia but were not legally sold in Armenia. Therefore, we have reduced the outflows model estimate by the same amount Notes: leading to outflows of 0.4bn in total, which also corresponds with estimated consumption in Armenia of 4.2 billion cigarettes

Armstat, Migration figures, 2018



Country profiles Methodology **Executive summary**



Cigarette consumption, inflows and outflows (cont.)

ND Inflows to Armenia, 2018

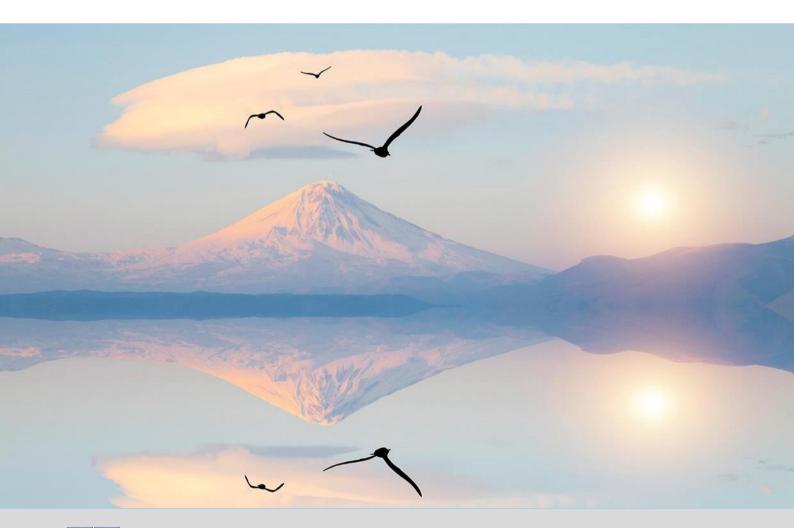
ND Inflows to Armenia	
bn sticks	2018
Russia	0.005
Georgia	0.003
Total Inflows	0.008

Outflows from Armenia, 2018

Outflows from Armenia	
bn sticks	2018
Russia	0.340
Others ^(a,b)	0.060
Total Outflows	0.400

Others include outflows to 28 European Union countries, Switzerland and Norway; (b) Project Sun's model has been used to calculate outflows from Kazakhstan; Outflows from 2017 have been used for 2018 calculations

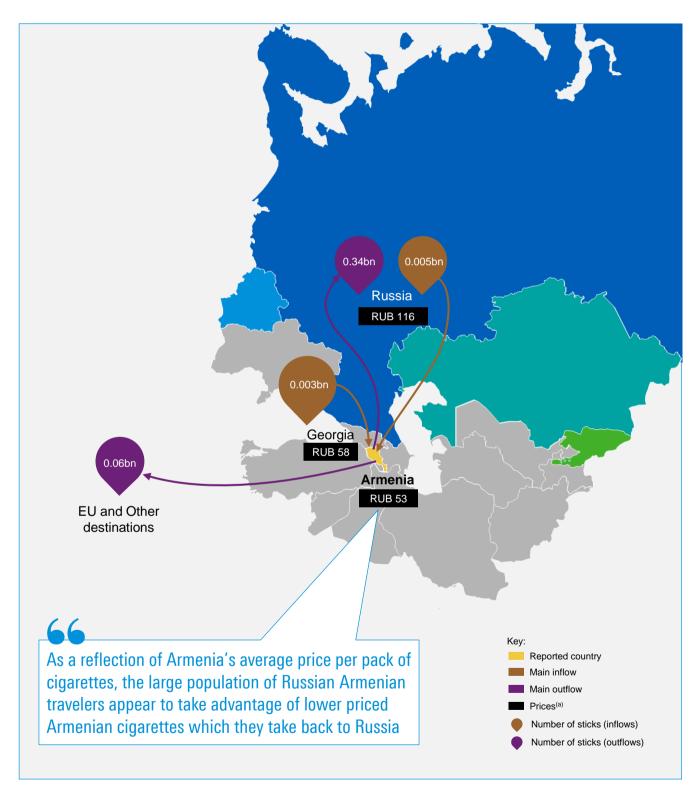
Sources: (1) KPMG Flows model; (2) Project SUN results, 2015-17, KPMG







