



Home Office

# Understanding organised crime 2015/16

Estimating the scale and the social and  
economic costs

Second edition

Research Report 103

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February 2019

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# List of abbreviations

ACBI	Association of Commercial Banknote Issuers
AFI	Annual Fraud Indicator
AFO	Armed Firearms Officer
AS	Arrestee Survey
BSA	Business Software Alliance
BSIA	British Security Industry Association
CEA	Construction Equipment Association
CITES	Convention on International Trade in Endangered Species
CITS	Combined Industries Theft Solutions
CJS	Criminal Justice System
CSE	Child sexual exploitation
CSEW	Crime Survey for England and Wales
CViT	Cash and valuables in transit
Defra	Department for Environment, Food, and Rural Affairs
DRAC	Drug-related acquisitive crime
DSE	Drug strategy evaluation
DTtoA	Drug testing on arrest
EA	Environment Agency
ESAET	The Environmental Services Association Education Trust
ESCC	The Economic and Social Costs of Crime (Heeks, Reed, Tafhiri, & Prince, 2018)
EUIPO	European Union Intellectual Property Office
FCA	Financial Conduct Authority
FCO	Foreign and Commonwealth Office
GDP	Gross Domestic Product
HMRC	Her Majesty's Revenue and Customs
HRT	Hand-rolling tobacco
IDA	Inadequately documented arrival
IMF	International Monetary Fund
IP	Intellectual property

IPO	Intellectual Property Office
LEA	Law Enforcement Agency
LSCB	Local Safeguarding Children Board
MMF	Mass-marketing fraud
NaVCIS	National Vehicle Crime Intelligence Service
NCA	National Crime Agency
NDFU	National Document Fraud Unit
NFA	National Fraud Authority
NHS	National Health Service
NRM	National Referral Mechanism
NS&I	National Savings and Investment
NSA	National Strategic Assessment
NWCU	National Wildlife Crime Unit
OAC	Organised Acquisitive Crime
OCG	Organised Crime Group
OCJS	Offending, Crime, and Justice Survey
OIC	Organised Immigration Crime
ONS	Office for National Statistics
PANIU	Plant and Agricultural National Intelligence Unit
PIPCU	Police and Intellectual Property Crime Unit
PRC	Police recorded crime
UOC	Understanding Organised Crime (Mills, Skodbo, & Blyth, 2013)
UKVI	UK Visas and Immigration

# Errata

In the original edition of this report, the volume figures for the illicit tobacco and cigarette market were for the overall market (rather than the illicit market).

The following revisions were therefore required:

- The volume figure for illicit hand-rolled tobacco (HRT) has been revised from 9.9 million kilograms to 3.2 million kilograms. The volume figure for illicit cigarettes has been revised from 38.5 billion to 5 billion.
- The estimated market size for illicit HRT has been revised from £1,800m to £580m. The estimated market size for illicit cigarettes has been revised from £6,700m to £880m.
- The total scale of organised illicit tobacco and cigarette supply has been revised from £8,500m to £1,500m.
- The total scale of organised economic crime has been revised from £14.4 billion to £7.3 billion.
- The total scale of serious and organised crime has been revised from £20 billion to £13 billion.

In the second edition, these revisions have been made to Tables 2 and 5, and the text has been revised accordingly where required.

# Executive summary

This report aims to improve our understanding of organised crime in the UK by updating estimates of the scale, and the social and economic cost, for a range of organised crime types based on the 2013 report of the same name (Mills, Skodbo, & Blyth, 2013). In 'Understanding Organised Crime' (UOC) 2013, the social and economic cost of organised crime was estimated to be at least £24 billion in financial year (FY) 2010 to 2011.

The social and economic costs of organised crime to the UK is estimated to be approx. **£37 billion** in FY 2015 to 2016. The scale of organised crime is estimated to be approx. **£13 billion** in FY 2015 to 2016.

These estimates are likely to be a lower bound since the contributing estimates are generally conservative and in some cases partial; this is discussed in more detail in the Introduction. The largest components of the social and economic cost estimate are:

- drugs supply (£20 billion)
- economic crime (£8 billion)
- modern slavery (£2 billion)

This report produces two estimates: the scale of organised crime, and the social and economic costs associated with it. The scale estimates provide a sense of the size of known activity across organised crime types.<sup>1</sup> Social and economic cost estimates consider, where possible, both direct and indirect costs resulting from the crime and of reactions to the crime. These are defined in more detail in the Introduction. The scale and social and economic costs are estimated for the UK; however, for some SOC types, it was not possible to access data from Wales, Northern Ireland and/or Scotland so estimates may be scaled up in proportion with population figures. All estimates are for FY 2015 to 2016. The estimates provided throughout the report are all approximate and are rounded.

For the purposes of this report, organised crime is defined as:

*“... serious crime planned, coordinated and conducted by people working together on a continuing basis. Their motivation is often, but not always, financial gain.”* (HM Government, 2013).

Figure 1 illustrates the relative size of the component estimates of the £37 billion total social and economic cost estimate. A summary of the main findings for each crime type is at the end

<sup>1</sup> Generally this estimation is based on the average value of the item associated with the offence multiplied by the recorded annual volume of those offences.



of this chapter. More detail on each crime type, outlining the method, data, assumptions, and limitations is detailed in the relevant crime type section in chapter 2 'Findings'.

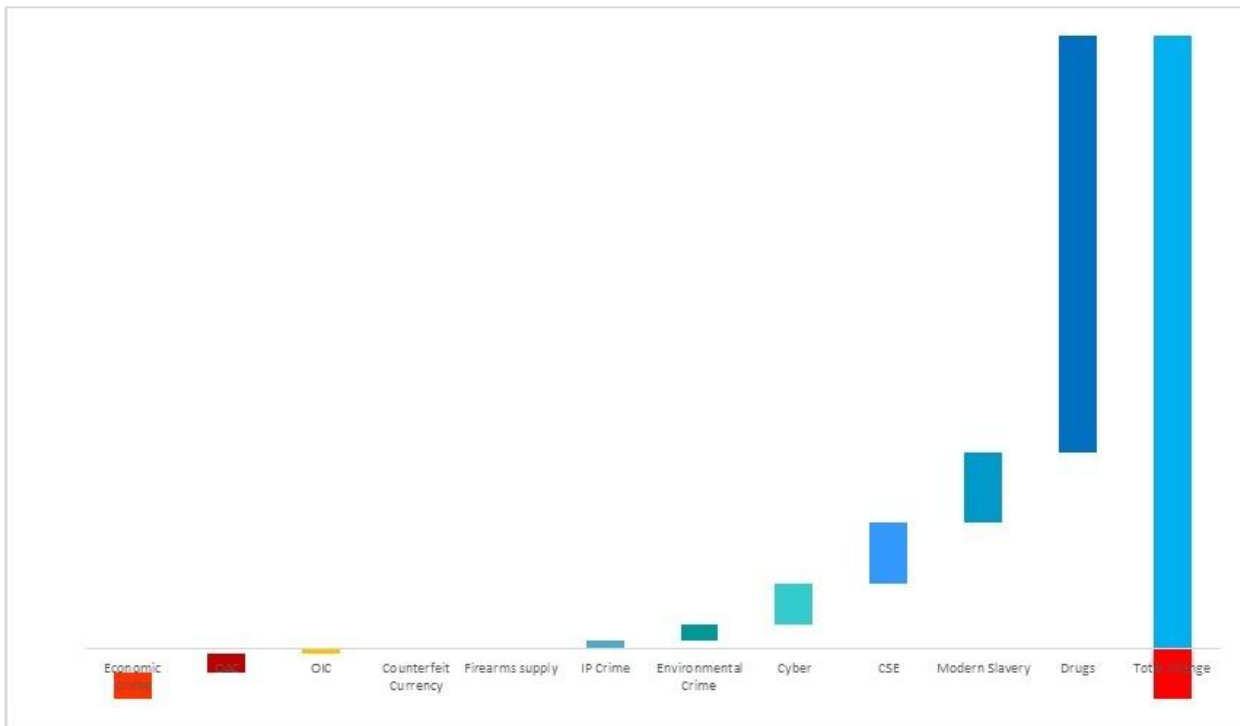


**Figure 1: Tree diagram showing the social and economic cost estimates by organised crime**

Figure 2 illustrates how the FY 2015 to 2016 estimates have changed since FY 2010 to 2011, in real terms. This increase can be broadly broken down into the following categories: methodological and data changes; additional harm caused by organised crime; inflation; and the inclusion of new crime types. Changes since UOC 2013 are discussed as appropriate in the specific sections in section 2 'Findings'. The key findings from this are:

- The social and economic cost of drugs supply in the UK has increased by approximately £9.3 billion since FY 2010 to 2011.
  - This increase is driven by improvements in the methodology for estimating the cost of drug-related acquisitive crime (DRAC) and also by a considerable increase in the volume of drug-related deaths.
  - This increase is a large contributor to the overall rise in the social and economic cost of crime since FY 2010 to 2011.
- This report includes an estimate of the social and economic cost of cyber-dependent crime against individuals, and of organised waste crime, neither of which were estimated in UOC 2013.
- The social and economic cost estimates for all crime types in this report, apart from organised acquisitive crime (OAC), organised immigration crime (OIC) and economic crime have increased since FY 2010 to 2011. This may not mean that the situation has become worse; in many cases this reflects improved methodologies and more complete estimates.
- The social and economic cost of OAC has fallen since UOC 2013, reflecting the general downward trend in the volume of these crimes; this is somewhat offset by more complete cost of crime unit costs in this report from 'The Economic and Social Costs of Crime' (ESCC 2018) (Heeks, Reed, Tafsiri, & Prince, 2018).

As highlighted by the changes above, a direct comparison of the total and component costs in this report and UOC 2013 can be misleading. The total social and economic cost estimate is not directly comparable with that of UOC 2013 since the scope of this report is broader, considering a wider range of organised crime types. For specific crime types included in both reports, comparison may not be appropriate where the scope or method has changed. For example, the scope of organised intellectual property (IP) crime and counterfeiting has been increased to include some digital aspects which were not included in UOC 2013. Differences in the estimates for each crime type since UOC 2013 are discussed in their specific sections in chapter 2 'Findings'.



**Figure 2: Waterfall chart showing the change in social and economic cost estimates by crime type between FY 2010 to 2011 and FY 2015 to 2016 in real terms**

Many of the FY 2015 to 2016 estimates rely on the Home Office cost of crime estimates from ESCC 2018 (Heeks, Reed, Tafsiiri, & Prince, 2018). However, the majority of the estimates produced in this report are not directly comparable to the total cost of crime estimates in ESCC 2018.

Given the difficulty of assigning an organised proportion to total crime, the estimates in this report tend not to use the Crime Survey for England and Wales (CSEW) as the source for the volume of the crime, as is done in ESCC 2018. The differences between the estimates in this report and ESCC 2018 estimates are discussed where appropriate in the specific sections, notably in section 2.2.1 'Fraud against businesses and the public sector'.

For many of these estimates, an ESCC 2018 unit cost is used as a proxy measure to map the organised crime type to a category within ESCC 2018. Further, ESCC 2018 unit costs are often amended to fit their use in this report more specifically. Given these changes and differences between this report and ESCC 2018, the estimates should not be compared.

## Summary of findings by crime type

The following is a summary of the estimates for each crime type. The summaries cover the scale and the social and economic cost estimates, the proportion of organised crime involvement attributed to each crime type, an outline of the data and methodology, limitations of the estimate, and a high-level comparison to the UOC 2013 estimates. More detail on each crime type is included in the specific crime-type sections in chapter 2 'Findings'.

### Drugs supply

- The scale of organised drugs supply is estimated to be £4.5 billion (ONS, 2017b).
- The social and economic cost is estimated at £20 billion.

It is assumed that 100% of drugs supply is organised. The scale estimate is based on a new estimate provided by the Office for National Statistics (ONS), which uses the Arrestee Survey (AS) and the Offending, Crime, and Justice Survey (OCJS) (ONS, 2017b). The social and economic cost includes the cost of DRAC, drug-related deaths, drug-related healthcare costs, drug-related enforcement costs by the police and Border Force, and other expenditure on media and information campaigns.

The scale estimate is not directly comparable with UOC 2013 due to a change in methodology and a narrower scope focusing on fewer drug types. The social and economic cost estimate has increased by £9.3 billion since UOC 2013 due to an increase in ESCC 2018 unit costs used to estimate DRAC, and an increase in the number of drug-related deaths since FY 2013 to 2014. Costs to the FCO, the NCA, and expenditure on media information activity are new additions since UOC 2013.

### Economic crime

For the purposes of this report, and based on available data, economic crime encompasses fraud against businesses and the public sector, and illicit tobacco and cigarette smuggling.

- The scale of economic crime is estimated to be £7.3 billion.
- The social and economic cost is estimated to be approximately £8.4 billion.

In UOC 2013, only a partial estimate of fraud against businesses, the public sector, and individuals was considered. The figure produced here for fraud is lower than in UOC 2013 due to the narrower scope, therefore the two figures are not directly comparable.

#### *Fraud against businesses and the public sector*

Fraud encompasses a variety of criminal activities and scams, with the common element being *“when trickery is used to gain an unfair advantage, which is often financial, over another person”* (Action Fraud, 2017).

- The scale of organised fraud is estimated to be £5.9 billion.
- The social and economic cost is approximately £5.9 billion.

Various proportions of organised involvement are considered for the different fraud types included in the estimate. These estimates exclude tobacco since this is considered separately.

The estimates are based on the estimated losses from fraud in the Annual Fraud Indicator (AFI) 2011, as used in UOC 2013, updated for FY 2015 to 2016. The social and economic cost estimate includes £28 million of criminal justice system (CJS) costs.

This estimate is only a partial reflection of the cost of organised fraud as it considers a limited variety of frauds against the public sector and against businesses. Although organised fraud against individuals was included in the previous estimate, it is excluded in this report because there was insufficient robust data to appropriately estimate how much of fraud against individuals is attributable to organised crime.

These estimates of organised fraud are not directly comparable to those in UOC 2013 due to the exclusion of fraud against the individual and of illicit tobacco and cigarettes which is considered separately in this update.

### *Illicit tobacco and cigarettes supply*

The focus is on three primary forms of illicit tobacco that are smuggled into the UK: illicit whites,<sup>2</sup> counterfeit cigarettes, and genuine cigarettes smuggled to avoid duty.

- The scale of organised illicit tobacco and cigarettes is estimated to be £1.5 billion.
- The social and economic cost is estimated to be £2.5 billion.

It is assumed that 100% of such activity is organised given the degree of planning required to smuggle goods. The scale estimate is based on HMRC's tobacco tax gap estimate of market size for FY 2015 to 2016. The social and economic cost includes the VAT and duty tax gap and enforcement costs by Border Force and HMRC.

CJS costs have not been included due to the lack of specific data for this crime type. The loss to legitimate businesses as a result of the illicit supply of tobacco and health costs associated with illicit tobacco has not been estimated due to insufficient data.

This section was considered within fraud in UOC 2013, so the estimates are not comparable.

### *Modern slavery*

For the purposes of this report, modern slavery considers only labour exploitation of adults and children and sexual exploitation of adults. This ensures that there is no double counting with the CSE victim's cohort.

- It is estimated that there were 7,679 victims of organised modern slavery. A monetary estimate of the scale of modern slavery is not produced here.
- The social and economic cost of modern slavery is estimated to be £2.3 billion.

It is assumed that 100% of activity is attributable to organised crime given the specific scope of this section. The number of victims, and the unit cost to estimate the social and economic cost, is based on Reed *et al.* (2018) and Silverman (2014).

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<sup>2</sup> Legally manufactured abroad specifically for smuggling into the UK.

These estimates reflect only total victims of modern slavery. The unit costs in Reed *et al.* (2018) are deflated to FY 2015 to 2016 prices for consistency.

These estimates are not comparable to the estimates of human trafficking in UOC 2013 since they follow a distinctly different methodology and scope.

## Child sexual exploitation (CSE)

CSE is a form of child abuse in which a child or young person is coerced or manipulated into sexual activity in exchange for something the victim needs or wants and/or for the advantage, financial or otherwise, of the perpetrator (Department for Education, 2017). This report focuses on organised/networked sexual exploitation.

- In the UK in 2015, it is estimated that there were approximately 6,850 victims of organised CSE. A monetary estimate of the scale of CSE is not meaningful and is not produced here.
- The social and economic cost of organised CSE is estimated to be £2.3 billion in FY 2015 to 2016.

It is assumed that 100% of activity is attributable to organised crime, given the scope of this section. The number of victims is based on the Office of the Children's Commissioner's 'Inquiry into Child Sexual Exploitation in Gangs and Groups' (2015). The social and economic cost is based on the unit cost for sexual exploitation from the 'The economic and social costs of modern slavery' (Reed, Roe, Grimshaw, & Oliver, 2018).

The scale estimate uses a broad measure to attempt to account for unreported victims, which may not be accurate. The applicability of the unit cost for sexual exploitation, amended for child victims, devised for modern slavery to this cohort of victims is not necessarily accurate, but is the best available proxy.

The estimated number of victims is higher than the estimate in UOC 2013 because this 2018 report scales the figure to cover the whole of the UK and also attempts to account for unreported incidents of organised CSE by using a broader measure. The social and economic cost estimate is higher than in UOC 2013, due in part to the increased number of victims, and also to a methodological change to use the Reed *et al.* (2018) modern slavery unit cost.

## Organised acquisitive crime (OAC)

For the purposes of this report, as in UOC 2013, OAC is made up of the following crime types: cash and valuables in transit (CViT), distraction burglary, metal theft, plant theft, road freight crime and vehicle theft.

- The estimated scale of OAC is £680 million.
- The social and economic cost of OAC is estimated to be £1.5 billion.

Since UOC 2013, these scale estimates have increased from £550 million, and the social and economic cost estimates have decreased from £1.8 billion. This reflects the general downward trend in the volume of these crimes, while using more complete cost of crime estimates in this report from ESCC 2018 (Heeks, Reed, Tafsiiri, & Prince, 2018).

### *Cash and valuables in transit (CViT)*

CViT robbery “relates to the illegal appropriation of...high-value goods – usually cash – while they are being transported from one location to another” (Wainer & Summers, 2011).

- The scale of organised CViT robbery is estimated to be £4 million.
- The social and economic cost is £8 million.

It is assumed that 100% of CViT attacks are organised. These estimates are based on data from SaferCash which provides a national framework for intelligence and data on CViT attacks.

The baseline SaferCash figures reflect only 70% of the industry and are thus scaled up to produce the estimates. The social and economic cost is estimated using a proxy unit cost from ESCC 2018.

The estimates are substantially lower than those produced in UOC 2013; this is because the number of recorded CViT robberies by SaferCash in 2015 (167) is less than a quarter of the number recorded in 2010 (749).

### *Distraction burglary*

Distraction burglary is defined as: “any crime where falsehood, trick, or distraction is used on an occupant of a dwelling to gain, or try to gain, access to the premises to commit burglary” (Home Office, 2016d).

- The scale of organised distraction burglary is estimated to be £28 million.
- The social and economic cost is £86 million.

It is assumed that 100% of distraction burglary incidents are attributable to organised crime. The estimates are based on Police Recorded Crime (PRC) data on the number of offences, CSEW data, and unit costs and multipliers from ESCC 2018.

The volume of incidents is scaled for unreported crimes using the ESCC 2018 crime multiplier for ‘domestic burglary’ as a proxy. The ESCC 2018 unit cost for ‘domestic burglary’ is used as a proxy to estimate the social and economic cost.

This scale estimate is lower than that in UOC 2013. This can be attributed to fewer recorded distraction burglaries in PRC data; in FY 2015 to 2016 the number of incidents was almost 6,000 less than in FY 2010 to 2011, falling from approximately 17,300 incidents to 11,600.

### *Metal theft*

Metal theft refers to “thefts of items for the value of their constituent metals, often copper, lead, and aluminium” (Home Office, 2012).

- The estimated scale of organised metal theft is £19 million.
- The social and economic cost is estimated to be £41 million.

It is assumed that 54% of metal theft incidents are organised. The estimates are broadly based on PRC data and ESCC 2018 cost estimates. The methodology is updated from UOC 2013 to

include costs in anticipation and response to organised metal theft in the social and economic cost estimate, which were not included in UOC 2013.

These estimates are based on only a small number of companies. Part of the social and economic cost estimate relies on the ESCC 2018 unit cost for 'commercial theft' as a proxy measure.

The scale estimate for FY 2015 to 2016 is lower than that of FY 2010 to 2011; this can be largely attributed to the fall in the number of police recorded metal theft offences in England and Wales. The proportion of metal theft offences that were organised in FY 2015 to 2016 increased to 54%, compared to the previous estimate of 20% in UOC 2013. This change could be reflective of the changing nature of metal theft since FY 2010 to 2011, most notably the significantly lower levels of offences occurring.

### *Plant theft*

Plant theft is the theft of construction and agricultural equipment.

- The scale of organised plant theft is estimated at £51 million.
- The social and economic cost is £490 million.

It is assumed that 100% of plant theft considered is attributed to organised crime since the focus is on large plant items. The scale estimate is based on the value of items recorded as stolen on the Plant and Agricultural National Intelligence Unit (PANIU) database. The social and economic cost estimate is an industry estimate developed in consultation the Construction Equipment Association (CEA) and Combined Industries Theft Solutions (CITS).

The estimates consider only reported incidents and are scaled to FY 2015 to 2016 prices for consistency.

The estimates for organised plant theft for FY 2015 to 2016 are lower than those for FY 2010 to 2011. This is due to a large fall in the number of plant items being stolen, from 6,000 in 2011 to around 2,600 in 2016.

### *Road freight crime*

Road freight crime is the theft of haulage vehicles and their loads.

- The scale of organised road freight crime is estimated to be £51 million.
- The social and economic cost is estimated to be £63 million.

It is assumed that all road freight crime is organised due to the level of planning and coordination required to steal goods in this way. The estimates are based on data from the National Vehicle Crime Intelligence Service (NaVCIS) and unit cost estimates from ESCC 2018.

These estimates consider only reported incidents and are scaled to FY 2015 to 2016 prices for consistency. NaVCIS Freight receives regular information from only about 45% of police forces, so is an underestimate of all activity.

The estimates produced are not significantly different to those in UOC 2013. Although the number of road freight crime incidents is less in 2016 than in 2010, the value of vehicles and loads stolen is greater per incident, and thus the estimates do not change that much overall.

### *Vehicle theft*

Organised vehicle crime includes the theft of high-value vehicles to order, theft of vehicles for export, theft of older vehicles to be broken down for parts, and the theft of vehicles for use in other crimes.

- The scale of organised vehicle theft is estimated to be £520 million.
- The social and economic cost of organised vehicle theft is estimated to be £850 million.

It is assumed that 61% of vehicle crime is organised, based on data from CSEW. The estimates are based on PRC data, multipliers and unit cost estimates from ESCC 2018, and CSEW data.

The scope of the estimates concerns 'theft of a vehicle' offences and domestic burglaries in which car keys are stolen. PRC Scotland Counting Rules differ slightly from Home Office Counting Rules used for PRC data in England, Wales and Northern Ireland, therefore the scope of 'car key' burglaries for Scotland may be an overestimate.

This scale estimate is considerably larger than the estimate produced in UOC 2013. The main contributor to the increase is a change in the methodology to use the average value of unrecovered stolen vehicles as the unit cost in the calculation rather than the average value of a recovered stolen vehicle, as was done previously.

### *Cyber-dependent crime against individuals*

The focus in this report is only on cyber-dependent crime against individuals; those crimes which can only be committed using computers, computer networks, or other forms of ICT (HM Government, 2013).

- The number of organised cyber-dependent offences against individuals is estimated to be 1.5 million. The scale is not monetised here.
- The social and economic cost of organised cyber-dependent crime against individuals is estimated to be £830 million.

The estimates are based on new experimental data from CSEW FY 2015 to 2016, and unit cost estimates from ESCC 2018.

Estimates of organised involvement differ for the types of cyber crime considered. It is conservatively assumed that 80% of computer virus/malware attacks are organised and 40% of unauthorised access cyber crime is organised.

The scope of cyber crime considered in this report is only partial. CSEW data informing the scale estimate is based on experimental data.

Cyber crime was not considered within scope in UOC 2013.



## Intellectual property (IP) crime and counterfeiting

IP crime is the wilful infringement of registered trademarks and the unauthorised copying and use of material protected by copyright (Intellectual Property Office, 2011).

- The scale of organised IP crime and counterfeiting is estimated to be £100 million.
- The social and economic cost is estimated to be £570 million.

Various levels of organised involvement are assumed for the goods included in this section; physical goods are considered 100% attributable to organised crime, a conservative estimate of 40% organised involvement is assumed for digital film and music, and an industry estimate is used as a proxy for business software. The estimates are based on seizure data, and estimates of the street and legitimate values of goods. Costs to the exchequer and enforcement costs of firms against IP crime are considered in the social and economic cost estimate.

The level of organised involvement for business software uses a proxy measure from FY 2010 to 2011. The use of seizure data means that these estimates reflect only detected activity. Due to a lack of data, street values for goods from UOC 2013 are used. Costs to the exchequer are scaled to FY 2015 to 2016 prices. Other social and economic costs that could not be quantified include costs to brand reputation and reduced incentives to invest in research and analysis.

The estimates are larger than those in UOC 2013, however this is mostly explained by the increased number of goods included in this update in an attempt to reflect the changing trends of IP crime by including some digital aspects. The additional goods considered in this update are cosmetics, jewellery, watches, handbags, luggage, sports goods, digital music tracks and digital film downloads.

## Environmental crime

Environmental crime is defined as “*acts that breach environmental legislation and cause significant harm or risk to the environment and human health*” (European Commission, 2017). For the purposes of this report, environmental crime captures organised waste crime and organised wildlife crime.

- The scale of organised environmental crime is not estimated.
- The social and economic cost is estimated to be £350 million. This only considers organised waste crime.

Environmental crime was not estimated in UOC 2013 due to lack of data.

## Waste crime

For the purpose of this report, organised waste crime constitutes organised fly-tipping, illegal waste sites and illegal waste exports.

- The scale of organised waste crime is not estimated due to insufficient data.
- The social and economic cost is estimated to be £350 million.

It is assumed that waste crime is generally 100% organised, except for illegal fly-tipping for which the organised involvement is proportioned based on the size of the vehicle used in the

offence. The estimate considers: the tax evasion from illegal dumping, illegal waste sites, and mis-classification of waste; loss of profit from legitimate waste business; enforcement costs; costs of removing illegally dumped waste; and costs of the damage to the environment and health due to waste. Data from the Department for Environment, Food, and Rural Affairs (Defra), the Environment Agency (EA), HMRC, and the Environmental Services Association Education Trust (ESAET) are used to inform the estimate.

EA spend on enforcement is only partial since some spend is not possible to apportion. Due to a lack of data, the following costs are not quantified: police force and local authority enforcement costs; costs to private land owners of fly-tipping; and further social and economic costs resulting from damage to the environment as a result of illegal waste.

Organised waste crime was not estimated in UOC 2013 due to lack of data.

### *Wildlife crime*

Wildlife crime, for the purposes of this report, is defined as “*any action which contravenes current legislation governing the protection of the UK’s wild animals and plants*” (NWCA, 2017a). Estimates for the scale and the social and economic costs for organised wildlife crime have not been possible to produce given the data available.

### *Firearms supply*

- The scale of organised firearms supply has not been estimated due to insufficient data.
- The social and economic cost is estimated to be £190 million.

This estimate is based on unit cost estimates from ESCC 2018, with four firearm-specific adjustments applied, and offence information from PRC data.

Northern Ireland is excluded from this estimate. Some significant assumptions are made to produce this estimate; these are detailed in chapter 2 ‘Findings’.

This estimate is approximately £30 million higher than that from UOC 2013 of £160 million. This difference is almost entirely due to methodological improvements since the cost of crime estimates and firearm-specific adjustments are now more complete. The number of offences involving firearms has not changed considerably since FY 2010 to 2011, though the nature of firearm use has changed, tending towards offences with less damaging outcomes.

### *Organised immigration crime (OIC)*

For the purposes of this report, OIC considers abuse of legitimate entry and people smuggling.

- The scale of OIC is estimated at £110 million.
- The social and economic cost of OIC is estimated at £73 million and includes Immigration Enforcement costs against OIC as well.

The scale estimate is lower than in UOC 2013 (£240 million). This is attributable to lower recorded volumes of specific cohorts of entrants due to a methodological change in how to estimate these volumes with the available information. The social and economic cost is lower

than in UOC 2013 (£1,040 million) due to a change in methodology, for example the re-allocation of human trafficking into a separate modern slavery category.

### *Abuse of legitimate entry*

Abuse of legitimate entry covers organised criminals targeting legitimate processes to facilitate illegal migration. The cohorts considered within the estimates are sham marriages, forged supporting documents, visa port refusals, and enforcement arrests of such entrants.

- The scale of organised abuse of legitimate entry is estimated to be £38 million.
- The social and economic cost is estimated at £15 million.

Various levels of organised involvement are assumed for these sections based on the assumptions made in UOC 2013 using available intelligence and expert opinion. The recorded volumes of these cohorts in a year are used to inform the estimate. The social and economic cost includes costs of abuse of legitimate entry asylum applications, removals, detentions, enforcement arrests and also pay costs for the National Document Fraud Unit (NDFU). This cost focuses on the operational impact of abuse of legitimate entry and draws from recorded occurrences of these types of crime in a year, applying an assumed proportion of organised involvement in these activities based on the assumptions made in UOC 2013, and the assumed unit cost to the government in response to these activities.

These estimates reflect only detected cases and are likely to be underestimates. The samples sizes to estimate the fees paid to organised criminals for services are very small. The specific harms to victims of abuse of legitimate entry cases facilitated by organised criminals are not estimated within this report given the lack of data with which to estimate these costs. Significant assumptions are made to estimate the volume of abuse of legitimate entry cohorts who applied for asylum, and were detained and removed.

Both estimates have increased since UOC 2013. This is mostly due to an increase in the volumes of cases identified as abuse of legitimate entry and also in part due to changing methodology. The unit costs for the components contributing to the social and economic cost have fallen since UOC 2013.

### *People smuggling*

People smuggling involves facilitating the entry of irregular migrants to the UK. The scale estimate is based on the number of clandestine and inadequately documented arrivals (IDAs) and the fees paid to organised criminals to facilitate migrants' entry into the UK in this way, and on the number of in-country enforcement arrests.

- The scale of organised people smuggling is estimated to be £75 million.
- The social and economic cost is estimated to be £31 million.

Various levels of organised involvement are assumed for the different scenarios based on available intelligence and research. The social and economic cost includes the costs of clandestine asylum applications, removals, detentions and enforcement arrests. This cost focuses on the operational impact of organised people smuggling to the UK, following the same method as with the 'abuse of legitimate entry' estimate.

These estimates only reflect detected people smuggling activity so are likely to be an underestimate. The level of organised involvement and fees paid to organised criminals for clandestine entry are based on a limited sample. UOC 2013 data is used to estimate some of the fees paid to organised criminals and for the volume of enforcement arrests. As with 'abuse of legitimate entry', the specific harms to victims are not included within this estimate due to the lack of data with which to estimate these costs. Significant assumptions are made to estimate the volume of people smuggling cohorts who applied for asylum, and were detained and removed.

These estimates are lower than those in UOC 2013. The method used to estimate the volumes of people smuggling is different to that in UOC 2013 so the estimates are not comparable across the reports. For the scale estimate, the estimated fee paid to organised criminals to facilitate clandestine entry into the UK is considerably lower for FY 2015 to 2016 than it was in UOC 2013. The unit costs of asylum applications and detention has fallen since UOC 2013 and thus contributes to the lower social and economic cost estimate.

## Counterfeit currency

The focus here is on the counterfeiting of UK banknotes only.

- The scale of organised counterfeit currency is £7 million.
- The social and economic cost is estimated to be £9 million.

It is assumed that 100% of banknote counterfeiting is organised. The estimates are based on the value of banknotes taken out of circulation for Bank of England, Scottish, and Northern Irish Sterling banknotes. The social and economic cost estimate includes CJS costs for counterfeit currency offences under the Forgery and Counterfeiting Act 1981.

The scope of these estimates is partial, concerning only banknotes, so will be underestimates. These estimates only account for detected activity. Additional social and economic costs that could not be quantified include: costs to retailers of training staff to detect counterfeits and of installing inspection devices; and costs to the Bank of England of designing currency in response to specific counterfeit threats.

This scale estimate is not much larger than that from UOC 2013. The social and economic cost estimate is more complete than the previous estimate due to the inclusion of CJS costs associated with counterfeit currency offences.

## Money laundering

No robust estimates for either the scale or the social and economic cost of money laundering were possible. Instead the current literature is reviewed in Annex E. Money laundering was not considered in scope in UOC 2013.

# 1. Introduction

This report aims to improve our understanding of organised crime in the UK by updating the estimates of the scale and the social and economic costs for a range of organised crime types included in UOC 2013 (Mills, Skodbo, & Blyth, 2013). In UOC 2013, the social and economic cost of organised crime to the UK was estimated to be at least £24 billion per year in FY 2010 to 2011.

Where possible, this report aims to improve upon UOC 2013 and produce estimates for crime areas which previously had insufficient data to do so (e.g. waste crime). Additionally, this report aims to further our understanding of organised crime by widening the scope to include organised crime types that previously were not included in UOC 2013 (e.g. cyber-dependent crime against individuals). Broadening the range of included organised crimes provides a more comprehensive view of organised crime in the UK. The estimates are shown in Table 2 on page 28.

Robust estimates for the scale and the social and economic costs of organised crime contribute to the evidence base for policy and law enforcement in this area. These estimates can be used in conjunction with other research and the national intelligence picture on organised crime to evaluate trends in threat, spending, and harms, and to help in the allocation of resources.

The social and economic costs of organised crime to the UK is estimated to be approx. **£37 billion** in FY 2015 to 2016. The scale of organised crime is estimated to be approx. **£13 billion** in FY 2015 to 2016.

These estimates are likely to be a lower bound since the contributing estimates are generally conservative and in some cases partial.

The largest components of the social and economic cost estimate are:

- drugs supply (£20 billion)
- economic crime (£8 billion)
- modern slavery (£2 billion)

The scale estimates provide an indication of the size of known activity in organised crime markets. The largest organised crime activities in terms of scale are estimated to be:

- organised economic crime (£7 billion)
- drugs supply (£4 billion)

For context, comparing these scale estimates to the turnover of particular industries illustrates the significant size of organised criminal activities. For example, the scale of economic crime is broadly equivalent to the turnover of businesses involved in manufacture of bread, fresh pastry goods and cakes (£7.0 billion) or wholesale of perfume and cosmetics (£6.4 billion) in 2015 (ONS, 2017a).

## 1.1. Definition of organised crime

Defining organised crime is challenging and multiple definitions exist in the literature and across governments. A prominent issue with defining organised crime is the variety of criminal activities that it encompasses; these are wide ranging and differ significantly in their levels of complexity, coordination and motivation.

The definition of organised crime used in this report differs slightly to that used in UOC 2013 which was taken from the 2011 publication 'Local to Global, Reducing the Risk from Organised Crime'. This report takes the definition of organised crime from the current Serious and Organised Crime Strategy:

*“Organised crime is serious crime planned, coordinated and conducted by people working together on a continuing basis. Their motivation is often, but not always, financial gain.”* (HM Government, 2013).

This definition indicates that organised crime involves at least two people working together, which is more specific than the previous definition of *“individuals, normally working with others”* (HM Government, 2011).

Importantly financial gain is not always the motivation for involvement in serious and organised crime. For example, CSE offenders may be motivated by sexual interest, and cyber criminals may be driven by ideology (NCA, 2017b). The characteristics of organised criminals today have changed significantly, moving away from highly structured hierarchical groups to looser networks based on trust, reputation and experience (NCA, 2017b). Recent research suggests that this has contributed to increased involvement by organised crime groups (OCGs) in more complex crimes like drug trafficking, human smuggling, money laundering and fraud (Pinotti, 2015; Wall & Chistyakova, 2015).

The Crown Prosecution Service legally defines serious crime, which includes drug trafficking, slavery, people trafficking, firearms offences, prostitution and child sex, armed robbery etc., money laundering, fraud, offences in relation to public revenue, bribery, counterfeiting, blackmail, computer misuse, intellectual property (IP), environment, and organised crime (The Crown Prosecution Service, 2017). The organised crime aspect of many of these serious crimes is in scope of this report and considered within the analysis.

Table 24 (page 105 in Annex A) shows the proportion of each crime type assumed to be organised.

## 1.2. Scope

The crime areas included in this report are primarily based upon those included in UOC 2013 since the initial aim is to provide an update to these previous estimates. Improvements are made in this report, since the scope here is expanded to consider illicit tobacco and cigarette supply separately to organised fraud, and cyber-dependent crime against individuals. Further, an estimate for waste crime is produced in this report. For crime types that are considered in scope of the report, but for which there is insufficient data to produce estimates, the sections detail the current state of literature on the crime type. This applies to wildlife crime (see Section 2.8 'Environmental crime') and money laundering,<sup>3</sup> which was not in scope in UOC 2013 (see Annex E).

The crime types considered are shown in Table 1. These crime types complement those identified as key threat areas in the National Crime Agency (NCA) National Strategic Assessment (NSA) of Serious and Organised Crime (2017b).

This report does not cover all of organised crime because of a lack of robust and sufficient data to develop estimates. This is a particular issue when attempting to attribute a proportion of a crime category to organised activity, which is very difficult to estimate accurately; often very little data exists to inform such an assumption. Also, some crime types are interrelated and thus double counting could occur between estimates. Some specific organised crime types that were considered, but deemed beyond the scope of this report because of the lack of robust data include: kidnapping; bribery, corruption, and sanction evasions; identity fraud; violence related to organised crime; and extortion. As a result the overall figure given in this report will underestimate the true costs of organised crime since there are costs from the excluded crime types that are not included.

**Table 1: Organised crime types included in the report**

Organised crime types
Drugs supply
Economic crime:
Fraud against businesses and the public sector
Illicit tobacco and cigarette supply
Modern slavery
Organised child sexual exploitation (CSE)
Organised acquisitive crime:
Cash and valuables in transit (CVIT)
Distraction burglary
Metal theft
Plant theft

<sup>3</sup> As highlighted in Annex E, an estimate of the scale and social and economic cost of money laundering would not be included in the total estimate since it would risk double counting with other crime types.

Organised crime types
Road freight crime
Vehicle crime
Cyber-dependent crime against individuals
Intellectual property (IP) crime and counterfeiting
Environmental crime:
Waste crime
Wildlife crime
Firearms supply
Organised immigration crime (OIC):
Abuse of legitimate entry
People smuggling
Counterfeit currency
Money laundering

### 1.3. Approach

The approach to developing estimates for the scale and the social and economic costs of organised crimes in this report is broadly consistent with that adopted in UOC 2013. The aim of this report is to update UOC 2013 and bring together the currently available data, therefore no primary research was done to inform these updated estimates. The research focuses on producing estimates for the individual types of organised crime detailed in Table 1.

For some crime areas, due to data limitations, estimates are only partial, or focus specifically on only one aspect of the crime. Other estimates only account for detected instances and therefore will miss a potentially significant proportion of the crime. In general, figures have only been produced where it is robust to do so, even if known unknowns are large. Thus, this results in underreporting.

### 1.4. Methodology

As in UOC 2013, this report produces two estimates – the scale of organised crime and the social and economic cost associated with it.

- **Estimates of scale (or market size)**

These provide a measure of known activity across organised crime types and reflect the revenues, but not profit, earned by organised criminals from activity in each market. Generally this estimation is based on the average value of the item associated with the offence multiplied by the recorded annual volume of those offences. Some estimates scale up the recorded volumes to attempt to account for unreported crime, based on crime multipliers in ESCC 2018. The details of this method are discussed in the specific sections in chapter 2 'Findings'.



- **Estimates of the social and economic costs**

These estimates monetise, where possible, the full range of impacts of organised crime to victims and society. They are based on the Home Office methodology for estimating the costs of crime, as adopted in ESCC 2018, which includes:

- costs in anticipation of crime (e.g. the cost of burglar alarms)
- costs as a consequence of crime (e.g. the cost of property stolen or damaged)
- costs in response to crime (e.g. costs to the police).

In cases where the scale estimates equate to the value of property stolen, this also tends to form part of the social and economic cost estimate; therefore, the scale and the social and economic cost figures should not be added within the crime types. The social and economic cost estimates also consider, where possible, the indirect costs resulting from the crime. For example, drug misuse deaths are an indirect impact of drugs supply whereas the direct costs of the crime of supply would be on the police and CJS. The incidence and ability to estimate these different aspects varies across each crime type and estimates of the social and economic costs may not comprehensively cover all costs in anticipation of crime, as a consequence of crime, or in response to crime consistently. The specific limitations within these estimates are covered in each section in chapter 2 'Findings'.

The estimates consider neither benefits nor harms to the organised criminals or groups. This is consistent with UOC 2013 and other previous Home Office research in which any effects on a person carrying out an illegal action are not considered to affect the total welfare of society.<sup>4</sup>

Where applicable, the methodology for the individual estimates has been made more robust since UOC 2013. For example: obtaining a new source of data for road freight crime following the demise of the previous source; broadening the scope of IP crime to reflect changing trends and the rise in digital activity; and including more social and economic costs in metal theft. This is addressed in specific sections in chapter 2 'Findings' as necessary.

## 1.5. Data

All estimates are in FY 2015 to 2016 prices. Where such price data was not available, figures have been scaled to FY 2015 to 2016 to account for inflation using the HM Treasury gross domestic product (GDP) deflator (HM Treasury, 2018). Estimates are for the UK unless otherwise stated.

Many of the estimates included in this report rely on the Home Office Cost of Crime estimates and crime multipliers from ESCC 2018 (Heeks, Reed, Tafsiri, & Prince, 2018). These unit cost estimates have been updated since UOC 2013 and are now more complete estimates due to methodological improvements considering a broader range of costs within the estimates.<sup>5</sup> In many cases this means that they have increased and therefore have contributed somewhat to the increases in our estimates in this update.

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<sup>4</sup> See Brand and Price (2000) for further details.

<sup>5</sup> See Heeks *et al.* (2018) for further details on the method and scope of these unit costs.

For many of the organised crime types considered in this report, assumptions have been made to produce meaningful estimates; for example, assumptions about the level of organised criminal involvement in certain crime markets are made. These assumptions are based on intelligence, and are in line with previous research; they are deemed the best approach in order to develop the estimates. Often this report frequently draws on assumptions from UOC 2013, based on expert judgement where no further updates are available, suggesting that these are still the best available assumptions. Assumptions are discussed in the text as relevant.

Given that multiple assumptions are made throughout this report, the certainty and confidence of the estimates produced varies between sections. Some estimates are more complete and based on more robust data than others. For some crime types, for which activity is largely hidden, data is limited and the confidence in these figures is much lower. Given the variation in the completeness of estimates across the crime types, when comparing the size of estimates to inform policy decisions, the completeness of the estimates should be taken into consideration. Specific limitations are discussed as necessary in specific sections in chapter 2 'Findings'.

Although it is likely that some double counting exists between some of the estimates for the individual crime types, this is not expected to be significant (particularly since no estimate is produced for money laundering, though this would not be included in the total anyway (please see Annex E)). As the estimates for the individual crime types tend to be conservative and underestimate the true costs of organised crime, this is likely to outweigh the double counting effects and also mean that the aggregate figure is still a lower bound estimate.

## 1.6. Comparing the social and economic costs of organised crime with other costs of crime

The definition of organised crime used will influence whether it is appropriate to compare two figures on the costs of organised crime. The definition used in this report is relatively imprecise in order to reflect the loose networks that organised criminals now tend to work in, while still encompassing the fact that their activities are organised, planned, and coordinated. However, stricter definitions, such as that used in an EU report on the costs of organised crime in the EU, based on the UN Palermo Convention, mean that figures are not necessarily directly comparable (Levi, Innes, Reuter, & Gundur, 2013). The figures produced in the EU report are not country-specific and thus comparing them to the UOC 2013 estimates is difficult. The scope of the estimates produced in the EU report is considerably smaller than that of UOC 2013 due mainly to lack of robust data across EU countries.

## 1.7. Comparisons with 'Understanding Organised Crime 2013'

The figures produced in this report update those initially developed in UOC 2013. However, a direct comparison of the total and component costs is not necessarily appropriate and can be misleading. The total social and economic cost estimate is not comparable with that of UOC 2013 since the scope of this report is broader, considering a wider range of organised crime types. For specific crime types included in both reports, comparison may not be appropriate where the scope or method has changed. For example, the scope of organised IP crime and

counterfeiting has been increased to include some digital aspects which were not included in UOC 2013, or the method used to calculate the estimates for metal theft is more accurate since it now includes costs as a consequence and in anticipation to the crime which were previously excluded. These improvements to the method and scope in the estimates produced in this update mean that the figures are not directly comparable on a one-to-one basis with their previous counterparts. Differences in the estimates for each crime type since UOC 2013 are considered in their individual sections in chapter 2 'Findings'.

The social and economic cost of organised crime has increased since UOC 2013. The real changes in each estimate are shown in Figure 2 (see also Executive Summary). The total increase in the estimate of the social and economic cost of organised crime to the UK, from £24 billion in FY 2010 to 2011 to £37 billion in FY 2015 to 2016, is attributable to:

- **Methodological and data changes**

Changes to the method across drugs supply, CSE, metal theft, vehicle crime, IP crime, and firearms supply have contributed to more robust and more complete estimates. The use of the ESCC 2018 unit cost estimates, which have been updated since UOC 2013 and are now more complete, has also contributed to the increase in the overall estimate.

- **Additional harm caused by organised crime**

The majority of additional harm caused by serious and organised crime is reflected in the estimate for drugs supply (£20 billion). This estimate has increased by approximately £9.3 billion since FY 2010 to 2011, with the majority of this increase estimated to reflect additional harm from drugs supply. The main drivers of the increase are an increase in the cost of DRAC, driven by increased ESCC 2018 unit costs, and an increase in the cost of drug-related deaths due to a considerable increase in the volume of such deaths since FY 2013 to 2014. These are discussed in detail in section 2.1 'Drugs supply'.

- **Inflation**

A small portion of the total increase in the social and economic cost of organised crime to the UK is attributable to inflation since FY 2010 to 2011. This is estimated to be approximately £2 billion of the overall increase, based on scaling using the GDP deflator (HM Treasury, 2018).

- **Inclusion of new crime types**

The scope of the Economic Crime section has been increased to consider illicit tobacco and cigarette supply separately to fraud against businesses and the public sector. Additionally, estimates for organised waste crime and organised cyber-dependent crime against individuals are included, further adding to the total estimate.

Other changes since UOC 2013 include decreased social and economic cost estimates for OAC. This reflects the general downward trend in the volume of these crimes, which is somewhat offset by the use of more complete unit costs from ESCC 2018. Hence this estimate is not comparable across the reports.

## 1.8. Comparing the social and economic costs of organised crime to ESCC 2018 estimates

As mentioned above, many of the estimates in this report rely on the Home Office unit cost of crime estimates from ESCC 2018 (Heeks, Reed, Tafsiri, & Prince, 2018). In most instances the estimates produced in this report are not directly comparable to the total estimates of the cost of crime in ESCC 2018. A variety of reasons contributes to the lack of comparability between these estimates, these are set out below. There are some general high-level differences between ESCC 2018 and this report:

- ESCC 2018 considers crime in England and Wales only; this report produces estimates for the UK.
- ESCC 2018 focusses on victim-specific crimes, such as homicide and robbery – it does not consider crimes with no direct victim, such as drugs supply, and it does not consider crimes against authorities/government, such as fraud against the government. This report focusses on the organised criminals' activity, rather than working on a victim-basis.
- There are different approaches taken between ESCC 2018 and this report with respect to the costs considered – ESCC 2018 includes the direct costs of crime, whereas this report also considers, for certain crime types, secondary indirect costs of the crime (e.g. drug-related deaths as a result of drugs supply).

This report specifically considers organised crime, and given the difficulty of assigning an organised proportion to total crime, the estimates in this report tend not to use CSEW as the data source for the volume of crime, as is done in ESCC 2018. As a result, the total cost of crime estimates between these two reports is not comparable.

There are certain sections which are distinctly different between the two reports, namely section 2.2.1 'Fraud against businesses and the public sector', and some sections where there is no overlap at all (e.g. IP crime and counterfeiting). The differences between the estimates in this report and ESCC 2018 for fraud are covered specifically in section 2.2.1 'Fraud against businesses and the public sector'.