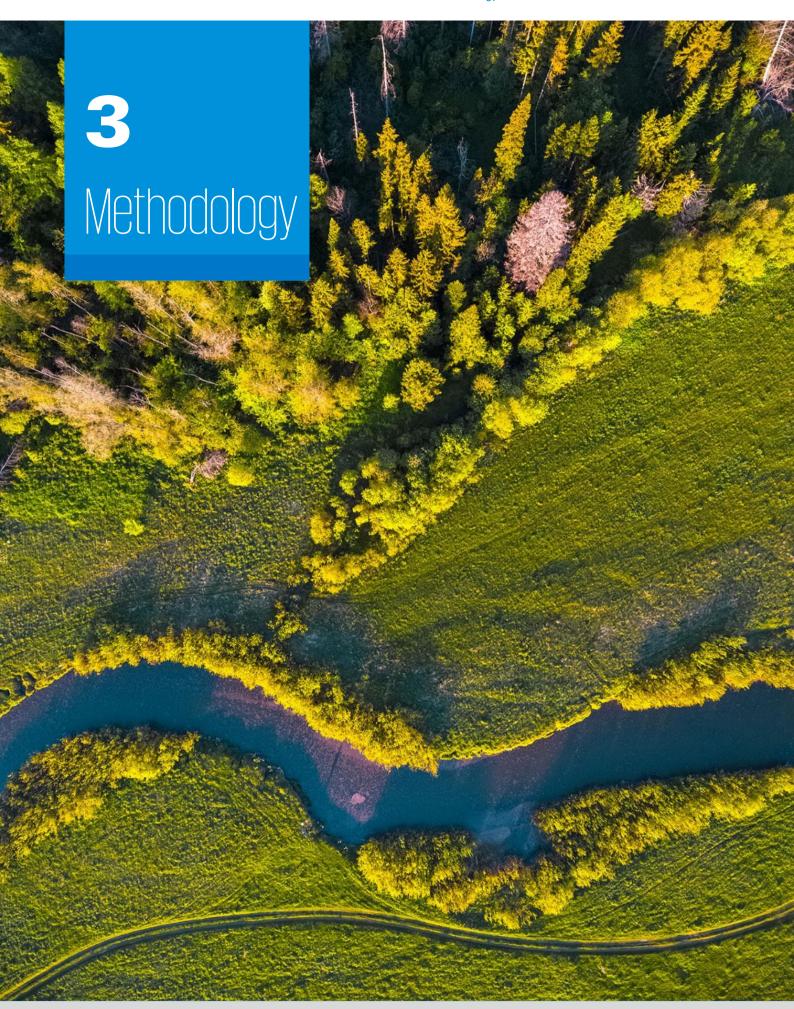
Key Inflows/Outflows



Note: For all countries apart from Russia, the 2014 RUB price was used as the base with price inflation as per the CAGR in the countries' domestic currencies (2) Total flow from Armenia to Russia does not include the Armenian-labelled cigarettes which do not appear in Armenia's legal domestic sales information – this flow equates to a further 0.8

Sources: (1) KPMG Flows model; (2) WHO 2017 for all countries excluding Russia;