**Table 2: Summary of estimates of the scale and social and economic cost of organised crime types**

Sector	Proportion of total crime type assumed to be organised	Scale	Social and economic cost	Section reference
Drugs supply	100%	£4,500m	£20,000m	2.1
Economic crime:		£7,300m	£8,400m	2.2
<i>Fraud against businesses and the public sector</i>	<i>Various</i>	<i>£5,900m</i>	<i>£5,900m</i>	2.2.1
<i>Illicit tobacco and cigarette supply</i>	<i>100%</i>	<i>£1,500m</i>	<i>£2,500m</i>	2.2.2
Modern slavery	100%	-	£2,300m	2.3
Child sexual exploitation	-	-	£2,300m	2.4
Organised acquisitive crime:	100%	£680m	£1,500m	2.5

Sector	Proportion of total crime type assumed to be organised	Scale	Social and economic cost	Section reference
<i>Cash and valuables in transit</i>	100%	£4m	£8m	2.5.1
<i>Distraction burglary</i>	100%	£28m	£86m	2.5.2
<i>Metal theft</i>	54%	£19m	£41m	2.5.3
<i>Plant theft</i>	100%	£51m	£490m	2.5.4
<i>Road freight crime</i>	100%	£51m	£63m	2.5.5
<i>Vehicle crime</i>	61%	£520m	£850m	2.5.6
Cyber-dependent crime against Individuals	67%	-	£830m	2.6
IP crime and counterfeiting	22%	£100m	£570m	2.7
Environmental crime:		-	£350m	2.8
<i>Waste crime</i>	100%	-	£350m	2.8.1
<i>Wildlife crime</i>	-	-	-	2.8.2
Firearms supply	100%	-	£190m	2.9
Organised immigration crime:		£110m	£73m	2.10
<i>Abuse of legitimate entry</i>	76%	£38m	£15m	2.10.1
<i>People smuggling</i>	83%	£75m	£31m	2.10.2
Counterfeit currency	100%	£7m	£9m	2.11
Money laundering	-	-	-	Annex E
<b>Totals</b>		<b>£12,700m</b>	<b>£36,700m</b>	
		<b>£13 bn</b>	<b>£37 bn</b>	

**Notes:**

Figures may not sum due to independent rounding.

## 2. Findings

This chapter details the method and data used to inform the scale and the social and economic cost estimates to the UK for each crime type. The assumptions made and changes since UOC 2013 are discussed as necessary. The methods adopted are the same as those used in UOC 2013 unless otherwise specified.

### 2.1. Drugs supply

#### **Key findings:**

- The **scale** of organised drugs supply in FY 2015 to 2016 is estimated to be **£4.5 billion** (ONS, 2017b).
- The **social and economic cost** of organised drugs supply is **£20 billion**. This has increased by £9.3 billion since UOC 2013 due to an increase in the unit costs from ESCC 2018, and because of an increase in the volume of drug-related deaths.
- **Limitations:**
  - the scale estimate is not comparable to UOC 2013 because it uses a different method and focuses on fewer drug types
  - it is assumed that the proportion of acquisitive crimes which are drug-related has not changed since UOC 2013
  - it is assumed that CJS costs of drug offences have not changed significantly since FY 2013 to 2014
  - it is assumed that the average costs relating to physical and emotional harm, lost output, health services, and victim services for drug-related deaths are the same as for homicides
  - it is assumed that the proportion of time spent by police on drug-related crimes in 2015/16 is the same as in FY 2006 to 2007
  - costs to the FCO, the NCA, and expenditure on media and information activity are new additions to the FY 2015 to 2016 estimate since UOC 2013.

The supply of drugs in the UK is likely to be highly organised for most drugs. Although there may be examples in which people grow drugs for their own personal use, this is likely to be a small proportion of the overall organised illicit market for drugs; therefore, as in UOC 2013, it is assumed that 100% of drugs supply in the UK is organised.

The FY 2015 to 2016 scale estimate uses a new estimate produced by ONS for the purpose of including drugs in the UK National Accounts. This follows a different methodology to the scale estimate in UOC 2013 and the results are therefore not directly comparable. This update to the

social and economic cost estimate keeps much of the methodology the same since UOC 2013, but includes some additional costs such as spending on drug-related media and information campaigns as well as non-legal aid defence for drug offences.

The new estimate for the social and economic cost of drugs supply is considerably higher than the UOC 2013 figure. The increase is almost entirely explained by the following three changes:

- An increase in the unit costs of drug-related acquisitive crimes (DRACs) as a result of improvements to the methodology.
- A considerable increase in the number of drug-related deaths.
- The inclusion of non-legal aid defence spending in the costs to the criminal justice system (CJS) for drug possession and supply offences.

### 2.1.1. Scale

The scale of organised drugs supply in FY 2015 to 2016 is estimated to be £4.5 billion.

This estimate is taken from the ONS statistical bulletin 'Consumer Trends, UK' (ONS, 2017b). Since UOC 2013, the ONS have begun to include expenditure on a number of illicit activities, including drug use, in the calculation of the UK National Accounts. As a starting point, they used estimates of the market size in FY 2003 to 2004 for six of the main drug types,<sup>6</sup> which were derived by Pudney *et al.* (2006) using data from the Arrestee Survey (AS) and the Offending, Crime and Justice Survey (OCJS). These estimates are then updated to account for the changes in users, prices, and purity to generate a series of market size estimates over time.

In UOC 2013, the scale of organised drugs supply was estimated to be £3.7 billion. This was estimated by scaling up estimates from the AS and OCJS using population and arrest statistics, for eight drug types.<sup>7</sup> The UOC 2013 estimate of the scale of organised drugs supply is not directly comparable to the new estimate, due to the differences in scope and methodology.

### 2.1.2. Social and economic cost

The social and economic cost of organised drugs supply is estimated to be £20 billion for FY 2015 to 2016. Of this, enforcement costs associated with the supply of drugs constitute £780 million.

The costs considered within this estimate are the consequences of the supply of drugs. Specifically, they are direct costs of DRAC and drug enforcement, and the indirect costs of drug-related deaths, drug-related healthcare, and other costs like drug-related media campaigns. These costs are detailed in Table 3. Most of the data used in the calculation is for England and Wales, and is scaled to the UK population. This carries the implicit assumption that costs and drug prevalence are distributed evenly across the UK and thus may not accurately estimate costs.

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<sup>6</sup> Powder cocaine, crack cocaine, ecstasy, heroin, cannabis, and amphetamines.

<sup>7</sup> Powder cocaine, crack cocaine, ecstasy, heroin, cannabis, amphetamines, magic mushrooms, and LSD.

**Table 3: Social and economic cost of organised drugs supply**

Category	Cost type	Value
Crime	Drug-related acquisitive crime	£8,400,000,000
	Criminal justice costs	£2,300,000,000
<b>Crime total</b>		<b>£10,700,000,000</b>
Deaths	Drug-related deaths	£7,700,000,000
Healthcare costs	Drug-related mental health costs	£34,000,000
	Drug-related overdoses and poisonings	£16,000,000
	Drug-related neonatal disorders	£2,000,000
	Drug-related infectious diseases	£44,000,000
	Drug treatment costs	£680,000,000
<b>Healthcare total</b>		<b>£770,000,000</b>
Enforcement costs	Police spend on drug enforcement	£570,000,000
	Border Force spend on drug enforcement	£75,000,000
	Other enforcement costs	£140,000,000
<b>Enforcement total</b>		<b>£780,000,000</b>
Other costs	Media and information	£200,000
<b>Total</b>		<b>£20,000,000,000</b>

**Notes:**

Figures may not sum due to independent rounding.

*Drug-related acquisitive crime (DRAC)*

A range of acquisitive crimes are considered within the estimate.<sup>8</sup> Data from ESCC 2018 (based on CSEW and PRC data) is used as the main source for the volume of most acquisitive crimes. This volume data relates to England and Wales so is scaled to the UK using population data. These crime volumes are scaled by the proportion thought to be motivated by drug dependency taken from Roe and Vincent (2013). This is based on crimes committed by those who use crack cocaine or heroin at least twice a week, derived from the AS. These proportion estimates have not been updated as the AS has not been undertaken since 2006 and no reliable alternative data has been produced since this survey. Therefore, this estimate assumes that the proportion of acquisitive crimes which are drug-related has not changed since the last AS.

The total cost to society of each type of acquisitive crime is estimated by combining the volume estimates with unit costs from ESCC 2018 (Heeks, Reed, Tafsiri, & Prince, 2018). This approach carries the implicit assumption that DRACs cause the same level of social and economic harm as acquisitive crimes which are not drug-related. An exception to this method is 'theft from shop' offences, which are not directly comparable to the ESCC 2018 'commercial

<sup>8</sup> Theft of vehicle, theft from vehicle, domestic burglary, commercial burglary, commercial robbery, personal robbery, theft from a person, theft from shop, other theft, non-investment fraud and credit fraud.



theft' estimate. For these offences, the unit cost from UOC 2013, uplifted to FY 2015 to 2016 prices is used. This is shown in Table 25 in Annex B.

Overall, DRAC is estimated to cost £8.4 billion.

This updated estimate of drug-related acquisitive crime is approximately £3.3 billion higher in real terms than in UOC 2013 despite the estimated number of DRAC offences falling considerably since UOC 2013. The biggest contributors to this increase are higher unit cost estimates for domestic burglary, commercial robbery, and fraud.

- In the case of domestic burglary, the number of offences has fallen by around 10%, but the updated estimate of the social and economic harm caused has increased by almost half (Heeks, Reed, Tafsiri, & Prince, 2018). This does not mean that burglary offences have become more severe, only that the assessment of the damage is now more complete by considering a wider range of costs than before.
- Most of the cost increase in commercial robbery is primarily caused by a large increase in the estimated volume of offences; this may be explained by the difference in data sources used for ESCC 2018, which capture crimes against businesses more effectively than the OCJS and AS used in UOC 2013. The unit cost estimate for commercial robbery has also increased by around 50%, compounding the increase in total cost.
- Fraud costs have increased considerably, almost entirely because of increases in estimated volume. It is difficult to identify the cause of this increase because data sources have changed considerably since UOC 2013 and fraud offences are now categorised differently, meaning volumes are not directly comparable with UOC 2013.

### *Criminal justice costs*

These are based on the CJS costs estimated in ESCC 2018, which in turn is based on reported expenditure by the Ministry of Justice in England and Wales for FY 2013 to 2014, uplifted to FY 2015 to 2016 prices and scaled to cover the whole of the UK (Heeks, Reed, Tafsiri, & Prince, 2018). The costs considered cover those related to the Crown Court, legal aid, magistrates courts, prison, probation, prosecution, National Offender Management Services, and Youth Justice Board for drug possession and supply offences. For consistency with ESCC 2018, the value of private legal defence spending (i.e. not legal aid defence) and the opportunity cost of jurors' time are also estimated using legal aid and criminal justice statistics. These criminal justice costs amount to £2.3 billion.

These calculations only cover drug possession and supply offences, as criminal justice costs for drug-related acquisitive crimes are accounted for in the ESCC 2018 estimates applied to these figures. The CJS estimate assumes that CJS costs of drug offences have not changed significantly since FY 2013 to 2014. The ratio between private legal cost and legal aid cost is assumed to be the same for drug offences as across all crimes.

This estimate of CJS costs for drug-related offences is considerably higher than that in UOC 2013 (£680 million). This is almost entirely caused by the inclusion of non-legal aid defence spending and, to a lesser extent, the opportunity cost of jurors' time, which together account for around 90% of the £1.6 billion real increase since UOC 2013.

## *Deaths*

The number of drug-related deaths registered in 2015 is obtained from National Statistics across England and Wales, Scotland, and Northern Ireland (ONS, 2016b; National Records for Scotland, 2016; Northern Ireland Statistics and Research Authority, 2015). A consistent UK-wide definition of drug-related deaths has been established since UOC 2013 was published, so the figures from each geography can be added together without the need for the adjustments which were applied in UOC 2013. This gives around 3,300 drug misuse deaths in the UK in 2015.

The number of drug-related deaths in the UK is multiplied by a 'value of a life' estimate (approximately £2.3 million). This 'value of a life' figure is derived by adjusting the ESCC 2018 estimate of the social and economic cost of a homicide (Heeks, Reed, Tafsiri, & Prince, 2018). This carries the assumption that the average costs relating to physical and emotional harm, lost output, health services and victim services are the same for drug-related deaths as for homicides. This may not accurately represent drug-related deaths in all aspects, but is the best available proxy with which to estimate these costs. The costs relating to insurance, defensive expenditure, police costs and CJS costs are removed as it is assumed that these costs are negligible in the average drug-related death. This assumption may underestimate the cost of drug-related deaths as some of these costs may apply in certain cases, for example, there may be some small-scale police investigations. The differences between the construction of the homicide and drug misuse death cost estimates are detailed in Table 27 in Annex B.

This gives an estimate of £7.7 billion for the cost of drug-related deaths in the UK in FY 2015 to 2016.

The cost of drug-related deaths has risen by approximately £4.6 billion in real terms since UOC 2013, from £3.2 billion to £7.7 billion. The vast majority of this increase is attributable to a significant rise (around 80%) in the number of drug-related deaths since UOC 2013. The remainder of the increase is driven by a higher 'value of a life' estimate. According to Taylor (2016), the sudden increase in drug misuse deaths in FY 2013 to 2014 was likely caused by an increase in the availability of heroin, following a fall in deaths during a period when heroin purity and availability was significantly reduced. This report also acknowledges that there are likely to be many factors that have contributed to this rise, including most notably an ageing cohort of heroin users, many of whom started to use heroin in the 1980s and 1990s, who are now experiencing cumulative physical and mental health conditions that make them more susceptible to overdose. Other factors reported include increasing deaths among women, improved reporting, and an increase in polydrug and alcohol use (Taylor, 2016).

## *Healthcare costs*

Healthcare costs are made up of four categories: drug-related mental and behavioural disorders; drug-related overdoses and poisonings; drug-related neonatal disorders; and drug-related infectious diseases (HIV and Hepatitis C infections). Due to insufficiently granular data, other costs, such as reduced quality of life or emotional costs of drug-related diseases, are not estimated.

For each of the four categories, healthcare costs are estimated by multiplying the number of episodes by an average unit cost per episode. Total healthcare costs are therefore estimated to be £96 million in FY 2015 to 2016.

The number of episodes for drug-related mental and behavioural disorders, overdoses and poisonings, and neonatal disorders are all obtained from the 2016 Hospital Episode Statistics for England and the 2016 Patient Episode Data for Wales (NHS Digital, 2016; NHS Wales Informatics Services, 2016). These are scaled up by population to account for the whole of the UK. The number of drug-related HIV and Hepatitis C infections is taken from 'Shooting Up: Infections among people who injected drugs in the UK, 2015' (Public Health England, 2016).

Average unit costs for all four categories above are taken from the FY 2015 to 2016 National Schedule of Reference Costs, collected by National Health Service (NHS) trusts and NHS foundation trusts (Department of Health, 2016). For drug-related infectious diseases, it is assumed that drug-related HIV and Hepatitis C infections are no more severe or costly to treat than similar instances that are not caused by drug use. This assumption may lead to an underestimation of costs if drug users typically enter treatment later than other victims.

For mental and behavioural disorders, overdoses and poisonings, and neonatal disorders, the reference costs are also adjusted to take account of the length of stay, severity and level of emergency of drug-related episodes specifically. The average inpatient stay for drug-related mental and behavioural disorders, and drug-related neonatal disorders is around ten days. Therefore, for these categories, the average unit costs for long-stay non-elective hospital visits<sup>9</sup> are used. The average stay for drug-related overdoses and poisonings is around one day, so the average unit cost of short-stay non-elective hospital visits is used. The costs are also adjusted for severity for these categories by weighting the average unit cost by the number of episodes in each level of severity. This could over or underestimate costs if the severity of drug-related conditions is different to the overall average. For example, if infectious diseases caused by drug use are on average more severe than infectious diseases caused by non-drug factors, then costs would be underestimated. The additional cost of treating emergencies is also added by multiplying the number of drug-related episodes which are emergencies by the average cost of providing emergency treatment. This assumes that the additional cost of an emergency admission does not vary by diagnosis, and is no more expensive for drug-related diagnoses than any other. These calculations are shown in Table 28 in Annex B.

### *Drug treatment costs*

The cost of drug treatment in FY 2015 to 2016 is estimated to be £680 million. This estimate is based on the FY 2014 to 2015 estimate provided in the Drug Strategy Evaluation (DSE), an evaluation of the 2010 Drug Strategy because since 2013, funding for drug treatment has been decentralised and there is no longer a ring-fenced budget for drug treatment (Home Office, 2017).

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<sup>9</sup> Long-stay is defined as two or more days. Non-elective visits are where the patient did not admit themselves to the hospital voluntarily; this is likely to be the case in most drug-related hospital admissions.

In the DSE, the total spend on drug treatment in England was estimated from local authority reports on their annual forecasted and actual public health expenditure to the Department for Communities and Local Government. This cost is uplifted to FY 2015 to 2016 prices and scaled by population to estimate the treatment cost across the UK. It should be noted that the DSE spend figure relating to treatment for young people (under 18s) is an overestimate as it includes the cost of both drug and alcohol treatment.

### *Enforcement*

The enforcement costs considered within this estimate are those to the police, Border Force, the Foreign and Commonwealth Office (FCO), and NCA from drug enforcement, and the cost to police forces of implementing the Drug Testing on Arrest (DToA) scheme. All of these costs are based on the estimates produced in the DSE (Home Office, 2017).

Police costs of drug enforcement are estimated using the average cost per drug offence in FY 2014 to 2015 from the DSE<sup>10</sup> and uplifting it to FY 2015 to 2016 prices using a GDP deflator (HM Treasury, 2018). This is multiplied by the total number of drug offences in England and Wales in FY 2015 to 2016 from PRC data, and scaled to the UK population. This method assumes that the proportion of time spent by police on drug-related crimes is the same in FY 2015 to 2016 as it was in FY 2006 to 2007, which is the most recent year in which activity-based costing data are available.

Border Force costs of drug enforcement were estimated in the DSE for FY 2014 to 2015 by applying the proportion of officers' time spent on drug enforcement activities to annual Border Force expenditure. This is scaled to FY 2015 to 2016 prices for this estimate.

The costs to FCO and NCA of drug enforcement in FY 2014 to 2015 were reported in the DSE based on estimates from each organisation. For this report, these figures are scaled to FY 2015 to 2016 prices. The inclusion of these costs contributes somewhat to the overall increase in the social and economic cost of drugs supply since UOC 2013 given that these were not previously considered.

The cost of DToA was calculated in the DSE using data on the number of tests carried out by 19 police forces in England and Wales over the first three months of 2015. This was scaled up to estimate the total number of tests carried out over the year across all forces using DToA, and multiplied by an average cost per test obtained from three forces who accounted for 11% of total drug tests. The DSE estimate of DToA cost is used here, uplifted to FY 2015 to 2016 prices.

### *Drug-related media and information activities*

This is based on the estimate of the cost of media and information campaigns intended to enhance awareness and information relating to drug use in the DSE, uplifted to FY 2015 to 2016 prices. This is estimated to be approximately £200,000.

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<sup>10</sup> This estimate was produced by applying activity-based costing data from FY 2006 to 2007 (the most recent year in which it was reliably collected) to the FY 2014 to 2015 total police budget.

The inclusion of this category of costs contributes to some extent to the overall increase in the social and economic cost of drugs supply since UOC 2013, since these costs were not considered previously.

The DSE also provides estimated costs for various other policy interventions in the 2010 Drug Strategy, but they are not considered within this report as they have a broad range of other objectives in addition to reducing drug use. Examples of these are early intervention activities for young people, such as personal, social, health, and economic (PSHE) Education, and non-treatment rehabilitation activities such as the Work Programme.

### 2.1.3. Summary

Overall, the social and economic cost of organised drugs supply is estimated to be £20 billion for FY 2015 to 2016.

This estimate is an improvement on that in UOC 2013 due to more complete unit cost estimates in ESCC 2018 and also an increase in the scope of items included in the calculation. There are still important limitations in this estimate, one being that this is a top-down approach, and hence is only indicative of the cost of drugs supply. The estimates cannot be disaggregated to estimate the unit costs of specific drugs or specific types of drug users. The estimates of government expenditure used here should be treated with particular caution, as high-level assumptions are made on the proportion of costs which are attributable to drug-related activity specifically. For example, Border Force officers will search vehicles for drugs, smuggled goods, weapons etc. so the time spent searching is not clearly delineated between different offences. Multiple additional analytical assumptions are used to inform this estimate, detailed above, which are further limitations of the estimate. For example, for DRAC it is assumed that the proportion of acquisitive crime types which are drug-related has not changed since the last AS in 2007.

Given that a lot of the change in cost since UOC 2013 is attributable to changes in methodology or assumptions, much of the analysis is not directly comparable with the UOC 2013 estimate, and most of the change should not be interpreted as a worsening of the overall situation.

Despite evidence that overall drug use has remained relatively stable since FY 2011 to 2012, as reported in the CSEW, this estimate is considerably higher than that of UOC 2013, increasing by around £8.9 billion in real terms. The majority of this increase is due to changes in methodology or assumptions, rather than by a real increase in the costs of drugs supply. The most important factor behind the cost increase, which is not related to a change in methodology or assumptions, is the increase in drug-related deaths, discussed above. Nearly all of the total increase in costs is driven by increased estimates for DRAC, criminal justice costs and drug-related deaths. The remainder of the increase is mainly driven by greater estimated costs of police spending, and the inclusion of additional costs that were not considered in UOC 2013. These are slightly offset by a fall in expenditure on drug treatment. A detailed breakdown of the changes in costs since UOC 2013 can be found in Table 29 in Annex B.

## 2.1.4. Results from UOC 2013

In UOC 2013, the scale of organised drugs supply was estimated to be £3.7 billion. The social and economic cost was estimated at £10.7 billion.

The scale of drugs supply was estimated using the total amount spent by individuals on illegal drugs. These were estimated using data from the OCJS and AS.

The social and economic cost of organised drugs supply was calculated by adding a range of estimates of drug-related costs to society, including the costs of enforcement, healthcare and deaths, drug-related crime, and other costs.

## 2.2. Economic crime

In this report the scope of economic crime considered is only partial, covering only organised fraud against businesses and the public sector and organised illicit tobacco and cigarette supply. Money laundering is not estimated within this report given insufficient robust data with which to inform estimates; instead a short literature review is included in Annex E. Corruption is also not included within this report due to insufficient robust data.

The scale of economic crime is therefore estimated to be £7.3 billion. The social and economic cost is estimated to be £8.4 billion. These estimates differ because the social and economic cost of illicit tobacco and cigarette supply is partial, considering only the lost tax to HMRC and some enforcement costs. Additional costs, such as losses to legitimate businesses, or health costs as a result of using lower quality illicit goods, are not monetised within this report. The fraud figure produced in this report is lower than that of UOC 2013 because the scope is narrower; this is discussed below.

### 2.2.1. Fraud against businesses and the public sector

#### **Key findings:**

- The **scale** of organised fraud against businesses and the public sector in FY 2015 to 2016 is estimated to be **£5.9 billion**. This is based on the AFI 2013.
- The **social and economic cost** of organised fraud against businesses and the public sector is **£5.9 billion**. This includes the losses from such fraud, as in the scale estimate, and £28 million of CJS costs.
- **Limitations:**
  - The scope of fraud considered is partial and does not consider organised fraud against individuals;
  - illicit tobacco is considered separately

These two limitations mean that the estimates are not comparable to UOC 2013.

- The proportion of fraud attributable to organised crime is from UOC 2013 in the absence of updated data and this fails to reflect any change in the nature of organised activity in fraud since FY 2010 to 2011.

Fraud covers a wide variety of criminal activities and scams, with the common element being “*when trickery is used to gain an unfair advantage, which is often financial, over another person*” (Action Fraud, 2017). Fraud takes place in different contexts, uses a plethora of methods, has a variable time horizon, and can be both traditional and online. The wide-ranging nature of fraud is always changing; fraud is migrating online and the criminals engaged in fraud adapt to the changing enforcement landscape and opportunities available.

These estimates are only a partial reflection of the cost of organised fraud as they consider a limited variety of frauds against businesses and the public sector. The updated estimates exclude both the tobacco tax gap, which is considered separately within section 2.2.2 ‘Illicit tobacco and cigarettes supply’, and organised fraud against individuals, which is not included in the estimates because it was concluded that there was insufficient data to appropriately and robustly reflect the current situation and scope of this type of organised fraud specifically.<sup>11</sup> Therefore, these updated estimates are lower than those in UOC 2013 and are not directly comparable.

### Scale

The total scale of organised fraud against businesses and the public sector in the UK in FY 2015 to 2016 is estimated to be £5.9 billion based on the estimated losses from various fraud types.

This estimate uses the previous UOC 2013 figure as a starting point, which was based on the AFI produced by the now defunct National Fraud Authority (NFA). Given the dissolution of the NFA, there has been no further government fraud cost estimates since the 2013 AFI publication.<sup>12</sup> This report updates the organised fraud estimate by updating the figures to FY 2015 to 2016.

The fraud types included in this estimate are based on the list detailed in the NFA AFI reports (FY 2011 to 2013). This is consistent with UOC 2013 but does not reflect any potential changes in the nature of organised fraud since the last report and hence may not accurately represent organised fraud today. However, this is the best available estimate given the lack of data available to accurately estimate organised fraud specifically. A significant challenge in estimating the scale and cost of organised fraud is approximating the degree to which different types of fraud are organised, and evidence on this is very limited, hence the reliance on the data used previously in UOC 2013. There is a significant change in this estimate compared with the UOC 2013 estimate; fraud against the individual is excluded from this update for a number of reasons explained below. This FY 2015 to 2016 estimate of organised fraud is therefore only partial, considering only a limited variety of frauds against the public sector and against businesses.

- Mass-marketing fraud (MMF)<sup>13</sup> was the only aspect of fraud against the individual included in the previous estimate. There are many other types of fraud against the individual and the categories of MMF with available estimates fail to reflect PRC or what

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<sup>11</sup> The CSEW FY 2015 to 2016 experimental statistics on fraud against individuals provides, for the first time, a better understanding of the scale of fraud and a more accurate representation of what fraud against individuals looks like. However, these data could not be used to inform an estimate of organised fraud against individuals specifically, because we have no robust and reliable data with which to estimate how much of such activity is attributable to organised criminals.

<sup>12</sup> Although there has been a more recent AFI produced by Portsmouth and Experian in 2016 (University of Portsmouth, 2016). The range of fraud included in the 2016 AFI is heavily based on previous AFI publications but there are significant methodological changes.

<sup>13</sup> MMF is when you receive an uninvited contact by email, letter, phone or adverts, making false promises to con you out of money (ActionFraud).

is now known from the new CSEW data. Hence it does not provide an accurate picture of fraud against individuals today.

- The estimates for organised MMF in the previous AFI reports are now significantly outdated. Estimates were based on a 2006 survey commissioned by the Office for Fair Trading and loss data was extrapolated from this. We are not aware of any more recent updates with a similarly robust methodology to accurately update the figures to FY 2015 to 2016.
- Data from CSEW FY 2015 to 2016 estimates that there were 3 million victims of fraud overall (some of which may be linked to MMF). Yet the previous estimate was of 3.2 million victims of mass marketing fraud alone. Thus new data throws into question the validity of the previous estimate.
- It has not been possible to use the CSEW FY 2015 to 2016 data on fraud against individuals to estimate the social and economic cost of organised fraud against individuals because of insufficient data with which to inform an estimate of the proportion of organised criminal involvement in this activity. In UOC 2013, the estimate for organised fraud against individuals was based on an assessment of how much of MMF was organised. Given that the CSEW data covers a much wider variety of fraud types, this assessment from UOC 2013 cannot simply be applied to the CSEW data. Hence, this aspect of fraud is not included in this update.
- Given the above, this updated estimate explicitly excludes fraud against the individual as it is not representative and there is insufficient data to provide an alternative estimate, thus it could potentially be misleading. Instead it considers only aspects of fraud against the public sector and against businesses where more recent data is available alongside a suitable estimate of the proportion that is linked to organised crime. There is, therefore, a significant evidence gap with respect to assessing organised fraud against the individual.

A further limitation of this estimate is with respect to tax fraud. This section considers only criminal attacks (minus the tobacco tax gap, discussed below). Although this is consistent with UOC 2013, this does not provide a broad illustration of the extent and different types of tax fraud. The other areas of tax fraud which would be included if possible are the hidden economy, evasion, vehicle licence evasion and tax credit fraud. There is currently insufficient data to include these areas with a proportion attributed to organised crime. Therefore, this figure for organised fraud is likely to be an underestimate.

The majority of the scale of organised fraud is made up of OCGs undertaking coordinated and systematic attacks on HMRC. This includes smuggling goods such as alcohol or tobacco, VAT repayment fraud and VAT missing trader intra-community fraud (HM Revenue & Customs, 2016a). These attacks are wholly attributed to organised crime and total £4.8 billion in scale in FY 2015 to 2016 (HM Revenue & Customs, 2016a). As illicit tobacco is contained within a separate section, the £1.8 billion of the tax gap attributed to illicit tobacco through avoidance of VAT and duty has been removed from the total. This gives an estimate of £3 billion.

Banking and plastic card fraud has increased greatly since 2012. Financial Fraud Action UK's report on fraud in the payment industry in 2015 totalled losses across payment cards, remote banking and cheques at £760 million in 2015, an increase of 26% since 2014 (Financial Fraud Action UK, 2016). These are often also fraud against individuals, but since most individuals are



reimbursed, the direct costs fall upon the businesses, and hence are included in this estimate. The scale of organised banking and plastic card fraud is estimated to be £610 million, based on applying Home Office estimates to proportion the sub categories to organised fraud (Dubourg & Prichard, 2008).<sup>14</sup>

Estimates for other aspects of organised fraud are also updated to FY 2015 to 2016. These include insurance fraud; National Savings and Investment (NS&I) Fraud; benefit fraud; and telecommunications fraud (Insurance Fraud Bureau, 2016; Department of Work and Pensions, 2016; Ofcom, 2016; National Savings & Investments, 2016). The proportions of organised criminality for these fraud types have been kept constant since UOC 2013 because of an absence of data with which to update these assumptions. These assumptions from UOC 2013 were based on industry estimates of the organised proportion of particular fraud types. These updated figures are shown in Table 4.

It has not been possible to update the estimate for mortgage fraud. This figure reflects an estimate of organised mortgage fraud as calculated for UOC 2013, scaled to FY 2015 to 2016 prices using a GDP deflator in the absence of any new data (HM Treasury, 2018).

In a similar fashion to the last report, this report does not include charity fraud as there is no evidence or data to estimate the scale or the extent to which it is organised.

**Table 4: Scale of organised fraud against businesses and the public sector**

Fraud type	Estimate
Banking fraud <sup>a</sup>	£610,000,000
Insurance fraud <sup>b</sup>	£550,000,000
NS&I fraud	£150,000
Benefit fraud	£190,000,000
Tax fraud <sup>c</sup>	£3,000,000,000
Telecommunications fraud <sup>d</sup>	£450,000,000
Mortgage fraud	£1,100,000,000
<b>Total<sup>e</sup></b>	<b>£5,900,000,000</b>

**Notes:**

- a) Includes: plastic card fraud – card-not-present (theft of genuine card details that are then used to make a purchase); counterfeit (a fake card using compromised details from the magnetic stripe of a genuine card); lost/stolen card; mail-non-receipt (where cards are intercepted on their way to the genuine cardholder); card ID theft; banking fraud – online, phone, and cheque fraud (forged, counterfeit, and fraudulently altered cheques) (National Fraud Authority, 2013).
- b) Includes: staged motor vehicle accidents and undetected insurance fraud.
- c) Made up of ‘criminal attacks’ less the ‘tobacco’ component, based on the HMRC tax gap which is the difference between the amount of tax that is due and the amount that is collected.
- d) Involves the theft of services or deliberate abuse of voice and data networks (National Fraud Authority, 2013).
- e) Figures may not sum due to independent rounding.

<sup>14</sup> Dubourg and Prichard (2008) is based on the proportion of organised involvement on discussions with the Dedicated Cheque and Plastic Crime Unit.

The main limitation of this estimate is that the types of fraud included are only a partial sample of frauds against businesses and the public sector, as discussed above. Further, the reliance on industry estimates of the proportion of each type of fraud that is attributable to organised crime from UOC 2013 is a limitation since this fails to reflect any changes that may have occurred in organised criminals' activity in this area, but this is still the best available information on these crimes.

### *Social and economic cost*

The total social and economic cost of organised fraud is estimated to be £5.9 billion. This is not directly comparable with UOC 2013 due to the exclusion of illicit tobacco and MMF (as an estimate of fraud against individuals).

The main social and economic costs of fraud considered in this report are the financial losses experienced by the corporate and governmental victims of fraud,<sup>15</sup> which is equal to the scale estimated above (£5.9 billion).

The additional social and economic costs of fraud are the costs to the CJS. The proportion of organised fraud losses of total fraud losses has been used, taken from the NFA's AFI (2013). This gives an approximate proportion of fraud losses due to organised criminality of 17%. For this report, it has not been possible to update the CJS estimates, instead the previous UOC 2013 CJS costs have been updated to FY 2015 to 2016 prices. The profile of fraud included in the CJS costs will be different to what is included in this estimate, but given the lack of available data, it is the best illustration available. The subsequent CJS costs resulting from organised fraud are £28 million.

It has not been possible to estimate other non-monetary victim costs that are within scope for organised fraud. The direct costs incurred by businesses and the public sector excluded from this estimate include the social and emotional costs incurred by them as the victims of fraud alongside any disruption to their activities resulting in economic harm both to themselves and society. Preventative costs are similarly not included. ESCC 2018 estimates the costs to victims of fraud against the individual. These are not used in this estimate given that the scope of this estimate is fraud against businesses and the public sector, therefore these additional social and economic costs are unlikely to be applicable. These would include the costs incurred by individuals and businesses to avoid becoming victims of fraud, government expenditure on preventing and tackling organised fraud and the cost of fraud prevention bodies. These are key limitations of this social and economic cost estimate, in addition to those outlined in the scale estimate above.

This estimate of the social and economic cost of organised fraud (£5.9 billion) is not comparable to the £4.7 billion cost estimate of fraud in the ESCC 2018 report. The two estimates cover different aspects of fraud and draw on different data sets to inform the estimates. The figure here provides only a partial estimate of the cost of organised fraud against businesses and the public sector, based on the AFI. The ESCC 2018 estimate considers only fraud against individuals, based on the CSEW, and does not differentiate

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<sup>15</sup> In this estimate the losses to victims considered are only businesses and the public sector.

between organised and unorganised fraud in the categories it includes. Therefore, the two estimates should be considered independently of one another and not compared.

### *Results from UOC 2013*

In UOC 2013, the scale of organised fraud was produced using the AFI 2011 alongside figures from HMRC on criminal attacks on the tax system. The scale of organised fraud was estimated at £8.9 billion. The social and economic cost estimate of £8.9 billion also included an additional £19 million of costs to the CJS from organised fraud.

#### 2.2.2. Illicit tobacco and cigarettes supply

##### **Key findings:**

- The **scale** of organised illicit tobacco and cigarette supply in FY 2015 to 2016 is estimated to be **£1.5 billion**.
- The **social and economic cost** of organised illicit tobacco and cigarette supply is **£2.5 billion**.
- **Limitations:**
  - it is assumed that 100% of supply is organised given the coordination needed to smuggle goods but this may overestimate activity
  - the social and economic cost estimate is partial, monetising only the tobacco tax gap and enforcement costs to HMRC
  - losses to legitimate business, health costs to users, and enforcement costs to other institutions are not estimated

Organised illicit tobacco supply is a lucrative market for organised criminals. There is substantial profit to be made even with small shipments of illicit tobacco, a van full having a profit potential of up to £60,000 (Edwards & Jeffray, 2014). It attracts considerable attention from organised crime due to it being considered high profit, low risk.

There are three primary forms of illicit tobacco that are smuggled into the UK:

- Illicit whites (cigarettes with no legal market in the UK, manufactured legally abroad specifically for the illicit market in other countries such as the UK)
- Counterfeit cigarettes
- Genuine cigarettes smuggled in to avoid duty

It is assumed that 100% of illicit tobacco and cigarette supply is organised because of the degree of planning and coordination required to smuggle goods. However, it could be that some of such activity is performed by individuals acting alone, but there is a lack of evidence to indicate how much activity this might constitute. Therefore, the figures presented here may overestimate the level of organised involvement in this crime.

##### *Scale*

The scale of organised illicit tobacco supply is estimated to be £1.5 billion in FY 2015 to 2016.

The scale of organised illicit tobacco supply is assumed to be the consumption of illicit tobacco within the UK. It is assumed that all illicit tobacco consumed within the UK must be smuggled into the country since the quantity of UK-produced cigarettes is insignificant compared to the quantity consumed.<sup>16</sup> Given the coordination and planning required to smuggle goods, it is assumed that all of this smuggling is organised. Hence, the illicit market share and volume of cigarettes from HMRC's tobacco tax gap FY 2015 to 2016 report can be used directly as the scale of illicit tobacco supply.

Taking the central estimates, HMRC estimates the illicit cigarette market is 13% of overall cigarette consumption, resulting in the total consumption of illicit cigarettes of 5 billion (HM Revenue & Customs, 2016b). For hand-rolling tobacco (HRT) this share is even higher, with 32% of the overall HRT market estimated to be illicit, resulting in the total consumption of illicit HRT of 3.2 million kilograms.

Although these figures give a scale, a volume or weight estimate of tobacco is slightly abstract. Trading Standards estimates that an illegal pack of 20 cigarettes costs £3.50 (compared to the high-street price of around £8) and a 50g pouch of illegal HRT at £9 (compared to £18 for the legal product) (Trading Standards, 2016). Using this to create unit costs for cigarettes and per gram of HRT gives an estimate of the revenue of the illicit tobacco market at £1.5 billion in FY 2015 to 2016. A breakdown of this estimate is shown in Table 5.

**Table 5: Scale of organised illicit tobacco and cigarette supply**

	Volume	Illegal price	Total cost
Tobacco	3,200,000 kg	£9.00 <sup>a</sup>	£580,000,000
Cigarettes	5,000,000,000	£3.50 <sup>b</sup>	£880,000,000
<b>Total</b>			<b>£1,500,000,000</b>

**Notes:**

- a) Price for a 50g pouch of illegal HRT (Trading Standards, 2016).
- b) Price for an illegal pack of 20 cigarettes (Trading Standards, 2016).
- c) Figures may not sum due to independent rounding.

*Social and economic cost*

The social and economic cost of organised illicit tobacco and cigarette supply is estimated to be £2.5 billion.

The primary cost is the loss to the exchequer but there are a range of other costs, from enforcement across various agencies to the cost of profits to legitimate business. Some of these have been monetised while others can only be qualitatively described.

The most significant cost of illicit tobacco is the resultant tax gap from the illegitimate sales. The HMRC tax gap for illegal tobacco and cigarettes is £2.4 billion for FY 2015 to 2016 (HM Revenue & Customs, 2016b). This is comprised of VAT and duty. The VAT gap for cigarettes is estimated to be £300 million and the loss of duty at £1.3 billion in FY 2015 to 2016 (HM Revenue

<sup>16</sup> As of May 2016 there is only one manufacturer of cigarettes in the UK (Ibisworld, 2016).

& Customs, 2016b). This takes into effect the increased consumption of tobacco due to the price being significantly lower, as demonstrated above. For HRT, the VAT gap is estimated at £200 million and the loss of duty at £600 million (HM Revenue & Customs, 2016a).

The enforcement costs of illicit tobacco supply are split between Border Force and HMRC. For the purposes of this report, Border Force enforcement costs could not be produced. HMRC estimated they spent approximately £69 million against illegal tobacco smuggling in FY 2011 to 2012 (National Audit Office, 2013). HMRC have re-calculated this spend with the same methodology for FY 2015 to 2016, giving a cost of £80 million. There are likely to be additional enforcement costs from police forces and NCA, however this has not been possible to estimate.

**Table 6: Social and economic cost of organised illicit tobacco and cigarette supply**

Category	Total cost
VAT gap – cigarettes	£300,000,000
VAT gap – HRT	£200,000,000
Lost duty – cigarettes	£1,300,000,000
Lost duty – HRT	£600,000,000
<b>Tax gap total</b>	<b>£2,400,000,000</b>
HMRC enforcement costs	£80,000,000
<b>Total</b>	<b>£2,500,000,000</b>

**Notes:**

Figures may not sum due to independent rounding.

The scope of this estimate is limited since the loss to legitimate business as a result of the illicit supply of tobacco has not been estimated. This is thought to be substantial, with the tobacco industry generally a key advocate for the fight against illicit tobacco. It does not just cause a loss to the tobacco industry but also to those who stock and sell legitimate tobacco and therefore suffer lower sales. Similarly, health costs as a result of illicit tobacco are not estimated. It is assumed that there is an additional consumption of tobacco due to the price differential with legitimate sources which would contribute towards higher health costs. It is also likely that illicit tobacco is a lower quality than legal tobacco for a variety of reasons. However, difficulties in specifically estimating the health costs of illicit tobacco and cigarette use mean that this cost is not considered.

*Results from UOC 2013*

Organised illicit tobacco and cigarette supply was not included as a standalone section within the previous report. The loss to the exchequer through HMRC’s tax gap was included within the cost of organised fraud due to its inclusion within the criminal attacks category of the tax gap.

## 2.3. Modern slavery

### **Key findings:**

- It has been estimated that there were **7,679 victims** of organised modern slavery. This section considers adult and child victims of modern slavery for labour exploitation and adult victims of modern slavery for sexual exploitation.
- The **social and economic cost** of organised modern slavery is around **£2.3 billion**, based on Reed *et al.* (2018) and Silverman (2014).
- **Limitations:**
  - the scope is partial to eliminate double counting with CSE and to ensure more accurate proportioning to organised crime
  - the unit costs are deflated to FY 2015 to 2016 prices

In England and Wales, modern slavery is defined within the Modern Slavery Act 2015, which categorises offences of slavery, servitude and forced or compulsory labour, and human trafficking (NCA, 2017). Legislation is in place in Scotland and Northern Ireland to provide for equivalent offences within those jurisdictions. The types of modern slavery considered within this report are labour exploitation and sexual exploitation, based on 'The economic and social cost of modern slavery' (Reed, Roe, Grimshaw, & Oliver, 2018).

Domestic servitude, which is included in Reed *et al.* (2018), is not included in the estimates because of the difficulty in robustly defining how much of such activity is attributable to organised crime, given the lack of data and evidence. This is a limitation of this estimate which as a result will underestimate activity. Given the complex nature of modern slavery for labour and sexual exploitation, and the level of coordination and planning required for such activity, it is assumed that 100% of it is attributable to organised criminals.

The scope of victims of modern slavery includes both adults and children. However, to avoid double counting with section 2.4 'Organised child sexual exploitation', the child victims of modern slavery for sexual exploitation are excluded from the estimate of modern slavery here. This should be noted as a limitation of this modern slavery estimate, which is therefore only partial in its scope. As a result, the costs used in this estimate differ slightly to those in the Reed *et al.* (2018) paper.

Modern slavery is a unique crime and much of the activity is hidden and thus very difficult to measure. An adjustment has been made to account for unreported cases.

UOC 2013 produced only a partial estimate of modern slavery, considering only human trafficking of foreign women for sexual exploitation due to limited availability of robust data on which to base further estimates. The methodology used in UOC 2013 is different to that used in this report, therefore the two estimates are not comparable. This updated estimate does improve upon that in UOC 2013, however, by considering a broader scope of modern slavery and more complete social and economic costs.<sup>17</sup>

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<sup>17</sup> UOC 2013 considered only victim costs (constituting the harms sustained by victims, physical and emotional costs, and

### 2.3.1. Scale

There were an estimated 10,000 to 13,000 total victims of modern slavery in the UK in 2013 (Silverman, 2014). While this includes reported and unreported victims, no differentiation by victim type (adult, children) and type of modern slavery (labour/sexual exploitation, domestic servitude) is provided.

Using the mid-point of the Silverman (2014) estimate (11,500) in combination with the number of reported victims of modern slavery to the National Referral Mechanism (NRM), as highlighted in Reed *et al.* (2018), it has been estimated that there were 7,679 total victims of organised modern slavery for labour exploitation of adults and children, and sexual exploitation of adults in 2013. As mentioned above, domestic servitude and CSE are excluded. This figure is not adjusted to FY 2015 to 2016. It is implicitly assumed that the proportionate breakdown by victim type and type of modern slavery is the same for both reported and unreported victims.

A monetary estimate of the scale of modern slavery is not produced here because of the lack of robust data with which to approximate the potential revenue victims of modern slavery for labour and sexual exploitation may generate within a year. Instead, the number of victims of modern slavery indicates the known prevalence of this activity.

It is estimated there were 6,203 total adult victims of modern slavery for labour and sexual exploitation, and 1,477 total child victims of modern slavery for labour exploitation in 2013. These figures are based on those reported to the NRM and Silverman (2014). These figures are not adjusted to FY 2015 to 2016. A breakdown of victims by type of modern slavery is shown in Table 7.

**Table 7: Scale of modern slavery**

Victim	Modern slavery type	Number of victims <sup>a</sup>
Adults	Labour exploitation	3,661
	Sexual exploitation	2,542
<b>Adults total</b>		<b>6,203</b>
Children	Labour exploitation	1,477
<b>Children total</b>		<b>1,477</b>
<b>Total victims</b>		<b>7,679</b>

**Notes:**

a) Volumes based on figures reported to the NRM and Silverman (2014).

### 2.3.2. Social and economic cost

The social and economic cost of organised modern slavery is estimated to be approximately £2.3 billion.

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restrictions placed on victims' quality of life) and CJS costs of enforcement against trafficking offences (Mills, Skodbo, & Blyth, 2013).

This estimate considers costs in anticipation, costs as a consequence, and costs in response to the crime, based on the mid-point unit costs estimated in Reed *et al.* (2018). As with the scale estimate, this estimate is partial given that it only considers modern slavery for labour exploitation of adults and children, and sexual exploitation of adults. The mid-point unit costs in Reed *et al.* (2018) are adjusted to account for this limited scope of victims, and hence differ slightly from those reported in the paper.

Two adjusted mid-point unit costs are applied to the above volumes of victims of modern slavery to estimate the social and economic cost. The unit costs in Reed *et al.* (2018) are estimated for FY 2016 to 2017, therefore for consistency within this report the estimates are deflated to FY 2015 to 2016 prices (HM Treasury, 2018). The adjusted mid-point unit cost for labour exploitation (£314,980 in FY 2015 to 2016 prices) is applied to the volume of adult and child victims of modern slavery for labour exploitation (5,137). Similarly, the mid-point unit cost for sexual exploitation has been adjusted to reflect adult-only victims and deflated (£299,720 in FY 2015 to 2016 prices). This is then applied to the volume of adult victims of modern slavery for sexual exploitation (2,542). Overall this gives a total social and economic cost of around £2.3 billion (see Table 8). A brief summary of the method used to calculate these unit costs and the costs included within them is below. Further details on the specific methods used is included in the Reed *et al.* (2018) report.

**Table 8: Social and economic cost of organised modern slavery**

Type of modern slavery	Number of victims	Unit cost <sup>a</sup>	Total cost <sup>b</sup>
Labour exploitation <sup>c</sup>	5,137	£311,950	£1,600,000,000
Sexual exploitation <sup>d</sup>	2,542	£289,670	£700,000,000
<b>Total</b>			<b>£2,300,000,000</b>

**Notes:**

- a) Taken from Reed *et al.* (2018) and adjusted for the scope considered in this report.
- b) Totals may not sum due to independent rounding.
- c) Of adults and children.
- d) Of adults only.

As noted above, this estimate of the social and economic cost of modern slavery is partial for a number of reasons. Firstly, its scope is limited in order to avoid double counting with section 2.4 ‘Organised child sexual exploitation’ (exclusion of CSE volumes), and also in order to focus on purely organised aspects of modern slavery (exclusion of domestic servitude victims). These limitations mean that this estimate is likely to underestimate the social and economic cost.

The costs in anticipation of modern slavery include government expenditure on measures to prevent modern slavery, based on FY 2016 to 2017 expenditure by the government on the Official Development Assistance Modern Slavery Fund. The funding was used for targeted projects to tackle modern slavery in source counties and reduce the number of people being trafficked to the UK (Reed, Roe, Grimshaw, & Oliver, 2018). These costs are assumed to be split equally among the types of modern slavery.

The costs as a consequence of modern slavery include physical and emotional harms to the victim, lost time and output, healthcare service costs and victim services costs. The approach



for estimating these costs is based on ESCC 2018 with specific adjustments for the nature of modern slavery. For the physical and emotional harms, the types and prevalence of harms incurred differs depending on the type of modern slavery being estimated. These harms are estimated for modern slavery with specific adjustments made to account for the nature of the crime, particularly with respect to accounting for repeat victimisation, for example. To estimate the unit cost of sexual exploitation of adult victims, the cost components of physical and emotional harms, and lost time and output have been adjusted.

The costs in response to modern slavery consider police costs related to modern slavery offences. Police costs are assumed to be equal among the types of modern slavery in the unit cost estimates. CJS costs were not included in the unit cost estimation in Reed *et al.* (2018) because of the length and complexity of modern slavery cases and the subsequent difficulty in estimating robust court costs for a given year.

### 2.3.3. Results from UOC 2013

In UOC 2013, only human trafficking for sexual exploitation was estimated. The scale of organised human trafficking of foreign women for sexual exploitation was estimated at approximately £130 million. This estimate reflects the revenue generated by victims of human traffickers, based on data from Project ACUMEN<sup>18</sup> which identified the prevalence of victims of human trafficking for sexual exploitation in FY 2009 to 2010. The annual revenue generated by one female sex worker was estimated using data from the Scottish Crime and Drug Enforcement Agency.

The social and economic cost of human trafficking of women for sexual exploitation was estimated to be £890 million. This included physical and emotional costs and the costs of restriction to freedom of movement. Health costs incurred by public services in dealing with victim injuries and illnesses, including unplanned pregnancies and sexually transmitted infections, were also included with the costs of victim services and CJS costs for the prosecution of human trafficking offences (Mills, Skodbo, & Blyth, 2013). Enforcement costs to the police and the then UK Border Agency could not be estimated for UOC 2013.