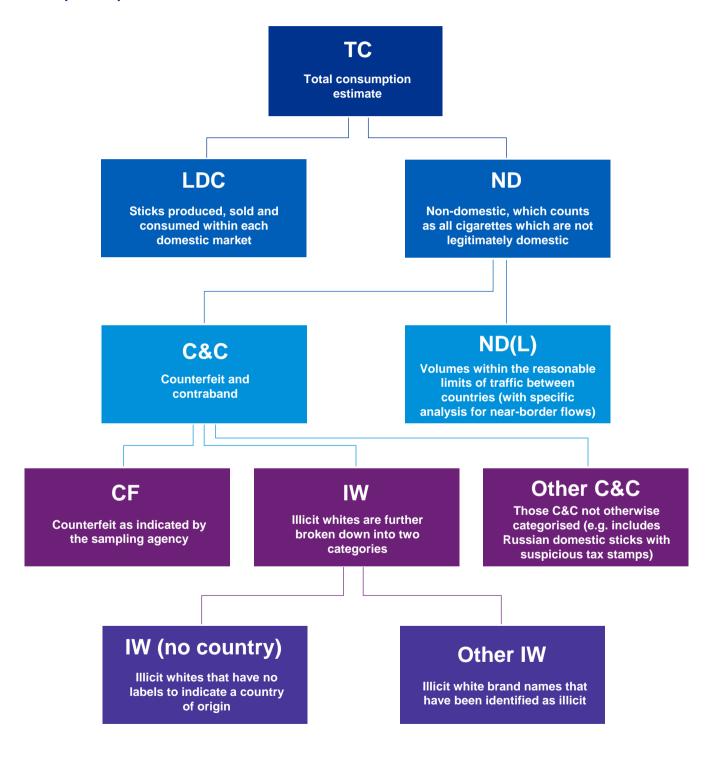






Cigarette consumption categorisation methodology and approach

The diagram below illustrates the various types of consumption that constitute total consumption for a study country





Eurasia methodology overview (1/2)

We have developed a methodology for quantifying C&C incidence across the EEU countries ("Eurasian Economic Union")

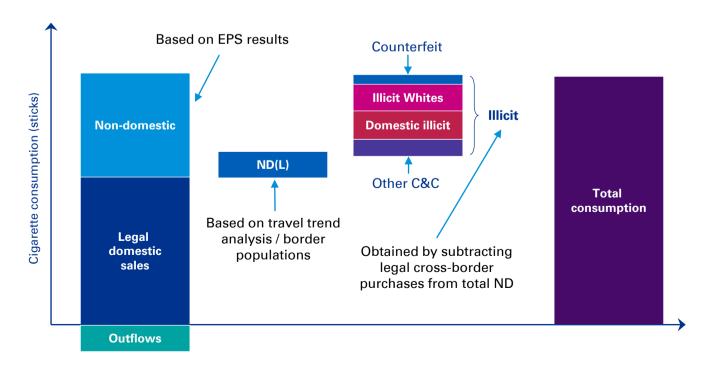
The methodology has been applied to multiple projects and refined to ensure that it delivers robust and explainable results

- Our approach integrates multiple sources and custom-built analytical tools. It is based on the approach used successfully since 2006 on Project Star/SUN to assess C&C consumption across the EU markets
- Due to intra-EEU trading arrangements, an alternative methodology has been developed to understand C&C consumption in Russia, Kazakhstan, Belarus, Armenia and Kyrgyzstan originating from within the bloc

The methodology is based primarily on objective evidence from legal domestic sales (LDS) and empty pack survey (EPS) results, which are inputted into a bespoke model The KPMG Flows Model is a dynamic, iterative model that is based on LDS and EPS results, and is used to estimate the overall volume of manufactured cigarette consumption

- The KPMG Flows Model has been developed by KPMG to measure inflows and outflows of cigarettes between the 5 Eurasian markets included in this study. It is an iterative data driven model that uses LDS and EPS results which estimates a defined quantity of domestic and non-domestic cigarettes by country of origin and brand
- LDS are the starting point of the methodology, from which outflows of legal sales to other countries are then subtracted to determine legal domestic consumption
- Non-domestic inflows from other countries are then added in to give an estimate for the total consumption within a market
- Inflows are split into non-domestic legal and illicit consumption based on where the cigarettes have originated and travel trend analysis
- Illicit consumption is split into component parts based on the packs identified in the FPS

Project Eurasia uses LDS, EPS results and travel research to quantify the volume of C&C sticks consumed in each country of study





Eurasia methodology overview (2/2)

EPS results provide a robust indication of the incidence of nondomestic and counterfeit packs and country of origin

EPS relies purely on physical evidence, avoiding the variability of consumer bias found in interview-based methods

- EPSs were conducted for all 5 markets included in this report during the period of study
- The EPSs were conducted by independent market research agencies on a consistent basis across these 5 markets, allowing for direct comparison of data and the identification of inflows and outflows between the countries analysed
- 30,000 packs were collected in 2018 as part of this research

Travel and tourism trends are used to quantify the volume of legal non-domestic cigarette purchases

Travel and tourism data provided by publicly-available third-party sources are used to estimate genuine, legal non-domestic tobacco purchases in each market based on inbound visit inflows

- World Tourism Organisation⁽¹⁾ data is the main source used to determine travel flows
- The quantum of cigarettes purchased is calculated assuming that travellers who smoke (as defined by the national smoking prevalence) will purchase their legal allowance, where the price in the country is lower
- Where flows enter a country from a higher priced country, they are assumed to all be legal. The price of the most popular brand in each market was used to undertake that analysis
- The remaining non-domestic cigarettes are contraband and make up the total volume of C&C along with the identified counterfeit

There are some specific limitations in the Project Eurasia methodology

Given the innate complexity of measuring C&C, we recognise there are some limitations within the methodology

- There are two types of limitations: scope exclusions and source limitations
 - Scope exclusions include areas which cannot be or have not been accounted for in our scope of work and approach, such as geographic, unidentifiable brands and Other Tobacco Products
 - Within the EEU there is no specific regulation defining the limits of personal consumption allowable for transportation between EEU countries. These flows are only considered contraband when they are re-sold in another jurisdiction. It is not possible to tell by looking at the pack whether it was re-sold or not. In this case, travel trends and assumptions based on consumption close to the border are used
 - Source limitations are determined by the lack of availability of information or sampling criteria, which may incur coverage issues and seasonality factors

To help improve the accuracy of results, some minor refinements were necessary at a country level

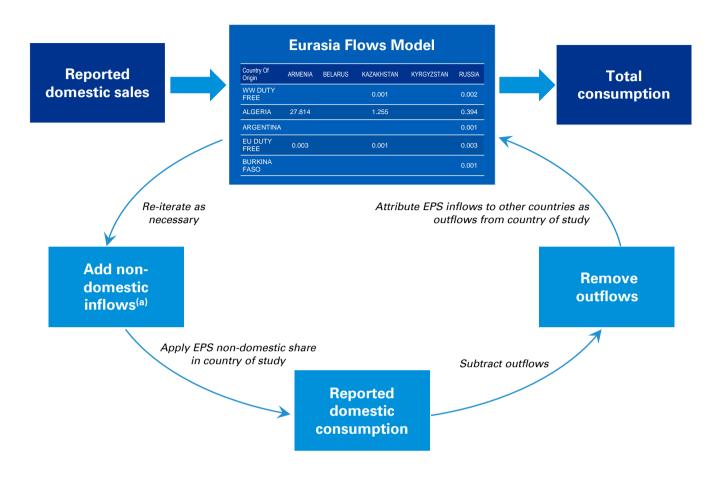
Despite not having country-specific labelling, some data points were mapped to countries of origin

The origins of some entries within the EPS were classified as 'unspecified'. Some of these were assigned a country of origin through identification and location of the Trade Mark Owner

Source: (1) UN WTO, Yearbook of Tourism 2018



Eurasia Flows Model



The KPMG Eurasia Flows Model is a dynamic, iterative model that is based on using the volume of Reported domestic sales combined with the percentage splits identified within the EPS

- LDS volumes are the starting point of the model from which outflows of legal sales to other countries are then subtracted to estimate Reported domestic consumption in a market
- The percentage of non-domestic inflows from other countries are then added 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 5 countries of study where EPS results were available to ensure that all flows estimated are equal

For Russia an additional survey was added for Dagestan which resulted in more of the country being sampled⁽¹⁾

- The survey collected information covering a further 3% of the population, in an area with high levels of illicit cigarette consumption
- The net result of this addition was to push up the non-domestic incidence in this survey from 8.4% to 8.7% in

Source: (1) "Discarded Cigarette Packs Collection Project, Dagestan" Business Analytica, Aug 2018

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



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Empty pack survey approach

Overview

EPS is a research system which collects 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 the countries of study