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<sup>18</sup> Project ACUMEN commenced in January 2009 as a multi-agency, year-long initiative to improve knowledge and understanding of the scale of human trafficking for sexual exploitation in England and Wales (Mills, Skodbo, & Blyth, 2013).

## 2.4. Organised child sexual exploitation (CSE)

### **Key findings:**

- It is estimated that there were **6,850 victims** of organised CSE in the UK in 2015 based on data from the Office of the Children’s Commissioner (2015).
- The social and economic cost of organised CSE is estimated to be around **£2.3 billion** in the UK in FY 2015 to 2016, based on Reed *et al.* (2018).
- **Limitations:**
  - the scale estimate uses a broad measure to attempt to account for unreported victims which may not be accurate
  - the volume of victims is not scaled to account for data not submitted from all Local Children Safeguarding Boards
  - the applicability of the amended unit cost for sexual exploitation devised for modern slavery to this cohort of victims is not necessarily accurate, but is the best available proxy

CSE is a form of child sexual abuse:

*“It occurs where an individual or group takes advantage of an imbalance of power to coerce, manipulate or deceive a child or young person under the age of 18 into sexual activity (a) in exchange for something the victim needs or wants, and/or (b) for the financial advantage or increased status of the perpetrator or facilitator”* (Department for Education, 2017).

Four broad categories of CSE are identified:

- Inappropriate relations<sup>19</sup>
- ‘Boyfriend’ model of exploitation<sup>20</sup>
- Peer-on-peer exploitation<sup>21</sup>
- Organised/networked sexual exploitation or trafficking<sup>22</sup>

All of these categories can contain organised elements, however since the fourth category is entirely organised, this is where the focus in this report lies, as was the case in UOC 2013.

In UOC 2013, the scale estimate of the number of confirmed victims of CSE by gangs and groups, taken from the Office of the Children’s Commissioner’s Inquiry Interim Report, was not scaled up to attempt to account for those victims that are unknown to the authorities. This updated estimate attempts to consider unidentified victims of organised CSE and the hidden nature of this activity by using a broader prevalence figure for the scale estimate. As a result, the scale estimate of the number of victims is higher than in UOC 2013.

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<sup>19</sup> When one offender has inappropriate power or control over a young person (physical, emotional, or financial) (College of Policing, 2017).

<sup>20</sup> When the offender befriends and grooms a young person into a ‘relationship’ and then coerces or forces them to have sex with them, friends, or associates. The offender may be significantly older than the victim (College of Policing, 2017).

<sup>21</sup> Situations when young people are forced or coerced into sexual activity by peers or associates. This can be associated with gang activity (College of Policing, 2017).

<sup>22</sup> Victims are passed through networks, sometimes over geographical distances, where they may be forced into sexual activity with multiple men (College of Policing, 2017).

The method used to estimate the social and economic cost of organised CSE has changed considerably since UOC 2013. It now uses a unit cost for sexual exploitation, discussed in detail below. As a result, the estimates are not comparable between the two reports. Part of the increase in the estimated cost figure is driven by the higher prevalence figure from the scale estimate.

#### 2.4.1. Scale

Since organised CSE does not always involve a financial motive for the OCGs involved, estimating the potential revenue for organised criminals is not meaningful. Hence, as in UOC 2013, the scale estimate reflects the number of victims of organised CSE.

The scale estimate for organised CSE is based on data in the Office of the Children's Commissioner's 'Inquiry into Child Sexual Exploitation in Gangs and Groups: One Year On' (2015) report. Given the specific scope of this crime type, this remains the best source for estimating the number of victims of organised CSE since this data relates most closely to the 'organised/networked sexual exploitation or trafficking' of children category of CSE outlined above. Additionally, this data source is unlikely to capture other methods of CSE which are not related to organised crime, given the specific scope of the research conducted by the Office of the Children's Commissioner, and therefore, all of the data on victims we draw on from this source can be attributed to organised crime. This report identified 2,092 known victims of CSE by gangs and groups in 2013 in England, and 5,669 'at risk' victims of CSE.<sup>23</sup> An individual is identified as 'at risk' if they are displaying three or more signs indicating as such (Office of the Children's Commissioner, 2015). This list is included in Annex C. These figures are based on responses to a questionnaire issued to obtain data for the report from Local Safeguarding Children Boards (LSCBs).<sup>24</sup>

Many cases of CSE go unreported and the nature of this crime is that the activity is largely hidden and difficult to measure. Therefore, in an attempt to account for this, the scale estimate here is based on the reported number of 'at risk' victims of CSE in 2013 in England. Although this covers a broader scope than using the actively identified number of actual victims of CSE, it was deemed the most appropriate way to attempt to scale up the prevalence to account for the high degree of unreported cases.<sup>25</sup> Despite this broader remit, it is still likely that the figures presented here will underestimate the scale of organised CSE given the nature of such activity, so this is still deemed to be a conservative estimate of the number of victims of organised CSE.

The number of 'at risk' victims of CSE in 2013 in England (5,669) is scaled up to the 2015 population and also to account for the whole of the UK, not just England, using ONS population estimates (ONS, 2016d). Therefore, this gives a scale estimate of 6,850 victims of organised CSE in the UK in 2015, shown in Figure 3. Scaling this figure to account for the

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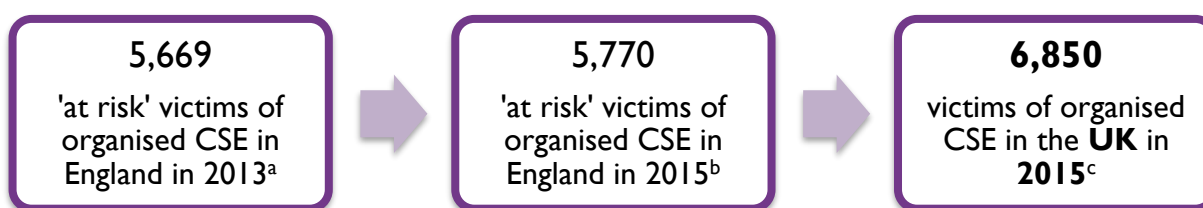
<sup>23</sup> It should be noted that these figures are based on a limited response rate from LSCBs. Of the 148 LSCBs in England, 70 (48 per cent) reported figures for the number of known victims of CSE by gangs and groups in 2013, and 79 (54 per cent) reported figures for the number of 'at risk' victims.

<sup>24</sup> See Office of the Children's Commissioner (2015) for further details.

<sup>25</sup> An alternative method of using Home Office Cost of Crime multipliers for either 'rape' or 'other sexual offences' from the ESCC 2018, applied to the 2,092 identified victims was considered (Heeks, Reed, Tafsiri, & Prince, 2018). However, this was deemed to be less applicable to this specific type of crime and potentially unrepresentative of the true scale of organised CSE.

yearly and geographical population ensures consistency with the rest of this report, though this is a limitation of the estimate produced here, as this carries the implicit assumption that the prevalence of organised CSE is same across the whole of the UK as it is in England. The number of 'at risk' victims in England, based on the responses from 54% of LSCBs, is not scaled up to account for the remaining 46% of LSCBs in England, for which data was not obtained. This is because it was not possible to ascertain if the 54% of responding LSCBs were a geographically representative sample of England, or what proportion of the population they represented, and therefore if scaling them up to account for the remaining LSCBs would be a robust approach. Therefore, this estimate is conservative and likely underestimates the number of victims.

**Figure 3: Scale of organised CSE**



**Notes:**

- a) Taken from the Office of the Children's Commissioner (2015).
- b) Scaled to 2015 using ONS population estimates.
- c) Scaled to UK using ONS population estimates. Considers a degree of unreported offences based on the use of the proxy measure of 'at risk' victims. This is still deemed to be a conservative estimate.

Given the use of a proxy measure to account for the hidden nature of organised CSE in the scale estimate, the figure presented here provides only an indication into the likely scale of this activity and may not be an accurate representation and therefore should be treated with caution. Further, given that the underlying data applies to 2013 and England only, scaling the data to the 2015 population and to the UK carries the assumption that the prevalence is consistent across these populations, which may not be accurate.

### 2.4.2. Social and economic cost

The social and economic cost of organised CSE is estimated using the 6,850 prevalence figure (shown above), and the mid-point unit cost for sexual exploitation from 'The Cost of Modern Slavery' (Reed *et al.* 2018).

The child adjusted mid-point unit cost for sexual exploitation is estimated to be £348,410 in FY 2015 to 2016.<sup>26</sup> This includes costs in anticipation, costs as a consequence (physical and emotional harms, lost output, health services, and victim services), and costs in response to the crime (police costs). The method used for estimating this unit cost is detailed in section 2.3.<sup>27</sup> For the purposes of this calculation, the unit cost with the child-specific adjustment is used to account for the fact that the victim is a child and consequently that the impact of the harms may be more significant. Lost output costs have also been adjusted to account for child-only victims.

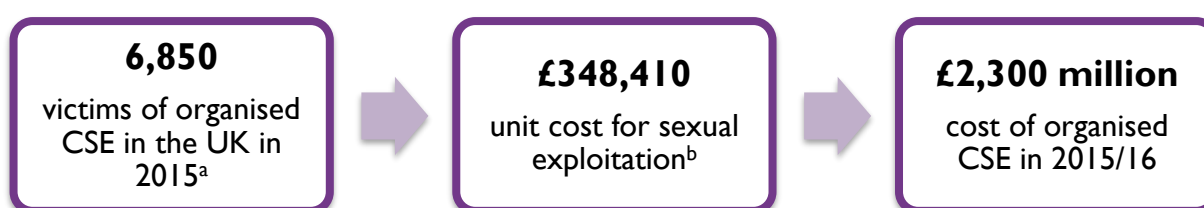
<sup>26</sup> This cost is deflated from the FY 2016 to 2017 unit cost estimated in Reed *et al.* (2018) using a GDP deflator (HM Treasury, 2018).

<sup>27</sup> See Reed *et al.* (2018) for further details.

Therefore, the social and economic cost of organised CSE is estimated to be around £2.3 billion in FY 2015 to 2016. This is shown in Figure 4 below.

The applicability of this sexual exploitation unit cost being used to estimate organised CSE is a significant limitation of this estimate, particularly as the physical and emotional costs to child victims of modern slavery for sexual exploitation and child victims of organised sexual exploitation are not necessarily the same. It is likely that the harms experienced by child victims of modern slavery for sexual exploitation are more severe. For example, the victims of modern slavery for the purposes of sexual exploitation are estimated to experience an average of ten rapes per week, which may be an overestimate of the level of harm experienced by child victims of organised sexual exploitation. Therefore, it is likely that to some extent, the harms are overestimated in this instance.

**Figure 4: Social and economic cost of organised CSE**



**Notes:**

- a) Taken from Office of the Children’s Commissioner (2015); scaled up to the 2015 UK population.
- b) Based on Reed *et al.* (2018).

### 2.4.3. Results from UOC 2013

In UOC 2013, the focus was solely on the ‘organised/networked sexual exploitation or trafficking’ category. The scale estimate provided an indication of the number of victims of organised CSE. The number of victims was based on the Office of the Children’s Commissioner’s ‘Inquiry into Child Sexual Exploitation in Gangs and Groups: Interim Report’ (2012) which identified that there were at least 2,409 victims of CSE in gangs and groups over a 14-month period. UOC 2013 acknowledged that this figure would likely overestimate the number of victims in a year, but is still likely to underestimate the true scale of organised CSE since many cases are unreported.

The social and economic costs included costs of coercion, exploitation, and other costs resulting from the abuse. The total social and economic costs were estimated to be £1.1 billion per year. Included within this estimate was violence suffered at the hands of exploiters, the physical and emotional costs of rape and sexual assault, self-harm and attempted suicide following or during the exploitation, sexual health issues, and disengagement from education. Data limitations meant that the estimate did not include costs to families as a result of a child being sexually exploited. Further agency costs for preventing children becoming victims of sexual exploitation and CJS costs on organised CSE offences were not included as the data could not be identified separately.

## 2.5. Organised acquisitive crime

The estimated scale of OAC is £680 million. The social and economic cost of OAC is estimated to be £1.5 billion.

The scope of OAC for the purposes of this report considers the following crime types: CViT, distraction burglary, metal theft, plant theft, road freight crime and vehicle crime. The estimates produced here have decreased since UOC 2013 (adjusted for inflation). This reflects the general downward trend in the volume of these crimes, though this is somewhat offset by the use of more complete cost of crime estimates from ESCC 2018.

### 2.5.1. Cash and valuables in transit (CViT)

#### **Key findings:**

- The **scale** of organised CViT in FY 2015 to 2016 is estimated to be **£4 million**. This is based on an industry estimate from SaferCash.
- The **social and economic cost** of organised CViT is **£8 million**.
- **Limitations:**
  - the estimates from SaferCash are scaled up to account for 100% of the industry
  - the social and economic cost is estimated using proxy unit costs from ESCC 2018

CViT robbery “relates to the illegal appropriation of ... high-value goods – usually cash – while they are being transported from one location to another” (Wainer & Summers, 2011). These offences, classified as commercial robbery, can occur at various locations on the route between cash centres and bank branches. Such robberies typically require planning and preparation, and often more than one offender, which means that all of these offences can be attributed to organised crime.

The updated estimate is substantially lower than that produced in UOC 2013; this is because the number of recorded CViT robberies by SaferCash in 2015 is less than a quarter of the number recorded in 2010.

#### **Scale**

The scale of organised CViT robbery is estimated to be £4 million.

The total losses from CViT robberies are recorded each year by SaferCash, a security initiative operated by the British Security Industry Association (BSIA). It is a partnership between the industry and police that provides a national framework for intelligence and data on CViT attacks. Total losses of almost £2.5 million were recorded in 2015, with an average loss value across all 167 attacks of £14,962 (BSIA, 2015). BSIA members “are responsible for more than 70% of privately provided UK security products and services (by turnover)”, which means not every single CViT attack may be recorded in their data (BSIA, 2017). Therefore, these figures have been scaled up to account for 100% of the industry to give an estimated 239 offences and a scale of £4 million.

## Social and economic cost

The social and economic cost of organised CViT robbery is £8 million.

The main components of the social and economic costs of CViT robberies are the losses sustained by banks and businesses, the physical and emotional costs sustained by victims, property damaged during a CViT robbery, and any resulting CJS costs.

The 'commercial robbery' unit cost from the ESCC 2018 estimates (£14,996) is used to quantify the costs of these 239 offences (Heeks, Reed, Tafisiri, & Prince, 2018). Replacing the value of property taken with the reported £14,962 figure from SaferCash provides a base unit cost of £28,974.

SaferCash also reports injuries sustained as a result of CViT crime in 2015. These are split into the reason for injury (firearm, weapon, assault and 'other means'), and also according to whether the injury was minor or serious. Of the 239 CViT attacks, around 80 (35%) resulted in injury. The cost of these injuries is approximated using the physical and emotional cost estimates from the unit cost estimate for 'violence with injury' (Heeks, Reed, Tafisiri, & Prince, 2018). These physical and emotional harms amounted to £8,236.

Wainer and Summers (2011) estimate that 6% of CViT robberies include damage to property. This additional cost can be approximated using the ESCC 2018 estimate for 'other commercial criminal damage' (Heeks, Reed, Tafisiri, & Prince, 2018). The CJS component is excluded from this addition, as it is unlikely that there would be a separate prosecution. This unit cost is £1,070.

Combining these unit costs and volumes gives a total social and economic cost of organised CViT robberies of £8 million. The breakdown of this is shown in Table 9.

**Table 9: Social and economic cost of CViT**

	Volume <sup>a</sup>	Unit cost	Total cost <sup>b</sup>
CViT offence base cost	240	£28,974	£7,000,000
Injury component	80	£8,236	£690,000
Property damage component	10	£1,070	£15,000
<b>Total</b>			<b>£8,000,000</b>

**Notes:**

- a) Volume figures are rounded to the nearest ten.
- b) Totals may not sum due to independent rounding.

## Results from UOC 2013

In UOC 2013, the scale estimate of £12 million is taken from SaferCash. This figure is based on 750 CViT offences and an average loss per offence of approximately £15,000 for 2010.

UOC 2013 estimated the social and economic cost of CViT robberies to be £27 million. Additional harms, on top of the losses identified in the scale figure, were quantified using Home Office costs of crime estimates for commercial robbery. Approximately 30% of these robberies result in injuries to victims, and 6% in damage to property; these costs are

approximated using costs of crime estimates for injuries and criminal damage, respectively (Wainer & Summers, 2011).

## 2.5.2. Distraction burglary

### **Key findings:**

- The **scale** of organised distraction burglary in FY 2015 to 2016 is estimated to be **£28 million**.
- The **social and economic cost** of organised distraction burglary is **£86 million**.
- **Limitations:**
  - the volume of incidents is scaled to account for unreported crimes using the ESCC 2018 crime multiplier for 'domestic burglary' as a proxy
  - the social and economic cost is estimated using the 'domestic burglary' unit cost

The definition of 'Distraction Burglary in a Dwelling' is given by the Counting Rules for Recorded Crime:

*"Any crime where a falsehood, trick or distraction is used on an occupant of a dwelling to gain, or try to gain, access to the premises to commit burglary. It includes cases where the offender first enters premises and subsequently uses distraction burglary methods in order to remain on the premises and/or gain access to other parts of the premises in order to commit burglary."* (Home Office, 2016d).

Evidence suggests that most offenders work in pairs; one offender distracts the victim while the accomplice enters the house and steals cash, jewellery and other valuable items (Home Office, 2001). Most distraction burglary is thought to be related to organised crime. For many distraction burglars, offending is their 'work'; they are often prepared to travel long distances, committing anywhere between 10 and 30 offences per day (Home Office Distraction Burglary Taskforce, 2002). Therefore 100% of incidents are considered attributable to organised crime.

The scale estimate for FY 2015 to 2016 is lower than that for FY 2010 to 2011. This can be attributed to the lower number of distraction burglaries recorded in PRC data. In FY 2015 to 2016, the number of incidents was almost 6,000 less than in FY 2010 to 2011 and hence contributes to the lower estimate.

### **Scale**

The scale of organised distraction burglary in the UK is estimated to be £28 million.

PRC statistics report 2,863 distraction burglaries in England and Wales for the year ending March 2016 (ONS, 2016a). Not all offences are recorded, hence the number of recorded distraction burglaries is scaled up to account for this. ESCC 2018 estimates a multiplier of 3.6 for 'domestic burglary'. Since there is no specific multiplier for distraction burglary, this is deemed the best available proxy. Estimating the scale of doorstep crime is difficult because, arguably, there is likely to be less reporting of 'attempted burglary by distraction' compared with 'attempted burglary by force'. Forced entry will more often result in damage to the property such as a broken window, and reporting the incident to the police will be required for any



insurance claim, whereas attempting to gain entry by trickery does not often involve property damage (Gorden & Buchanan, 2013). Hence, the multiplier used is the best available, but may be an underestimate. This results in approximately 10,300 distraction burglary offences in England and Wales in FY 2015 to 2016.

This figure is scaled up to the UK population to give an estimate of approximately 11,600 crimes. This assumes the prevalence and nature of distraction burglary is consistent between the countries of the UK.

**Figure 5: Volume of organised distraction burglaries**



**Note:**

a) Scaled to UK using ONS population estimates.

The average loss from distraction burglaries is estimated to be £2,438 (ONS, 2016c). Multiplying the estimated number of crimes in the UK (11,600) by the average loss from a distraction burglary gives an estimate of £28 million for the scale of organised distraction burglary.

The use of the ESCC 2018 ‘domestic burglary’ crime multiplier as a proxy for distraction burglary is the main limitation of this estimate. Further, scaling the volume of crimes to the UK population assumes that the prevalence is consistent across the whole of the UK.

*Social and economic cost*

The main components of the social and economic cost of distraction burglaries are the value of goods stolen, the physical and emotional costs sustained by victims, and any resulting CJS costs. These are estimated using the ESCC 2018 estimate of £5,930 for ‘domestic burglary’; this is not the same as distraction burglary as a crime, but it is judged to be the best available proxy. Replacing the ‘value of property stolen/damaged’ component of this with the average loss from distraction burglaries used above (£2,438), gives a unit cost of £6,967. Multiplying this unit cost by the estimated number of crimes gives the estimated social and economic costs of successful distraction burglaries in the UK.

However, distraction burglaries are not always successful. PRC statistics report 281 ‘attempted distraction burglar[ies] in a dwelling’ for the year FY 2015 to 2016 (ONS, 2016a). Applying the 3.6 multiplier to account for unreported or unrecorded attempted distraction burglaries and scaling up to the UK population gives an estimate of approximately 1,100 incidents. It is assumed that these will incur the same costs as a successful distraction burglary with the exception of the value of property stolen. Therefore, the unit cost for unsuccessful distraction burglaries is £4,530, which is calculated as the ‘domestic burglary’ cost of crime minus its ‘value of property stolen/damaged’ component (Heeks, Reed, Tafhiri, & Prince, 2018). This is

multiplied by the number of unsuccessful distraction burglaries to give a cost estimate for unsuccessful distraction burglaries.

Adding the figures for successful and unsuccessful distraction burglaries gives the total social and economic cost of organised distraction burglary of £86 million. The components to this estimate are detailed in Table 10.

**Table 10: Social and economic cost of distraction burglary**

	Volume	Unit cost	Total cost <sup>a</sup>
Successful distraction burglary	11,600	£6,967	£81,000,000
Unsuccessful distraction burglary	1,100	£4,530	£5,000,000
<b>Total</b>	<b>12,700</b>		<b>£86,000,000</b>

**Notes:**

a) Totals may not sum due to rounding.

In addition to the limitations of the scale estimate, the use of the ESCC 2018 unit cost for ‘domestic burglary’ is a limitation of this estimate given it is a proxy for distraction burglary. Amending this unit cost with the ‘value of property stolen/damaged’ specifically for distraction burglaries minimises the extent of this limitation.

*Results from UOC 2013*

In UOC 2013, the scale of distraction burglaries in the UK was estimated to be approximately £35 million. Distraction burglary incidents were taken from PRC statistics. The number of incidents was scaled to account for unreported offences and to apply to the UK to give an estimate of 17,300 distraction burglaries for FY 2010 to 2011. This was multiplied by the average reported value of property stolen during a domestic burglary (ONS, 2016c).

UOC 2013 estimated the social and economic cost of distraction burglary to be £91 million. This used the Home Office Cost of Crime estimate for ‘burglary in a dwelling’ as a unit cost multiplied by the estimated number of incidents. The report also considered attempted distraction burglaries, for which there is also a recorded crime figure, and uses the same unit cost for this, minus the value of property stolen.

### 2.5.3. Metal theft

#### **Key findings:**

- The **scale** of organised metal theft in FY 2015 to 2016 is estimated to be **£19 million**.
- The **social and economic cost** of organised metal theft is **£41 million**.
- **Limitations:**
  - estimates are based on only a small number of companies
  - the cost of replacing stolen metal overestimates the value of this to criminals
  - organised metal offences are likely to be higher value than non-organised offences
  - part of the social and economic cost relies on the ESCC unit cost for 'commercial theft' as a proxy measure

Metal theft refers to thefts of items for the value of their constituent metals, often copper, lead, and aluminium (Home Office, 2012). Common targets for metal theft include copper wire and cable from transport and utility networks. Other targets include lead from churches and other historic buildings, catalytic converters (for their precious metal content), and street furniture, such as aluminium road signs and lead drain covers (Home Office, 2012).

The scale estimate differs from the UOC 2013 estimate and two changes related to the metal theft industry can go some way to explaining this. Firstly, the number of metal theft offences has fallen since UOC 2013; this may be because of changes in metal prices, new legislation, police enforcement operations and industry engagement (Morgan, Hoare, & Byron, 2015). The price of valuable metals has fallen and the police have led the National Metal Theft Task Force (2011 to 2014) and National Metal Theft Working Group to enforce legislation and engage industries to tackle metal theft (Morgan, Hoare, & Byron, 2015). Secondly, the proportion of metal theft offences that were organised in FY 2015 to 2016 increased significantly compared to the previous estimate in UOC 2013. This reflects the change in the nature of metal theft since FY 2010 to 2011 and the lower levels of offences in FY 2015 to 2016.

The main limitations of UOC 2013 are not directly addressed in this update. However, the inclusion of estimates for the cost in anticipation and in response to organised metal theft should produce more accurate estimates.