- EPSs were conducted by independent market research agencies (e.g. Nielsen) in 5 countries included in this report. The surveys are commissioned by PMI and the sampling plan is designed by the agencies in conjunction with PMI to help make the sampling plan statistically representative within each given country
- Results were based on a large sample of packs collected in various population centres throughout the countries, although the exact collection plan differs by country. The size of collection plan depends on the amount of population centres and the proportion of total population that this covered. Accuracy and credibility of results is driven by sound design of the sampling plan
- Results are not subject to respondent behaviour and are therefore less prone to sampling errors than many other alternative methodologies

Process

EPSs rely purely on physical evidence, avoiding the variability of consumer bias in interview-based methods

- The independent market research agencies randomly collect empty packs of any brand and market variant from streets and easy access bins
- Homes and workplaces are not visited and the collection route specifically excludes sports stadia, shopping malls and stations, or any other locations where non-domestic incidence is likely to be skewed and unrepresentative of the population
- Once packs are collected, they are sorted by manufacturer and brand, with the number of packs with domestic and non-domestic tax stamps counted to determine the proportion of packs that did not originate from that jurisdiction (including Duty Free variants)
 - In cases where tax stamps are not shown on a packet, health warning and packaging characteristics are used to determine the source market and where no markings are found, the country of origin is labelled unspecified
- Packs of brands trademark-owned by EPS participants are sent to the manufacturer for analysis to determine which are genuine and which are counterfeit. Only the Trademark Owners can accurately determine authenticity, based on inks, paper and other characteristics. Where there are clear mistakes and design flaws on brands from other manufacturers, these are also marked as counterfeit
- KPMG used the results of the EPSs to extrapolate overall consumption in each market
- The process is repeated across all countries where EPSs are conducted using the flows model as discussed above



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Legal domestic consumption

Consumption assumption for Belarus

Consumption	Explanation	Method	Countries where adjusted
Belarus 2018 consumption assumption	 It was thought that the legal domestic sales for Belarus was too low considering its population and smoking prevalence. Given the lack of reliable data on domestic consumption, we have used publicly available production volumes instead There are some brands identified in other countries which have no identifiable labelling but can be traced to trademark-owners based in Belarus – these volumes may be in excess of the reported production 	 Legal domestic consumption was calculated by taking the production estimate from 2017 and the established outflow to deduce the remaining consumption which was considered legal domestic consumption This approach was also triangulated with other approaches to determining consumption, reviewing the smoking population and smoking prevalence rates 	— Belarus





Non-domestic legal analysis and assumptions

Non-domestic legal analysis				
Approach	 Our approach was to model the volume of cigarettes that were legally brought into each country as a result of cross-border tourism/travel. Due to permitted movements of goods within the EEU, we have considered intra-EEU flows separately from those originating outside the EEU 			
Methodology	Non-EEU			
	 Travel data from the World Tourism Organisation (UNWTO)⁽¹⁾ was used to calculate the number of trips made by travellers over the age of 18 			
	 This was combined with the smoking prevalence and the proportion of the population of smoking age to give total overseas trips by smokers in the year 			
	 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 were purchased^(a) 			
	 It was assumed that the number of packs purchased per trip is equal to the legal import allowance per person 			
	 The EPS and Eurasia Flows model form the basis of all non-domestic analysis. As a result, where the ND(L) calculation was greater than 100% of the ND flow calculated by the Eurasia Flows model, it is capped at the ND volume 			
	 When non-domestic product is found in the EPS from a higher priced market. In this case, the entire ND inflow is considered to be legal 			
	Intra-EEU			
	 EPS data was analysed to identify non-domestic packs found within 50km of borders with other EEU members (E.g. Kazakh-Russian border) 			
	 The non-domestic packs found within 50km and not categorised as illicit for other reasons (e.g. counterfeit, illicit whites, etc.) are deemed legal due to freedom to move goods within the EEU 			
	 The remaining intra-EEU flows are categorised in the same way as those from non- EEU states, using the percentage of journeys that are flights as a guide for the maximum amount of legal inflows from within the EEU 			
Validation tools	 ND(L) outputs were discussed with local management to establish that results appeared reasonable given their understanding of the market 			
Limitations	 Although KPMG believes the ND(L) analysis outlined is the most robust available given data constraints, there are limitations to this method 			
	 The analysis assumes smokers will bring back their maximum permitted volume of cigarettes. Smokers who travel to another country may not bring back any cigarettes, or may bring back more than the legal limit 			
	 This approach gives no breakdown of the brands that are purchased when abroad 			

(a) In the absences of World Health Organisation prevalence data, Euromonitor and the Tobacco Atlas were used instead

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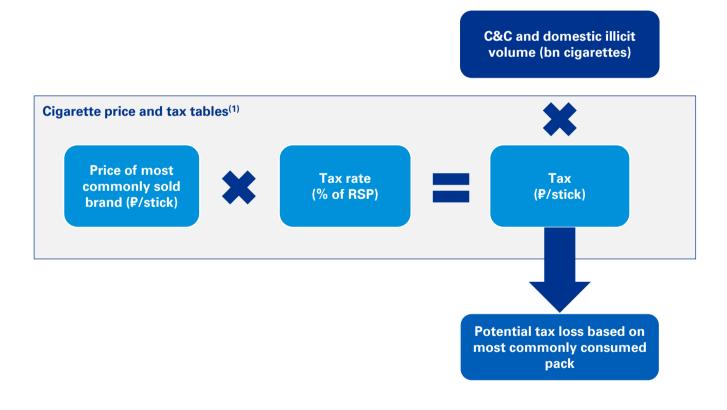
Source: (1) UN WTO, Yearbook of Tourism 2018



Total tax loss estimate

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

- The calculation shown below was performed for each country within the study
 - The country-specific price per pack of the most commonly purchased brand and total tax rate⁽¹⁾ provides an estimate of the tax lost per stick of C&C consumed within a country of study
 - The resultant tax take (per pack) is multiplied by the combined C&C and domestic illicit consumption volumes for that country to estimate the total potential tax loss
 - Total tax losses for Russia, Kazakhstan, Belarus, Armenia and Kyrgyzstan based on the most commonly consumed brand were estimated to be RUB 68bn in 2018
- Tax losses are calculated based on sales volumes and are not reflective of any other factors (e.g.
 affordability or price elasticity) and are always reported as what would have been lost if the C&C volume
 had been purchased legally on the domestic market



Note: (a) KPMG Flows model and analysis of data sources provided by PMI

Source: (1) PMI, 2018

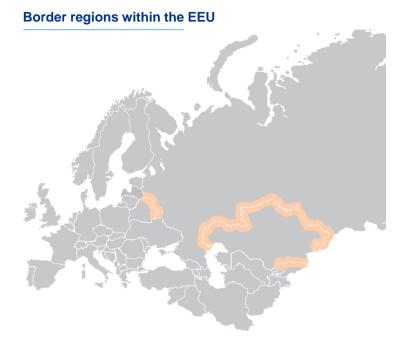


Eurasia Flows model

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Near-border ND consumption within the EEU

- Given the freedom of movement, trade, services and capital between the member states of the EEU, the incidence of nondomestic consumption appears to be higher in border regions between member states
- Those packs found which originate across a nearby border with another EEU member state and are not otherwise C&C (e.g. counterfeit, lacking excise stamps, etc.) are considered to constitute ND(L) within an assumed reasonable radius from the border (as illustrated in the figure on the right)
- This is due to the likelihood that border residents may make nearby cross-border trips to take advantages of price differences in other markets
- A 50km radius from the border is assumed to constitute 'reasonable' for the purposes of this report



Resulting ND categorisation due to border distance assumptions on ND consumption within the EEU⁽¹⁾

Distance to border	50km	
Distance to border	ND(L)	C&C
ARM	0.008	0.000
BEL	0.008	0.000
KAZ	0.127	0.261
KYR	0.016	0.013
RUS	2.181	20.044
No. cities	11	

Intra-EEU travel, 2018(2)

Distance to border	Visitor numbers	
Distance to border	From EEU	To EEU
ARM	6,951*	614,487
BEL	8,251,468	248,969
KAZ	3,111,320	6,335,607
KYR	3,371,882	1,667,117
RUS	4,620,123	10,485,564
Total visits	19,351,744	

^{*} Full numbers for incoming travel are undisclosed

Sources: (1) KPMG analysis

(2) UN WTO 2018



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