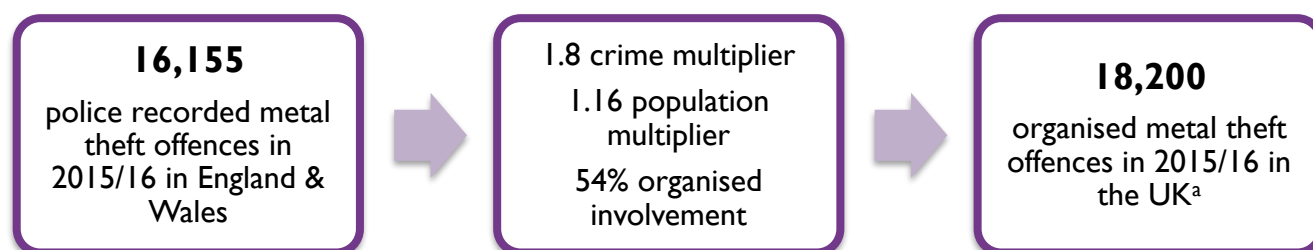
#### *Scale*

The scale of organised metal theft is estimated to be £19 million.

The number of metal theft incidents for FY 2015 to 2016 is taken from PRC data (16,155). Since this does not capture unreported offences, a multiplier of 1.8 is used to scale up for unreported offences. This multiplier is the mean of multipliers for domestic 'theft of vehicle', 'theft from vehicle' and 'other criminal damage' offences from ESCC 2018 (Heeks, Reed, Tafsiiri, & Prince, 2018). The average of the multipliers for these crimes is taken in the absence of a specific multiplier for metal theft; these offences were deemed to be most relevant to metal theft activity and therefore the best available proxy measure. In addition, a population multiplier of 1.16 is used to scale up for police force areas not captured in these estimates. This gives

approximately 33,700 metal theft offences in FY 2015 to 2016 across the UK. It is assumed that 54% of metal theft offences are organised, based on the proportion of FY 2015 to 2016 metal theft offences identified as being 'organised' by the British Transport Police records. Therefore, this gives approximately 18,200 organised metal theft offences for FY 2015 to 2016. This organised proportion is greater than the 20 percent estimated for FY 2010 to 2011 in UOC 2013, but is likely to be reflective of the changing climate of metal theft since then and the significantly lower levels of offences, which overall shows a fall in the absolute number of organised metal theft offences.

**Figure 6: Volume of organised metal theft**



**Notes:**

- a) Number of offences scaled up to account for unreported offences and to apply to the whole of the UK, with a proportion of organised involvement applied. This volume is rounded.

In FY 2012 to 2013 there were an estimated 26,000 organised metal theft offences, using the same method as detailed above with a 20% assumed organised crime involvement assumption as in UOC 2013. Between FY 2012 to 2013 and FY 2015 to 2016 the estimated metal theft offences therefore fell by 30%.<sup>28</sup> There is limited updated data with which to estimate the scale of organised metal theft in FY 2015 to 2016, hence the scale estimate from UOC 2013 is used as the basis. The cost of replacing stolen metal in FY 2010 to 2011 across various industries, companies, and sectors<sup>29</sup> is scaled to FY 2015 to 2016 prices using a GDP deflator and scaled down by 30%, reflecting the fall in the number of organised metal theft offences since FY 2012 to 2013. This gives an estimate of approximately £19 million for the scale of organised metal theft in FY 2015 to 2016, as shown in Table 11.

**Table 11: Scale of organised metal theft**

Item	FY 2015 to 2016
Cost of replacing stolen metal (selected sectors/companies)	£11,000,000
Power network cost of replacing stolen metal	£2,000,000
Cost of replacing metal beer containers	£6,000,000
<b>Total</b>	<b>£19,000,000</b>

This estimate faces the same limitations as in UOC 2013, as identified below. Firstly, only a small sample of companies and industries are included in the estimate. The cost of replacing stolen metal overestimates the value of stolen metal to criminals; this is an acceptable

<sup>28</sup> These are the years for which PRC data is available for metal theft offences.

<sup>29</sup> The estimate considers: BT Openreach, Mobile Broadband Network Ltd, UK Wireless Industry, Network Rail, E.ON, EDF, local authorities, religious buildings, construction industry, stainless steel industry, aerospace industry, education, power network, pubs and breweries.

limitation since the focus is on the opportunity cost to the companies and industries rather than estimating criminals' revenues. Finally, organised metal theft offences are likely to be higher value than unorganised offences, but the value of stolen metal cannot be differentiated as such.

### *Social and economic cost*

The social and economic cost of organised metal theft is estimated at £41 million. The components of this estimate are shown in Table 12.

Costs in anticipation of organised metal theft are estimated using the ESCC 2018 component estimates for 'commercial theft', deemed to be the best available proxy for metal theft offences (Heeks, Reed, Tafsiri, & Prince, 2018). The unit cost components for defence expenditure and insurance administration for 'commercial theft' are £210 and £10 respectively. These unit costs are combined with the estimated 18,200 organised metal theft offences.

The direct cost of replacing stolen metal for companies, industries, and sectors (£19 million, as per the above scale estimate) is included within the social and economic cost figure. An additional cost as a consequence of the crime is the lost output for telecommunications companies, and rail and power network disruption as a result of organised metal theft. For telecommunications, it is assumed that the same amount of time is lost per metal theft incident as in UOC 2013. To update this estimate the number of incidents is scaled down by 30% to reflect the estimated change in organised metal theft offences as outlined in the scale section above. A second alteration is an update to the Department for Transport value of time figures to £22.08 and £5.21 per hour respectively for working and non-working individuals in 2015 prices (Department for Transport, 2016). For rail disruption, cost estimates for delayed, part cancelled and cancelled trains in FY 2015 to 2016 from Network Rail are used (Network Rail, 2017). The time lost for power network customers as a result of metal theft disruption is assumed to be the same as in UOC 2013. However, the number of incidents<sup>30</sup> and the value of time lost as a result of metal theft have been updated (Network Rail, 2017). These figures are multiplied by the estimated proportion of metal theft offences that are organised in FY 2015 to 2016 (54%) to give the cost of lost output of £14 million. The physical and emotional harms, and health and victim services are assumed to be zero for organised metal theft. This is consistent with the 'commercial theft' category in ESCC 2018 (Heeks, Reed, Tafsiri, & Prince, 2018).

Costs in response to organised metal theft use the ESCC 2018 estimates for 'commercial theft' as a proxy (as above). These unit cost components are estimated to be £40 for policing and £210 for CJS. These unit costs are multiplied by the estimated 18,200 organised metal theft offences in FY 2015 to 2016.

**Table 12: Social and economic cost of organised metal theft**

Item	Unit cost	Total cost <sup>a</sup>
Defence expenditure	£210	£4,000,000
Insurance administration	£10	£100,000

<sup>30</sup> The Energy Networks Association claims 680 incidents have occurred ('to date') in 2016 (Energy Networks Association, 2017).

Cost of replacing stolen metal	-	£19,000,000
Cost of lost output	-	£14,000,000
Police cost	£40	£700,000
CJS cost	£210	£4,000,000
<b>Total</b>		<b>£41,000,000</b>

**Notes:**

- a) Totals may not sum due to rounding.

The inclusion of costs in anticipation of, and in response to, metal theft is an improvement on the UOC 2013 estimate of organised metal theft.

In addition to the limitations outlined for the estimated scale of organised metal theft, the main limitation of the updated estimate for the cost of organised metal theft is the use of 'commercial theft' unit costs as a proxy for organised metal theft offences. However, this approach avoids significantly underestimating the cost of organised metal theft. Other limitations include the reliance on a small sample of industries to estimate the cost of lost output. The industries considered are telecommunications, transport and power. Other industries for which lost output could not be estimated but are in scope could include construction and other metal users or producers. This could be addressed by surveying more companies, but this is out of scope for this report.

### *Results from UOC 2013*

Police intelligence suggests that metal theft is carried out by both individuals committing low-level, opportunistic offences, and organised groups committing thefts that are often higher value, and which require greater levels of planning or expertise. UOC 2013 used the latter category as a measure of the proportion of metal theft that are organised. Hence, it was assumed that 20% of metal theft was organised.<sup>31</sup>

UOC 2013 multiplied existing Home Office estimates for the scale and cost of all metal theft<sup>32</sup> by 20% to get an estimated scale of £26 million and social and economic cost of £44 million.

The main limitation of the approach in UOC 2013 was the exclusion of costs in anticipation of, and costs in response to, organised metal theft. Additionally, the authors of UOC 2013 acknowledged that:

- only a small number of companies and industries were included in the estimate
- the cost of replacing stolen metal overestimates the value of stolen metal to criminals, as replacement requires new materials and labour
- organised metal theft offences are likely to be higher value than non-organised offences

<sup>31</sup> This estimate was provided through consultation with the British Transport Police, from the proportion of police recorded cleared crimes attributed to people arrested within a criminal network or conspiracy, or circumstances suggesting organisation in 2010/11.

<sup>32</sup> These estimates were taken from impact assessment 0058 (Home Office, 2012). The impact assessment estimated the cost of replacing stolen metal (scale) to be £128 million each year and the cost of lost output to be £92m. The social and economic cost of metal theft was therefore estimated to be £220 million each year, including organised and non-organised offences.

(Sidebottom, 2012), (Mills, Skodbo, & Blyth, 2013).

As discussed above, these limitations still persist in the FY 2015 to 2016 estimate.

#### 2.5.4. Plant theft

##### **Key findings:**

- The **scale** of organised plant theft in FY 2015 to 2016 is estimated to be **£51 million**. This is based on an industry estimate from the Plant and Agricultural National Intelligence Unit (PANIU).
- The **social and economic cost** of organised plant theft is **£490 million**. This is based on an industry estimate from Combined Industry Theft Solutions (CITS).
- **Limitations:**
  - the estimates only cover reported incidents
  - estimates are scaled to FY 2015 to 2016 prices

The theft of construction and agricultural equipment is commonly known as plant theft.

The new estimates of organised plant theft are considerably lower than those developed in UOC 2013. This is due to a significant fall in the number of plant items being stolen. This could potentially be attributed to increased security of plant items, including 'tagging' machinery to make it more difficult to steal.

##### *Scale*

The scale of organised plant theft is estimated at £51 million in FY 2015 to 2016.

There were 2,658 plant items recorded as stolen by PANIU in 2016, with an estimated value of £52 million. Since this covers only larger plant items (those that are self-driven or can be towed), 100% is deemed attributable to organised crime. To ensure consistency across estimates in this report, this 2016 figure is scaled to FY 2015 to 2016 prices in line with the GDP deflator to give a scale estimate of £51 million (HM Treasury, 2018).

This data only considers plant theft incidents that are reported, which may cause an underestimation of the true scale of organised plant theft. However, it has been suggested by industry experts that most thefts are likely to be reported given the size of such equipment, so this is not likely to be significant.

##### *Social and economic cost*

The social and economic cost of organised plant theft is estimated to be £490 million.

Following consultation with the Construction Equipment Association and CITS, the social and economic costs of plant theft are estimated to be £500 million for 2016. This cost, in line with the CITS figures from 2011 used in UOC 2013, includes the direct replacement cost of equipment, hire of temporary equipment, loss of business, insurance claim processing costs, and increased insurance premiums. For consistency with other estimates, this figure is scaled

down to FY 2015 to 2016 prices using the GDP deflator to give a social and economic cost estimate of £490 million.

Although this is an industry estimate, it is based on the same method used in UOC 2013. The fall in this figure since 2011 also reflects the fall in the number of plant theft incidents.

### *Results from UOC 2013*

UOC 2013 used data from PANIU on the number of plant items recorded as stolen and their estimated value. These figures covered only larger plant items, and thus were considered wholly attributable to organised crime. In 2011 there were over 6,000 plant items recorded as stolen by PANIU with an estimated value of £100 million.

The social and economic costs used a figure developed by CITS. This industry estimate included plant replacement costs, hire of replacement equipment, loss of business, insurance claim processing costs and increased insurance premiums. The social and economic costs were estimated to be £650 million each year to the UK.

### 2.5.5. Road freight crime

#### **Key findings:**

- The **scale** of organised road freight crime in FY 2015 to 2016 is estimated to be **£51 million**. This is based on data recorded by NaVCIS Freight.
- The **social and economic cost** of organised road freight crime is **£63 million**. This is based on an industry estimate from CITS.
- **Limitations:**
  - the estimates only cover reported incidents
  - estimates are scaled to 2015/16 prices
  - NaVCIS Freight receives regular information from about 45% of police forces

Road freight crime is the theft of haulage vehicles and their loads. Due to the level of planning and coordination required to steal goods in this way, and realise the value of the stolen goods, it is assumed that all road freight crime is organised.

#### *Scale*

The scale of organised road freight crime is estimated to be £51 million in FY 2015 to 2016.

TruckPol, the data source for UOC 2013, was closed in 2012, and as a result data has been limited since. The National Vehicle Crime Intelligence Service (NaVCIS) Freight strand has since been established and holds a database on road freight crime. NaVCIS Freight gets regular crime data from around 45% of UK police forces. This database includes information on the number of incidents of road freight crime and the value of loads and vehicles stolen.

The NaVCIS Freight database reports that there were 1,189 incidents of road freight crime in 2016 and the combined value of vehicles and loads stolen was £52 million. To ensure



consistency with other estimates in this report, this figure is scaled down to FY 2015 to 2016 cost to give a scale estimate of £51 million (HM Treasury, 2018).

Estimates are not scaled up to account for offences that are not reported to NaVCIS Freight. Furthermore, since the database covers regular information for only about 45% of police forces, this estimate will underestimate the true scale of road freight crime. The database includes submissions from other police forces, just not on a regular basis; therefore, the database information is not scaled up to account for the remaining 55% of police forces because of the presence of partial data from other forces. The loss figures reported from NaVCIS Freight are advised to also be underestimates in most cases since the true retail values are only obtained sometime after the incident.

### Social and economic cost

The social and economic cost of organised road freight crime is £63 million.

As in the scale estimate, the volume of road freight crime incidents is taken from the NaVCIS Freight database. In line with the UOC 2013 methodology, the unit cost for 'theft of a commercial vehicle' from ESCC 2018 is used. This unit cost includes anticipatory defensive and insurance expenditure, the value of property stolen, the costs of any physical and emotional harms to victims, lost output resulting from the theft, and responsive police and CJS costs. To improve the accuracy of the estimate, the unit cost, less the value of property stolen (£10,390), is used in the calculation. This is multiplied by the number of recorded road freight incidents and then combined with the value of vehicles and loads stolen in FY 2015 to 2016 prices. The social and economic cost of organised road freight crime is therefore estimated to be £63 million.

**Figure 7: Social and economic cost of organised road freight crime**



**Notes:**

- a) Taken from Heeks *et al.* (2018).
- b) Taken from NaVCIS Freight, as per the scale estimate.

Weaknesses in the NaVCIS Freight data, as detailed above, will contribute to this figure, likely underestimating the true size of the costs.

### Results from UOC 2013

UOC 2013 used data from TruckPol, the then national road freight crime intelligence unit, on the number of incidents of road freight crime recorded in the UK in 2010 and the value of stolen vehicles and loads. Estimates were not scaled up to account for offences that were not

reported to TruckPol. In 2010, there were 2,567 recorded incidents of road freight crime, and the estimated value of stolen vehicles and loads was £52 million, according to TruckPol data.

For the social and economic costs of road freight crime, Home Office costs of crime for 'theft of a vehicle – commercial' were used, substituting the value of property stolen with the value reported by TruckPol from the scale estimate. The remaining unit cost was multiplied by the number of road freight crime incidents. TruckPol also recorded violent incidents that occurred with incidents of road freight crime; these costs were estimated using Home Office costs of crime for 'violence against the person'. Combined, the estimate for the social and economic costs of road freight crime was £64 million.

### 2.5.6. Vehicle crime

#### **Key findings:**

- The **scale** of organised vehicle theft in 2015/16 is estimated to be **£520 million**.
- The **social and economic cost** of organised vehicle theft is **£850 million**.
- **Limitations:**
  - the scope covers 'theft of a vehicle' offences and domestic burglaries in which car keys are stolen
  - the proportion of organised involvement is based on the CSEW recovery rate of stolen vehicles
  - PRC Scotland Counting Rules differ slightly to Home Office Counting Rules for PRC data in England, Wales, and Northern Ireland so the scope for 'car key' burglaries for Scotland may be an overestimate

Organised vehicle crime considers the theft of high-value vehicles to order, theft of vehicles for export, theft of older vehicles to be broken down for parts, and the theft of vehicles for use in other crimes.

The updated figures are lower than the estimates developed in UOC 2013. This reflects a smaller volume of incidents of vehicle theft and 'car key burglaries'. However, this decrease is offset to some extent by a methodological change. This estimate uses the average value of an unrecovered vehicle as the unit cost, which is higher than the average value across all stolen vehicles (as used in UOC 2013), but is a more applicable figure.

#### *Scale*

The scale of organised vehicle theft is estimated to be £520 million.

The same methodology is used as in UOC 2013. PRC data for FY 2015 to 2016 for England, Wales, Scotland, and Northern Ireland records 'theft of a vehicle' offences, which are then scaled using the ESCC 2018 multiplier for 'theft of a vehicle' (0.8) to account for differences in recording between CSEW and PRC data. It is assumed that unrecorded stolen vehicles are attributable to organised crime given the sophisticated methods used by OCGs since vehicles are often exported to other countries or dismantled for their parts. The recovery rate of stolen vehicles in the CSEW FY 2015 to 2016 is 39%, thus 61% of 'theft of a vehicle' offences are

attributed to organised crime. Applied to the number of offences, this gives approximately 43,100 ‘theft of a vehicle’ offences for the UK attributable to organised crime.

The FY 2015 to 2016 CSEW suggests that car keys are stolen in 9% of domestic burglaries. In these cases it is assumed that the vehicle is stolen but not recorded as a ‘theft of a vehicle’ offence. This proportion is applied to the number of recorded domestic burglaries from PRC data across the UK to give approximately 16,300 ‘car key burglaries’. This figure is then scaled to account for differences in recording between CSEW and PRC data, using the ESCC 2018 multiplier for ‘vehicle theft’ again (0.8) to give approximately 13,100 car key burglaries. It was deemed that the vehicle theft multiplier would be a better representation of the level of unreported ‘car key’ burglaries rather than the ESCC 2018 multiplier for ‘domestic burglary’. It is assumed that 100% of ‘car key burglaries’ are organised because of the planning and coordination needed to commit the offence.

The average value of an unrecovered stolen vehicle from ONS’s FY 2015 to 2016 CSEW analysis is £9,308. This is higher than the mean value of all stolen vehicles, as was used in UOC 2013, but this value is more applicable since it is assumed that unrecovered stolen vehicles are those attributable to organised crime.

Combining this value with the volume figures gives a scale estimate for organised vehicle crime of £520 million.

The PRC Scotland Counting Rules differ slightly from the Home Office Counting Rules used for recording crime in England, Wales, and Northern Ireland. The definition of a ‘burglary in a dwelling’ in Scotland is broader than that used for the rest of the UK; as a result, it is likely that the number of ‘car key’ burglaries for Scotland may be an overestimate here.

**Table 13: Scale of organised vehicle crime**

	Crime multiplier	Organised involvement	Number of organised offences	Unit cost	Total scale <sup>a</sup>
Theft of a vehicle	0.8	61%	43,100	£9,308	£400,000,000
‘Car key’ burglaries	0.8	100%	13,100		£120,000,000
<b>Total</b>					<b>£520,000,000</b>

**Notes:**

a) Totals may not sum due to rounding.

*Social and economic cost*

The social and economic cost of vehicle crime is £850 million.

This is calculated using the ESCC 2018 estimates for ‘theft of a vehicle’ and for ‘domestic burglary’. These unit costs include anticipatory costs on defensive and insurance expenditure, the value of property damaged or stolen, physical and emotional costs to victims, lost output, and police and CJS costs. To improve the accuracy of this estimate, the ‘value of property damaged/stolen’ is substituted with the average value of an unrecovered stolen vehicle, as used in the above scale estimate (£9,308). Therefore, the amended unit cost for ‘theft of a

vehicle' is £15,460, which combined with 43,100 offences gives a cost of £670 million; the amended unit cost for 'domestic burglary' is £13,837, which combined with 13,100 'car key burglaries' gives a cost of £181 million. Hence, the total social and economic cost of organised vehicle crime to the UK is £850 million. The breakdown of these costs is shown in Table 14.

**Table 14: Social and economic cost of organised vehicle crime**

Cost type	Volume	Unit cost	Total <sup>a</sup>
Vehicle thefts	43,100	£15,460	£670,000,000
Car key burglaries	13,100	£13,837	£180,000,000
<b>Total</b>	<b>56,200</b>		<b>£850,000,000</b>

**Notes:**

a) Totals may not sum due to rounding.

The limitations applicable to the scale estimate for vehicle crime are also applicable here since this relies on the volumes of crimes estimated from PRC data. The amendment of the 'theft of vehicle' unit cost from ESCC 2018 improves the accuracy of the estimate by using a more specific 'value of property damaged/stolen'.

*Results from UOC 2013*

In UOC 2013, PRC data was used to provide figures on the volume of vehicle thefts and a proportion of burglaries in which car keys were stolen. These volume figures were combined with the average value of a recovered stolen vehicle, taken from the CSEW. Approximately 60% of vehicle thefts were attributed to organised crime based on the recovery rate of stolen vehicles in 2011 from the CSEW, while 100% of 'car key burglaries' were considered organised. Therefore, this gave a scale estimate of £330 million. The volume figures were adjusted for underreporting of theft of vehicle offences using the Home Office Cost of Crime multipliers.

The social and economic cost estimate was derived using the Home Office Cost of Crime estimate for 'theft of a vehicle', which included the value of property damaged or stolen, physical and emotional costs to victims, and police and CJS costs. The social and economic cost was estimated to be £920 million.

## 2.6. Cyber-dependent crime against individuals

### **Key findings:**

- There were an estimated **1.5 million** organised cyber-dependent crime against individuals offences in FY 2015 to 2016, based on the CSEW.
- The **social and economic cost** of organised cyber-dependent crime against individuals is **£830 million**, based on ESCC 2018.
- **Limitations:**
  - the scope of cyber crime considered here is limited
  - the CSEW volume of cyber crime offences is based on experimental data
  - the assumed organised involvement is based on consultation with operational partners

Cyber crime has various definitions. The 2013 Serious and Organised Crime Strategy explained cyber crime as the following two types of criminal activity:

*“**Cyber-dependent crimes:** those which can only be committed using computers, computer networks or other forms of information communication technology. They include the creation and spread of malware for financial gain, hacking to steal important personal or industry data, and denial of service attacks to cause reputational damage.”*

*“**Cyber-enabled crimes:** those which can be conducted on or offline, but online may take place at unprecedented scale and speed.”* (HM Government, 2013).

These distinctions provide some clarification on the various forms of cyber crime that exist. Examples of cyber-dependent crimes are provided above, whereas examples of cyber-enabled crimes include fraud and theft (including theft of personal information and identification-related data). The overlap of cyber-enabled crimes with other reported crimes provides a significant issue for both data collection and subsequent analysis.

Due to issues surrounding data quality, double counting and proportioning, this report has not produced either a scale or cost figure for all of organised cyber crime. The report does estimate an experimental value for the social and economic cost of organised cyber-dependent crime against individuals; however, this represents only a partial estimate and there is no estimate for cyber-dependent crimes against businesses which are likely to result in substantial costs. The challenges associated with calculating the scale and cost of organised cyber crime are summarised below.<sup>33</sup>

### 2.6.1. Scale

#### *Data issues*

The UOC 2013 and recent ESCC 2018 identified the lack of high-quality data regarding the scale of cyber crime as a major barrier. The FY 2015 to 2016 CSEW contains an experimental category for cyber offences against individuals, compiled through asking members of the public if they have had a cyber offence committed against them. However, this represents a

<sup>33</sup> For more in-depth details, see Home Office (2018).

partial estimate; the cost to business is likely to be significant and not included. This gave an estimate of 2 million cyber offences committed against individuals in England and Wales in the year ending 31 March 2016 (ONS, 2016a). Scaling this to the UK using the ONS population estimates gives a figure of 2.3 million cyber offences committed against individuals in FY 2015 to 2016 in the UK.

The Cyber Breaches Survey 2017 provides an evidence base for cyber crime against businesses with just under half of businesses suffering a cyber breach in the 2016 survey (Klahr, et al., 2017). However, the wide definition of cyber breaches and lack of certainty around the costs make this an unfeasible data source to estimate the cost of cyber crime to business across the UK. Furthermore, it is unclear how these sources could be combined with the overlap of cyber attacks on business often leading to multiple counts of reported cyber crimes on individuals.

### *Defining organised cyber crime*

Cyber crime differs from traditional crime significantly. Cyber criminals can act primarily alone yet commit serious and organised crime on a continuous basis. The key distinction is that they do not need to work with others to commit these crimes. They often source their tools online from other, more serious or specialist cyber criminals through forums and thus may not need other partners' expertise for certain tasks.

The extent to which the structures and organisation seen in cyber crime may be considered as 'organised' in the manner typically applied to conventional crimes is unclear, and a topic of debate in the literature (Lusthaus, 2013; Leukfeldt, Lavorgna, & Kleemans, 2016). However, for the purpose of this publication, if individuals have the ability to commit large scale, continuous serious cyber crime, then this is considered both organised and serious. Even when cyber criminals work with others, these online connections may only be fleeting when beneficial rather than the continuous, or at least regular, working typical of traditional OCGs. By counting these individuals who operate within online networks and forums as 'working together on a continuing basis', a significant amount of cyber crime falls within the definition of organised crime in this report.

The most serious forms of cyber crime, such as industrial espionage, or large scale data breaches, are all considered organised due to the high level of sophistication and expertise that is required to commit these crimes. However, the absence of data on both scale and costs is most significant in this area. Given that these make up a significant proportion of the scale and cost of high-end organised cyber crime, their exclusion leads to a drastic underestimate.

### *Proportioning*

Proportioning cyber crime to organised crime proves difficult. The lack of granularity of CSEW data does not allow for a breakdown via an offence-based approach that would define offences as either organised or not. Other methods, such as proportioning through reported incidents of computer misuse to Action Fraud, could be used but are unlikely to be representative due to low reporting levels. CSEW estimated that only 6.6% of computer misuse offences were reported to the police or Action Fraud in the year ending 31 March 2016, and suffers the same issue of defining which incidents are organised (ONS, 2016a).

This report uses proportions driven by operational- and intelligence-led assumptions. The 2016 Cyber Crime Assessment states:

*“The NCA assesses that the most advanced and serious cyber crime threat to the UK is the direct or indirect result of activity by a few hundred international cyber criminals, typically operating in organised groups” (NCA, 2016a).*

Using this approach, consultations with operational partners have been used to proportion the CSEW cyber offences committed against individuals to an organised element. CSEW data is split by computer viruses and malware, and unauthorised access. Discussions suggest that computer viruses, including malware and ransomware, are likely to stem from an organised source as they require either technical expertise or tools sourced from an organised group. Additionally, criminals engaged in this form of activity are likely to perform it on a fairly frequent basis due to the commitment of either developing or purchasing the tools required. These discussions gave a conservative estimate of 80% of computer virus offences coming from an organised source.

For unauthorised access, it was agreed the majority may not be organised, for example disgruntled associates, and without further evidence, a conservative estimate of 40% being organised was agreed. Applying both of these estimates to the CSEW figures gives an experimental estimate of 1.5 million organised cyber-dependent offences against individuals in FY 2015 to 2016 in the UK.

**Table 15: Scale of organised cyber-dependent crime against individuals**

Cyber crime	Proportion organised	Volume of offences <sup>a</sup>	Volume of organised offences <sup>b</sup>
Computer virus/malware	80%	1,357,000	1,100,000
Unauthorised access	40%	649,000	300,000
<b>Total England and Wales</b>			<b>1,300,000</b>
<b>Total UK<sup>c</sup></b>			<b>1,500,000</b>

**Notes:**

- a) Volume figures taken from the CSEW FY 2015 to 2016.
- b) Totals may not sum due to rounding.
- c) Scaled up to account for the whole of the UK using ONS population estimates.

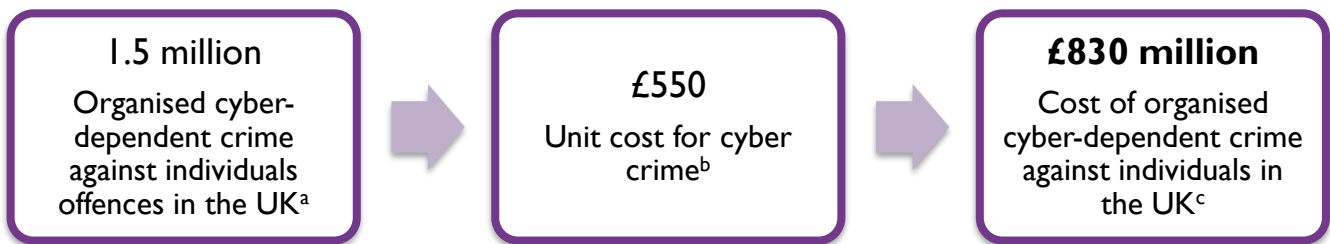
As highlighted above, the main limitation in this estimate of cyber crime is the narrow scope of only cyber-dependent crime against individuals. Furthermore, given that the volume of incidents is based on CSEW experimental statistics, the estimate should be treated with caution. In scaling the volume of incidents to account for the whole of the UK, it is implicitly assumed that the prevalence of cyber-dependent crime against individuals is the same across all countries.

### 2.6.2. Social and economic cost

The ESCC 2018 experimental estimate of cyber crime produced a unit cost of £550, using a methodology that took a top-down approach using the CSEW data on cyber offences. This unit cost is applied to the 1.5 million estimated offences of organised cyber-dependent crime

against individuals from the above scale estimate. This gives a social and economic cost of organised cyber-dependent crime against individuals of £830 million in FY 2015 to 2016. Costs against business have not been estimated due to lack of available data for the reasons explained above. By excluding these costs, this is a significant underestimate as it excludes the high-end cyber crimes performed by the upper echelon of organised cyber crime groups that are considered the most costly by operational partners such as the NCA. The limitations of the scale estimate above also apply to the figure presented here. For a more in-depth review of the cost of cyber crime, see 'Understanding the costs of cyber crime' (Home Office Science Advisory Council, 2018).

**Figure 8: Social and economic cost of organised cyber-dependent crime against individuals**



**Notes:**

- a) Based on CSEW FY 2015 to 2016.
- b) Taken from Heeks *et al.* (2018).
- c) Totals may not sum due to rounding.

### 2.6.3. Results from UOC 2013

In UOC 2013, cyber crime was excluded “*due to the high probability of extensive double counting as well as the absence of sufficient data on the prevalence of cyber crime and the extent to which it is organised*” (Mills, Skodbo, & Blyth, 2013). These challenges remain, however there has been progress and greater discussion on these challenges since then, as summarised above.



## 2.7. Intellectual property (IP) crime and counterfeiting

### **Key findings:**

- The **scale** of organised IP crime and counterfeiting is estimated to be **£100 million** in FY 2015 to 2016. This considers the counterfeiting and piracy of business software, CDs, digital music tracks, DVDs, digital films, clothing, footwear, cosmetics, jewellery, watches, handbags, luggage, and sports goods.
- The **social and economic cost** of organised IP crime and counterfeiting is **£570 million**. This considers lost sales to businesses, lost revenue to the exchequer, lost jobs to industry, additional benefit payments resulting from lost jobs, and enforcement costs by firms.
- **Limitations:**
  - the estimates are not directly comparable to UOC 2013 due to a change in the scope of goods
  - the level of organised involvement for business software is a proxy measure taken from FY 2010 to 2011
  - the use of seizure data means that the estimates reflect only detected activity
  - street values from UOC 2013 are used to inform the estimate
  - costs to the exchequer are uprated to FY 2015 to 2016
  - other social and economic costs that could not be quantified include costs to brand reputation and reduced incentives to invest in research and development

IP crime is the wilful infringement of registered trademarks (counterfeiting) and the unauthorised copying and use of material protected by copyright (piracy) (Intellectual Property Office, 2011). Counterfeiting can be defined as “*the manufacture, importation, distribution and sale of products which falsely carry the trademark of a genuine brand without permission and for gain or loss to another*” (Intellectual Property Office, 2016). By contrast, piracy, which includes the activity associated with counterfeiting, does not require direct profit from sales (Intellectual Property Office, 2016).

These offences are most often associated with OCGs dealing for profit in fake branded goods or pirated products (Intellectual Property Office, 2016). This can include both physical and digital goods sold online and offline. The main focus of this report is on the sale of physical goods infringing IP rights, whether using the internet or not. However, some digital aspects of IP crime are also considered. This avoids any overlap with the scope of cyber crime included in this report since the digital aspects considered here are cyber-enabled crimes.

Data availability has in part dictated the goods included in the analysis, but efforts have been made to expand the scope from those included in UOC 2013 to reflect the change in trends in IP crime. The prevalence of counterfeit CDs and DVDs has fallen significantly in recent years, and there has been a shift towards goods like cosmetics and luxury items (e.g. handbags, sunglasses). Additionally, there is now more of a focus on digital IP crime. The same methodology is used in this report as in UOC 2013. The goods considered are business software, music (CDs and digital), films (DVDs and digital), clothing, footwear, cosmetics, jewellery, watches, handbags, luggage, and sports goods.

The estimates derived here are still likely to underestimate the true costs of IP crime in the UK since the scope is very limited and does not capture the increasingly digital nature of the market. Furthermore, the use of seizure data to inform the estimates for physical goods only includes detected activity, and thus a large proportion of the market may not be considered. However, expanding the goods included to some digital aspects is a significant improvement since UOC 2013. Improvements in data collection and detection of digital IP crime would greatly improve the accuracy of these estimates.

### 2.7.1. Scale

The estimated scale of organised IP crime is £100 million. The counterfeiting and piracy of business software, CDs, digital music tracks, DVDs, digital film downloads, clothing, footwear, cosmetics, jewellery, watches, handbags, luggage, and sports goods are considered.

This list is based on the goods covered in UOC 2013, available information from the Intellectual Property Office (IPO) on the most common targets of organised criminals, and recent topics of research conducted by the European Union Intellectual Property Office (EUIPO). The use of seizure data means that only part of the physical market for these goods is captured, and undetected activity is excluded from these estimates. Seizure data from the IPO is used for the estimates for CDs, DVDs, clothing, footwear, cosmetics, jewellery, watches, handbags, luggage, and sports goods. The data for digital music and films is based on the IPO Online Copyright Infringement Tracker and tracking data from TECXIPIO, respectively. The data for business software is based on the Business Software Alliance (BSA) Global Software Survey.

#### *Business software*

The BSA Global Software Survey (2016) canvassed consumers, IT managers and enterprise PC users. It calculates unlicensed installations of software that run on PCs. The definition of piracy used by the BSA includes under-licensing software, where copies of the software are installed on more PCs than the user has purchased licences for. Therefore, the estimate for organised business software piracy is likely to be an overestimate because this activity is unlikely to require the same planning and coordination as other forms of counterfeiting and piracy considered within this report. The UK commercial value of unlicensed software for 2015 was estimated to be \$1.9 billion (BSA, 2016). This figure has been converted to pound sterling and scaled up to FY 2015 to 2016 to give a commercial value of unlicensed software of £1.4 billion. The level of organised involvement in this activity is derived from the BSA 'Global Survey of PC User Attitudes 2010-2011' in which it was suggested that 7% of UK respondents would only acquire software in pirated illegal ways. The use of this proportion as a proxy for organised involvement is consistent with what was assumed in UOC 2013. Overall, these figures suggest that the scale of organised business software IP crime is £99 million. This figure is likely to overestimate the scale of organised business software IP crime because the BSA definition of piracy includes under-licensing.

#### *Physical goods*

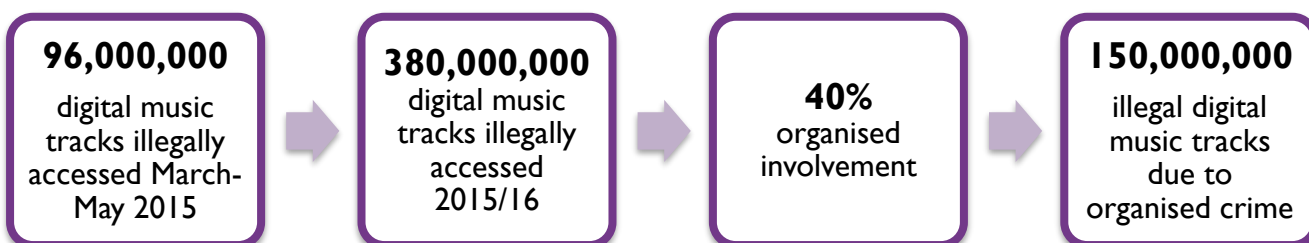
Seizure data for CDs, DVDs, clothing, footwear, cosmetics, jewellery, watches, handbags, luggage, and sporting goods from IPO is the basis for the physical goods scale estimates. The volume of seizures is combined with the average street value of the goods and the estimated

proportion of organised involvement. For physical music goods, the average street value is taken from UOC 2013 and scaled up to FY 2015 to 2016. These estimates from UOC 2013 were based on anecdotal evidence from industry bodies within Alliance Against IP Theft. For all other goods considered, the average street value has been derived through comparing street and legitimate values for goods that information is available for. Comparing the street and legitimate values for these goods from UOC 2013 suggested that the average street value is slightly less than one-third of the average legitimate value of the goods. This is a conservative proportion but has been used to attribute an updated street value to the other goods considered. The assumed level of organised involvement is 100% given the definition of organised crime, as in UOC 2013. These estimates are detailed in Table 16.

### Digital goods

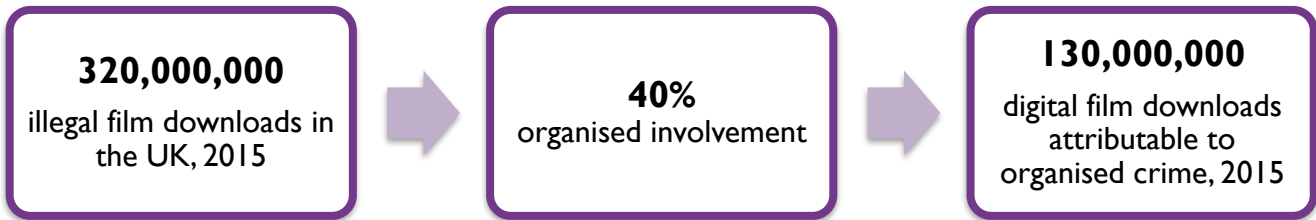
For digital music tracks, the volume of illegal content is taken from the IPO Online Copyright Infringement Tracker, which gives 96 million digital music tracks illegally accessed between March and May 2015 (Intellectual Property Office, 2015). This figure is scaled up to give a yearly figure of 380 million for FY 2015 to 2016. A significant proportion of this will be user-downloaded rather than attributable to organised crime. Following discussion with IPO and the Police Intellectual Property Crime Unit (PIPCU), a conservative assumption that 40% of digital IP crime is organised is adopted. This is based on anecdotal evidence from past experiences of digital IP crime investigations, and information on the general characteristics of digital IP crime. Therefore, there are 150 million illegal digital music tracks that are attributed to organised crime. However, since music obtained in this way is normally not paid for, the average street value is £0 and thus this aspect does not contribute to the overall scale estimate.

**Figure 9: Scale of organised digital music tracks**



For digital film downloads, the volume figure is taken from research conducted by TECXIPIO, which tracks the number of illegal movie downloads via BitTorrent across countries. Further research has suggested that BitTorrent users make up 40% of total pirating users in Europe (Price, 2013). This proportion is used to scale up the TECXIPIO BitTorrent figure to give approximately 320 million illegal film downloads in 2015 in the UK. Assuming 40% organised involvement, this suggests 130 million digital film shares in 2015 were attributable to organised crime. As with digital music downloads, digital film downloads are generally not paid for, so the average street value is £0 and they do not contribute to the overall scale estimate. The method used for digital film piracy is based on the 'bottom up' approach used in Frontier Economics (2017).

**Figure 10: Scale of organised digital film downloads**



Overall, the scale estimate for organised IP crime and counterfeiting is £100 million.

**Table 16: Scale of organised IP crime and counterfeiting**

Goods	Number of items seized	Street value	Organised involvement <sup>a</sup>	Scale estimate
Music (CDs and DVDs)	67,339	£4-5	100%	£400,000
Film DVDs	3,721	£3 <sup>b</sup>	100%	£12,000
Clothing	59,099	£7 <sup>b</sup>	100%	£400,000
Footwear	14,893	£15 <sup>b</sup>	100%	£200,000
Cosmetics	40,504	£8 <sup>b</sup>	100%	£300,000
Jewellery	275	£54 <sup>b</sup>	100%	£15,000
Watches	6,720	£554 <sup>b</sup>	100%	£3,700,000
Handbags	3,861	£184 <sup>b</sup>	100%	£700,000
Luggage	38	£152 <sup>b</sup>	100%	£6,000
Sports goods	71	£2 <sup>b</sup>	100%	£140
Music – digital	380,000,000 <sup>c</sup>	£0	40%	-
Film – digital	320,000,000 <sup>d</sup>	£0	40%	-
Business software	-	-	7%	£99,000,000
<b>Total</b>				<b>£100,000,000</b>

**Notes:**

- a) The level of organised involvement is assumed to be 100% for the goods for which there is seizure data. This is based on the definition of organised crime used in this report, and that to produce and circulate counterfeit goods requires a significant degree of planning, coordination and knowledge.
- b) This street value is approximately one-third of the average legitimate value of goods seized. This ratio is based on the comparison of street values to legitimate values for goods considered in UOC 2013.
- c) The number of illegal digital music content accessed. Taken from IPO (2015).
- d) The number of digital film shares. Based on TECXIPIO data on shares via BitTorrent.

There are limitations of this scale estimate of organised IP crime and counterfeiting. Firstly, the reliance on the street values of goods estimated in UOC 2013 to inform current street values of goods in the absence of more appropriate data. Also, the use of seizure data for physical goods reflects only the known activity of organised IP crime and counterfeiting activity; undetected activity is not accounted for within this estimate. For the business software element, the reliance of a proxy measure for the level of organised involvement from the ‘2010-2011 BSA Global Survey of PC User Attitudes’ is a further limitation of this estimate.

## 2.7.2. Social and economic cost

The social and economic cost of organised IP crime is estimated to be £570 million. The costs considered in this estimate are the lost sales to businesses, lost revenue to the exchequer, lost jobs to industry, additional benefit payments resulting from lost jobs, and enforcement costs by firms. Other costs for which there was not sufficient evidence to quantify include costs to brand reputation and reduced incentives to invest in research and development.

The weighted average of organised involvement across the goods considered in this analysis is based on the value of lost sales. This weighted average is calculated at 22% and applied to the exchequer and enforcement costs. However, since this proportion is very low, it is likely that these estimates will then underestimate costs to the exchequer and enforcement costs to firms associated with organised IP crime. It is, however, the most appropriate average to apply to these figures, based on the data included in this section.

### *Lost sales*

To estimate the lost sales to businesses, displacement rates are used to estimate the proportion of counterfeit goods that displace legitimate goods sales. The displacement rates are based on research by Frontier Economics (2017) which provides displacement rates for different types of goods and on the rates used in UOC 2013. The cost estimates combine the number of items of the good seized with the displacement rate and the average legitimate value of the items seized. This gives an estimate of £470 million in lost sales due to organised IP crime and counterfeiting per year. These figures are detailed in Table 17. Since this relies on seizure data, for physical goods in particular, this will underestimate the cost as this reflects only detected activity.

### *Costs to the exchequer*

The costs to the exchequer are based on research by Frontier Economics (2009) into the impact on governments of counterfeiting, as was used in UOC 2013. These costs include lost business taxes, income taxes and increased benefit payments due to increased unemployment as a result of counterfeit goods. The analysis is based on four sectors: luxury goods, pharmaceuticals, food and beverages, and software. An organised crime proportion has been attributed to this figure, derived from the weighted average of organised involvement for the goods analysed in the value of lost sales section above. This weighted average is 22%. Thus, these losses amount to £99 million.

### *Enforcement costs*

The estimate of enforcement costs differs in methodology from UOC 2013. Following communication with Alliance Against IP Theft, there was limited updated information available from members about enforcement spend specifically on physical IP crime. EUIPO has conducted research into the private costs of enforcement of IP rights in which it surveyed companies across the EU countries. There were 141 UK companies included in the report and the estimated total cost of enforcement against IP rights was approximately £8 million. Applying a proportion of organised crime involvement, as detailed at the beginning of this section, this gives an estimate of approximately £2 million in enforcement costs for organised IP crime.

Overall, the total social and economic costs of organised IP crime and counterfeiting are estimated to be £570 million. This is likely to be an underestimate due to a number of costs not

being included in the estimate due to insufficient data. These additional costs include the physical and emotional costs to victims as a result of poor quality counterfeits, reputation damage to brands, and reduced investment in research and development due to counterfeiting. Further, expanding the scope to include additional physical and digital IP crimes would improve the accuracy of the estimate.

**Table 17: Social and economic cost of organised IP crime and counterfeiting**

Goods	Number of items seized (organised)	Displacement rate <sup>a</sup>	Average legitimate value <sup>b</sup>	Cost estimate
Music (CDs & DVDs)	67,339	45%	£9	£300,000
Film DVDs	3,721	60%	£12	£25,000
Clothing	59,099	50%	£26	£800,000
Footwear	14,893	51%	£53	£400,000
Cosmetics	40,504	50%	£29	£600,000
Jewellery	275	57%	£188	£30,000
Watches	6,720	46%	£1,940	£6,000,000
Handbags	3,861	57%	£643	£1,000,000
Luggage	38	57%	£531	£12,000
Sports goods	71	51%	£7	£300
Music – digital	150,000,000	51%	£1 <sup>c</sup>	£78,000,000
Film – digital	130,000,000	51%	£4 <sup>d</sup>	£290,000,000
Business software	-	86%	-	£85,000,000
<b>Cost of lost sales</b>				<b>£470,000,000</b>
Costs to the exchequer <sup>e</sup>				£99,000,000
Enforcement costs <sup>e</sup>				£2,000,000
<b>Total</b>				<b>£570,000,000</b>

**Notes:**

- a) Taken from Frontier Economics (2017), except for CDs and DVDs which are taken from UOC 2013.
- b) Taken from IPO Seizure data 2016.
- c) Legitimate value based on the price of one music track on iTunes.
- d) Legitimate value based on the average price of renting a new release film in high definition across Amazon, TalkTalk and iTunes.
- e) Organised involvement applied to these costs is 22%, based on the weighted average of organised involvement in lost sales.

There are limitations associated with this estimate of the social and economic cost of organised IP crime and counterfeiting. The reliance on some of the same data as in UOC 2013 in the absence of any updated data, and on seizure data such that the estimate reflects only detected activity are limitations. Additionally the use of the EUIPO data to estimate enforcement costs relies on a limited sample of UK companies, but is the best available information with which to estimate this. Finally, the use of the weighted average organised involvement is likely to result in the figure here being an underestimate since this is a conservative estimate.

### 2.7.3. Results from UOC 2013

In UOC 2013, the scale of organised IP crime was estimated at £90 million. This was based on seizure data and thus only captures part of the market. Average street values were combined with the seizure volumes to monetise the scale of the market. The level of organised involvement in each type of good was based on stakeholder information.

The social and economic costs were estimated to be £400 million. The main social and economic costs considered were lost sales to business, lost revenue to the exchequer, lost jobs to industry, additional benefit payments resulting from lost jobs, and enforcement costs. The lost sales part of the estimate was developed by combining the average legitimate value of the goods with a displacement rate and the volume of goods seized. It was not deemed possible to quantify other relevant costs such as the impact on brand reputation or the costs suffered by individual recipients of poor quality counterfeits.

A significant weakness of the scope of IP crime considered in UOC 2013 is the focus on only physical goods when the market was already becoming increasingly focused on digital IP crime.

## 2.8. Environmental crime

Environmental crime is defined by the European Commission as “*acts that breach environmental legislation and cause significant harm or risk to the environment and human health*” (European Commission, 2017). The two main types of environmental crime within Europe and the UK are waste crime and wildlife crime, both of which are becoming increasingly attractive to organised criminals due to the high profitability and low risk (POST, 2017). These categories of environmental crime are considered separately below.

### 2.8.1. Waste crime

#### **Key findings:**

- There **scale** of organised waste crime is not estimated due to insufficient data.
- The **social and economic cost** of organised waste crime is **£350 million**. This considers tax evasion, lost profits, enforcement costs, and costs of removing waste.
- **Limitations:**
  - Environment Agency spend on enforcement is partial since some spend is not possible to apportion
  - due to a lack of data the following costs are not quantified: police force and local authority enforcement costs; costs to private land owners of fly-tipping; further social and economic costs resulting from damage to the environment as a result of illegal waste

Waste crime can be split into three distinct crimes:

- Illegal waste and dumps (large scale incidents)
- Illegal waste export
- Fly-tipping

The revenue of organised environmental criminals is unknown, therefore no scale estimate is possible.

### *Scale*

No scale estimate is produced due to limited data. However, this section aims to provide a sense of scale of waste crime through the limited data available.

#### *Illegal waste and dumps*

The EA collects data on known illegal waste sites. In FY 2015 to 2016, the EA identified 622 active illegal sites alongside 1,016 new illegal sites. They reported stopping the illegal waste activity at 989 sites, demonstrating the 'whack-a-mole' nature of illegal waste sites. Alongside illegal waste sites, 125 accounts of illegal dumping (large scale dumping, usually above lorry size) of the magnitude to be within the EA's remit were dealt with.

#### *Illegal waste export*

The EA also prevented 3,900 tonnes of waste being illegally exported.

Fines imposed as a result of the prosecutions led by EA (both illegal waste and dumps and illegal export) totalled just over £700,000 in 2015, an 85% increase from 2014 (Environment Agency, 2016).

#### *Fly-tipping*

Defra have responsibility for fly-tipping and collect data through local authorities. In FY 2015 to 2016, local authorities in England dealt with 936,000 fly-tipping incidents, an increase of 4% on the previous financial year (Department for Environment, Food & Rural Affairs, 2017). The number of incidents of fly-tipping on private land is unrecorded as it is considered the responsibility of the property owner, thus this is an underestimate of the scale of fly-tipping in England.

### *Social and economic cost*

The main components of the social and economic cost of waste crime are:

- the tax evasion from illegal dumping, illegal waste sites and mis-classification of waste
- loss of profit from legitimate waste businesses
- the costs of enforcement and costs of removing illegally dumped waste
- the costs of the damage to the environment and health due to waste

#### *Tax evasion and lost profits*

The latest estimate places the economic cost, including lost tax and profits, of illegal waste sites in England in 2015 at £120 million, with the cost split between £87 million to the private sector, £20 million to the public sector and £13 million to wider society (ESAET, 2017). Scaling this up to a UK-wide figure and to FY 2015 to 2016 prices gives an annual cost of approximately £140 million. All of this is attributed to organised crime.

ESAET estimate that £30 million of revenue was lost to the private and public sectors through illegal exports of waste in 2015 in England. This uses conservative assumptions and does not



account for further damage abroad in the supply chain. Scaling this figure to the UK and for the FY 2015 to 2016 price gives a cost of £36 million of illegal exports, all of which is considered attributable to organised crime under the same logic as illegal waste sites.

For illegal waste sites and illegal exports of waste, it is noted that scaling the estimates from England to the whole of the UK in proportion with population figures may lead to an underestimate given the historic prevalence of fuel laundering in Northern Ireland in the border region with Ireland.

Tax evasion as a result of the mis-classification of waste is a key economic cost of illegal waste crime. This arises due to the incentive to avoid the higher rate of landfill tax. HMRC estimate the tax evaded due to the mis-classification of waste as £150 million per annum in 2016 (HM Revenue & Customs, 2016a). Discussions with EA have indicated that there is compliance between both the producer of the waste and the recipient of the mis-classified waste, thus it is assumed that 100% is organised. Therefore, 100% of the £150 million is attributed to organised crime.

Summing these component costs gives a cost of tax evasion and loss of profit of £330 million.

#### *Enforcement costs and removing waste*

The costs of removing illegally dumped waste are shared between the EA for serious incidents, local authorities (LAs) for fly-tipping on public land, and private land owners for fly-tipping on private land. The EA spends £15 million per annum on waste crime, which given the above is assumed to be all against organised environmental crime (Environment Agency, 2016). Other spending from the EA on enforcement is difficult to apportion and therefore is not included in this paper, which means these figures will slightly underestimate the total cost. Other relevant enforcement costs would be those from the police forces and LAs but these have not been estimated due to lack of available data.

For fly-tipping, Defra collect the cost of clearance for each local authority of fly-tipping on public land, totalling £50 million in FY 2015 to 2016 (Department for Environment, Food & Rural Affairs, 2017). However, fly-tipping is not entirely organised. To proportion fly-tipping, the costs of reported incidents of the size of a small lorry and above have been considered organised. This assumption arises from the EA's official guidance and reflects organised waste crime being larger in scale than the majority of fly-tipping. This leads to a cost to LAs of £5 million per annum. The cost to private land owners of fly-tipping has not been estimated, due to the lack of available data.

This paper has not estimated the economic or social costs resulting from damage to the environment as the result of illegal waste, due to a lack of data. These would include damage to health due to hazardous waste, loss of intrinsic enjoyment of the environment due to environmental damage and others.

Combining the total cost figures above gives £350 million attributable to organised waste crime. The components to this estimate are shown in Table 18.

**Table 18: Social and economic cost of waste crime**

	Cost
Illegal waste sites	£140,000,000
Illegal exports	£36,000,000
Mis-classification of waste	£150,000,000
<b><i>Tax evasion and lost profits</i></b>	<b><i>£330,000,000</i></b>
Environment Agency costs	£15,000,000
Defra fly-tipping costs	£5,000,000
<b><i>Enforcement costs and removing waste</i></b>	<b><i>£20,000,000</i></b>
<b>Total</b>	<b>£350,000,000</b>

Limitations of this estimate include:

- the exclusion of additional EA spending on waste crime given that it is difficult to specifically apportion to organised waste crime activity
- the exclusion of the cost to private land owners of fly-tipping due to lack of available data
- additional social and economic costs resulting from damage to the environment as a result of illegal waste due to lack of data

### *Results from UOC 2013*

In UOC 2013, due to limited data, no estimate of the scale or the social and economic costs of organised waste crime was produced.

### 2.8.2. Wildlife crime

While there is no global definition for wildlife crime, the National Wildlife Crime Unit (NWCU) define it as “*any action which contravenes current legislation governing the protection of the UK’s wild animals and plants*” (NWCA, 2017a). In their latest strategic and tactical assessment, the NWCU define six priority areas:

- badger persecution
- bat persecution
- Convention on International Trade in Endangered Species (CITES) of wild fauna and flora issues (current priorities of European eels; illegal trade in raptors; ivory; medicinal and health products; reptiles; rhino horn; and timber)
- freshwater pearl mussels
- poaching (deer poaching/coursing, fish poaching and hare coursing)
- raptor persecution (especially golden eagle, white-tailed eagle, peregrine, red kite, hen harrier and goshawk) (NWCA, 2017b)

Several of these areas have potential for significant financial profit and have attracted OCGs as a result. However, it is important to note that the motives are not always purely financial; badger and other forms of persecution are often, but not always, motivated by sporting enjoyment or similar incentives (NWCA, 2017a).

It has not been possible to estimate a scale or cost of wildlife crime to the UK. Instead, an indication of the scale of the problem is provided using data that is available.

### *Scale*

This report has been unable to quantify the scale of organised wildlife crime in the UK.

The NWCU have identified several OCGs involved in wildlife crimes which are then reported to the NCA (NWCA, 2017a). These are predominantly due to how lucrative that wildlife crime can prove to be. For example, razor clam poaching off the coast of Scotland has been estimated to provide revenue up to £65,000 per day, attracting the attention of organised criminals (NWCA, 2017a). Likewise, deer poaching has attracted OCGs through the financial incentives that come as a result of selling poached deer to local business.

Since UOC 2013, there has been significant Law Enforcement Agency (LEA) action on wildlife crime. Operation Cobra 3, a joint global operation to tackle the international trade in illegal wildlife goods involving Border Force, NWCU and LEAs, was initiated in 2015. The operation led to a significant increase in the seizure of CITES goods with over 300 seizures during the active phase of the operation (NWCA, 2017a). This led to a reported 854 CITES seizures in 2015, a significant increase on the 512 seizures in 2014 (Home Office, 2015; Home Office, 2016b; Home Office, 2016c). The increase in seizures highlights that the true scale of the illegal trade is likely to be higher than previously expected and that the cost of wildlife crime in the UK is not solely to the UK. Through the UK serving as a transit route and consumer for endangered species, the cost of the illegal trade can be traced back to the origin countries and is most significant there rather than in the UK.

The NCA note in their 2015 strategic assessment that the illegal wildlife trade continues to be a threat and that OCGs are flexible in their approach to generating income, indicative of the appeal of the profit available from illegal wildlife trade (NCA, 2015a). Separately, the NWCU and EU note the potential revenue and profits that arise from organised wildlife crime, with the UN separately estimating that the illegal trade in wildlife is worth between \$7 billion and \$23 billion globally annually, making it the fourth largest environmental crime (Institute for European Environmental Policy, 2016; NWCA, 2017a; United Nations Environment Programme, 2016). The EU in particular noted that OCGs who operate on illegal wildlife trade are often involved in other forms of transnational illegal trade, particularly arms and drugs trafficking, indicating that OCGs traverse multiple illegal trades and operate in areas they see as high profit, low risk (Sina, et al., 2016).

### *Social and economic cost*

The main components of the economic and social costs of organised wildlife crime to the UK are likely to be:

- the various enforcement costs

- potential losses of tourism
- intrinsic loss of enjoyment through the persecution of wildlife in the UK

This paper has not considered the various costs of the origin countries of illegal wildlife trade, however these costs are expected to be sizeable, specifically with regard to the potential loss of tourism.

#### *Enforcement cost*

These costs are split between preventing the illegal trade in endangered species (CITES) and the enforcement of organised wildlife crime taking place directly within the UK. The Border Force CITES team at Heathrow is an example of prevention, while NWCU and the Metropolitan Police's Wildlife Crime Unit showcase enforcement. However, aside from the CITES team which deals with an illegal trade that is predominantly organised, these enforcement costs cover wildlife crime as a whole, not just that which is organised.

#### *Loss of tourism*

Wildlife attracts tourism with wildlife tourism having an estimated net impact of £65 million in Scotland in 2010 (Blake & Curtin, 2009). A study by the Royal Society for the Protection of Birds Scotland estimated that £5 million of spend each year on the Isle of Mull is attracted through the white-tailed eagles that inhabit the isle (Molloy, 2011). However, there is no estimate of the total UK wildlife tourism or the amount that is deterred through organised wildlife crime. Losses of tourism – and businesses that rely upon said tourism – as a result of organised wildlife crime are likely to be the highest cost to business alongside a small variety of other business that rely upon wildlife.

#### *Intrinsic loss of enjoyment of wildlife*

Through the illegal persecution of wildlife in both the UK and abroad, there is an intrinsic loss of enjoyment of wildlife in the UK and abroad for UK tourists. However, it is difficult to measure the utility gained through the enjoyment of wildlife let alone the amount lost through organised wildlife crime.

#### *Results from UOC 2013*

In UOC 2013, the authors similarly concluded that it was not possible to estimate a scale or cost of wildlife crime with the available evidence. Evidence was used to provide an indication of the potential scale, similar to the approach taken here.

## 2.9. Firearms supply

### **Key findings:**

- The **scale** of organised firearms supply is not estimated due to insufficient data.
- The **social and economic cost** of organised firearms supply is **£190 million**, based on ESCC 2018, and applying four firearm-specific adjustments to the unit costs.
- **Limitations:**
  - Northern Ireland is excluded from the estimate
  - it is assumed that all crime involving a firearm is reported and estimates reflect only recorded activity
  - it is assumed that all crimes utilising an illegal firearm would not have taken place without the firearm
  - it is assumed that all crimes involving handguns, shotguns, rifles, machine guns, converted air weapons, antique firearms and unidentified weapons are attributable to organised firearm supply

The supply of firearms in the UK is likely to be highly organised. Although supply itself may create costs to society through, for example, gang-on-gang violence, we expect the greater costs to result from the illegal use of firearms that would not otherwise have been available.

This update improves on the previous methodology in UOC 2013 by taking account of the way in which the firearm was used and the additional severity in outcome resulting from the use of a serious firearm<sup>34</sup> and applying updated cost of crime estimates (Heeks, Reed, Tafsiri, & Prince, 2018). The updated estimate is £30 million higher than the 2013 estimate. This increase is entirely explained by an expansion of the methodology and completeness of the ESCC cost of crime estimates. The number of offences involving firearms has not changed notably since FY 2010 to 2011, but the nature of their use has shifted significantly, leading to considerably less damaging outcomes.

### 2.9.1. Scale

The scale of organised firearms supply is not estimated.

To estimate the scale of organised firearm supply, data on the number of firearms that are imported to or stolen in the UK every year, as well as information on the nature of trade in illegal firearms and the degree to which this is organised, would be needed. However, there are not suitable estimates or data available given the covert nature of these offences.

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<sup>34</sup> For our purposes, serious firearms are defined as any firearm that was unlikely to be obtained legally; this includes handguns, sawn-off shotguns, long-barrelled shotguns, rifles, unidentified firearms, and other firearms. This does not include: imitation firearms, unconverted starting guns, CS gas, pepper spray, stun guns, toy guns (plastic or nerf guns), paintball guns, flare guns, or Pava spray.

## 2.9.2. Social and economic cost

The social and economic cost of organised firearms supply is estimated to be £190 million. This is calculated by applying adjusted cost of crime estimates from ESCC 2018 to all offences involving an illegally-obtained serious firearm, weighted by the outcome of the crime.<sup>35</sup>

The cost of each crime type in which a firearm is used is based on averages provided in ESCC 2018 (Heeks, Reed, Tafsiri, & Prince, 2018). Where appropriate, four firearm-specific adjustments have been made to account for the greater damage capability of firearms.<sup>36</sup> These adjustments are explained below and the figures are detailed in Table 30 in Annex D.

- **Recorded crime adjustment**

ESCC 2018 generated police and CJS cost-per-crime estimates by dividing total policing budgets and Ministry of Justice spending by the estimated number of reported and unreported crimes in England and Wales. This is calculated by crime type, not by weapon usage, so the police and CJS cost-per-crime represents *all crimes* rather than *all crimes involving a firearm*. It is assumed, as in UOC 2013, that every crime involving a firearm is reported, and therefore the cost-per-crime is held artificially low by the inclusion of estimated unreported crimes. This is adjusted by dividing the budget estimates<sup>37</sup> by PRC data for the specific crime to give new cost-per-crime values. This figure is subtracted from the original ESCC 2018 cost-per-crime estimate to give the relevant adjustment for the unreported crimes included in the ESCC 2018 estimate.

- **Outcome-based adjustments**

The cost of physical and emotional harms for each crime type is estimated in ESCC 2018. The same methodology and costs are used, but the likelihood of fear, broken bones, severe bruising and puncture wounds has been increased for the purpose of this report. The rate at which fear occurs is based on a 2014 study by the US Department of Justice on the socio-economic effects of violent crime. This found that between 2009 and 2012, victims of firearm related violence experienced moderate or severe distress in 68% of cases (Langton & Truman, 2014). Where offences result in serious injuries, the physical harm is taken from a study of civilian gunshot wounds in Israel from 2003 to 2005; this finds that broken bones occurred in 60% of cases, and internal injuries in 68% (Burg, et al., 2009). It is assumed that all serious injuries resulted in severe bruising and 86% resulted in puncture wounds. The proportion of serious injuries caused when a weapon was 'fired causing injury or inquiry to a person' was 86%. Lost output and healthcare costs as calculated in ESCC 2018 are functions of the level of physical and emotional harm caused by the offence. These have been updated to reflect the increased severity of outcomes.

- **Police costs**

Additional police costs reflect the requirement for the police to train and equip Armed Firearms Officers (AFOs) to respond to firearms offences. The cost of training and equipping AFOs in the Metropolitan Police is scaled by the total number in the UK to give

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<sup>35</sup> For example, a robbery may result in serious injury or only the loss or damage of property.

<sup>36</sup> These adjustments are not applicable to all crimes. For example the prison time for the perpetrator of a firearm-related homicide is unlikely to find their sentence affected by five-year mandatory minimum sentencing.

<sup>37</sup> These budgets were uplifted to FY 2015 to 2016 prices where appropriate using a GDP deflator (HM Treasury, 2018).

an estimate of total spend. This was divided by the number of firearm operations in FY 2015 to 2016 to give a cost per operation. It is assumed that every firearm offence requires a firearm operation, and adds the cost per operation to the cost-per-crime. Although firearm-specific costs were already included in the ESCC 2018 estimate, they made up less than 1% of the overall budget, so removing them made no significant difference to the unit costs.

- **Criminal justice costs<sup>38</sup>**

Offences involving firearms are subject to five-year mandatory minimum sentences, which mean prison costs are likely to be considerably higher for firearm offences (The Crown Prosecution Service, 2017). This adjustment was calculated using half of the average sentence length for firearm offences, around 30 months.<sup>39</sup> This was then applied to the cost per year of prison time, and the proportion of firearm offences that lead to a custodial sentence (National Offender Management Service Annual Report and Accounts, 2016).

As in UOC 2013, offences involving firearms are taken from PRC data for England, Wales, and Scotland (ONS, 2017c; Scottish Government, 2016). Northern Ireland is excluded from the analysis, as the nature of firearm supply and use is likely to be significantly different from the rest of the UK.

The crime types associated with firearms offences included in the analysis and adjusted as necessary are shown in Table 19. There were an estimated 4,000 offences involving a firearm. It is assumed that all firearm offences are reported to the police. These offences are not scaled up to account for unreported offences; therefore, this is likely to be an underestimate since less serious firearm offences may not be reported. Furthermore, it is assumed that all crimes utilising an illegal firearm would not have taken place without the firearm. This is likely to overestimate the cost as many crimes would have been possible to commit with a substitute weapon.

It is assumed that all crimes involving handguns, shotguns, rifles, machine guns, converted air weapons, antique firearms and unidentified weapons are attributable to organised firearm supply. This may overestimate the cost since it is possible that some perpetrators acted alone in stealing or importing guns for their own use.

**Table 19: Social and economic cost of organised firearms supply**

Crime type	Unit cost	Total cost
Attempted murder and other acts endangering life (including wounding)	£29,290	£16,000,000
Burglary	£21,460	£3,000,000
Criminal damage	£13,320	£2,000,000
Drug offences	£13,360	£70,000
Homicide	£3,200,000	£87,000,000
Other offences <sup>a</sup>	£13,280	£2,000,000

<sup>38</sup> Criminal justice costs use sentencing statistics published by the Ministry of Justice from 2003 to 2009 (ONS, 2010). The sentencing rate for firearm offences in 2009 was calculated using 2009 PRC data, and was assumed not to have changed since. The cost of prison time was taken from the National Offender Management Service Annual Report and Accounts 2015/16.

<sup>39</sup> Assuming prisoners serve on average half of their sentence.

Crime type	Unit cost	Total cost
Other theft offences	£15,040	£80,000
Other violence against the person	£18,340	£27,000,000
Robbery	£35,260	£49,000,000
Rape	£67,690	£1,000,000
Other sexual offences	£29,410	£200,000
<b>Total</b>		<b>£190,000,000<sup>b</sup></b>

**Notes:**

- a) Other offences include: blackmail, kidnap, other firearms offences, other notable offences, other offences against the state or public order, perverting the course of justice, possession of firearm offences and violent disorder.
- b) Figures may not sum due to rounding.

There have been considerable changes in the offences for which firearms are used since UOC 2013, with FY 2015 to 2016 data showing 793 fewer robberies, but 566 more ‘other violence against the person’ offences compared to FY 2010 to 2011 data. This has led to a significant decrease in overall severity, as outcomes of ‘other violence against the person’ offences are, on average, considerably less severe than those of robberies.

Although the number of firearm offences has remained almost unchanged since UOC 2013, the estimated cost has increased from £160 million to £190 million (Mills, Skodbo, & Blyth, 2013). This is almost entirely due to improvements in the methodology, as cost of crime estimates and firearm-specific adjustments are now more complete. Some specific methodological improvements are:

- Replacing the assumption that firearm offences cause fear at the same rate as any other crime (25% for violent crime and 21% for non-violent crime) (Heeks, Reed, Tafsiiri, & Prince, 2018). Instead, firearm offences have a higher chance (68%) of causing lasting fear to the victim (Langton & Truman, 2014).
- The per-person cost of training and equipping firearm officers is the same in London as in the rest of the UK, and firearm officers are paid no more than regular police. This may underestimate the true cost, but replaces an assumption that firearm offences are all handled without specific firearm operations.
- Firearms offences are assumed to have higher prison costs than for other offences given that they are subject to five-year mandatory minimum sentences, as discussed above in the ESCC adjustments section, but otherwise are assumed to be no more expensive to progress through the CJS. This replaces the stronger assumption that overall CJS costs are no higher for firearm offences.

### 2.9.3. Results from UOC 2013

In UOC 2013, it was not possible to estimate the scale of organised firearms supply; however, the social and economic cost was estimated to be £160 million. This was derived by applying the Home Office costs of crime unit cost estimates to the number of crimes involving a firearm (about 4,000 in FY 2010 to 2011).



## 2.10. Organised immigration crime (OIC)

Two types of OIC are considered in this section – abuse of legitimate entry and people smuggling, both of which can be facilitated by organised criminals.

The estimates for abuse of legitimate entry and people smuggling intend to capture the following activity facilitated by organised criminals: successful attempts by migrants to enter the UK, those detected on arrival, and those prevented from entering the UK. The data reflect what is known about these specific aspects of OIC, and thus do not account for hidden OIC activity. Therefore, these estimates will likely underestimate total OIC activity in the UK.

For abuse of legitimate entry and people smuggling, no attempt has been made to multiply up volumes to account for undetected activity because no appropriate proxy measure to use as a multiplier could be devised.

The scale of OIC is estimated to be £110 million in FY 2015 to 2016. The social and economic cost of OIC is estimated to be £73 million. This includes the cost of abuse of legitimate entry cases, people smuggling, and Immigration Enforcement costs against OIC. The social and economic cost estimates for abuse of legitimate entry and people smuggling consider only the direct costs of the OIC activities to the UK in terms of operational costs to the government. Further social and economic costs of migration generally are not included, and estimates of the harms to the victims of this activity facilitated by organised criminals, for example, reduced quality of life or health costs, are not considered.

### 2.10.1. Abuse of legitimate entry

#### **Key findings:**

- The **scale** of organised abuse of legitimate entry in FY 2015 to 2016 is estimated to be **£38 million**. This includes sham marriages, visa port refusals, enforcement arrests and forged supporting document cases.
- The **social and economic cost** of organised abuse of legitimate entry is **£15 million**. This includes the costs of asylum applications, detentions, and removals of this cohort of OIC.
- **Limitations:**
  - the level of organised involvement is taken from UOC 2013 in the absence of updated data
  - the sample sizes for fees paid to organised criminals to facilitate a sham marriage and to buy a forged document are very small
  - the social and economic cost considers only operational costs
  - significant assumptions are made to estimate the volume of abuse of legitimate entry cohorts who applied for asylum, and were detained and removed

OIC through abuse of legitimate entry covers organised criminals targeting legitimate processes to facilitate illegal migration. The areas specifically included in this section are sham marriages, forged supporting documents, visa port refusals, and enforcement arrests of such entrants. As mentioned above, only detected activity is included because of the lack of

information with which to inform multiplying up volumes, hence the figures here will underestimate activity.

The scale estimate has increased since UOC 2013. This is mainly due to an increase in the volume of sham marriages, visa port refusals and enforcement arrests recorded. The unit costs have also increased since UOC 2013, which will further contribute to the total estimate rise. The social and economic cost estimate is greater than that in UOC 2013. This is driven by an increase in the volume of enforcement arrests and asylum applications, removals, and detentions, in part due to changing methodology in measuring these volumes for this specific cohort of entrant. Therefore, this may reflect changed recording and law enforcement activity. The unit costs for the components contributing to the social and economic cost have fallen since UOC 2013.

The proportions of organised involvement assumed across these ‘abuse of legitimate entry’ estimates are taken from UOC 2013 given the absence of any updated data to inform new assumptions. Hence, this fails to reflect any changes in the characteristics of the organised proportion of this crime type since FY 2010 to 2011 but is the best available proxy. Therefore, this is a key limitation of these estimates.

### Scale

The scale of organised abuse of legitimate entry in FY 2015 to 2016 is estimated to be £38 million.

The estimate covers sham marriages, visa port refusals, enforcement arrests, and forged supporting document cases. For each aspect, the volume of cases is multiplied by the estimated fees paid to organised criminals to facilitate migrants’ entry into the UK in this manner. The assumed level of organised involvement is taken from UOC 2013 in the absence of updated data to suggest otherwise. These assumptions were developed using available data and expert opinions. These components of the estimate are shown in.

**Table 20: Scale of organised abuse of legitimate entry**

	Volume	Organised crime involvement <sup>a</sup>	Fees paid to organised criminals	Total cost <sup>b</sup>
Sham marriages	2,500	75%	£6,800 <sup>c</sup>	£13,000,00
Forged supporting document cases	12,500	75%	£1,100 <sup>d</sup>	£10,000,00
Visa port refusals	7,200	83%	£1,100 <sup>d</sup>	£6,000,00
Enforcement arrests	11,000	75%	£1,100 <sup>d</sup>	£9,000,00
<b>Total</b>				<b>£38,000,000</b>

**Notes:**

- a) Based on the assumptions made in UOC 2013.
- b) Totals may not sum due to independent rounding.
- c) Based on the arrangement of five sham marriages, which may not be an accurate representation.
- d) The median price paid for forged documents. Based on 50 cases for which price information was available.

### *Sham marriages*

There were an estimated 2,500 sham marriages reported in 2016. This is based on the number of Section 24 reports of suspicion of sham marriages by registrars. This may overestimate the number of sham marriages since not all suspicions will be proved to be marriages of convenience. However, there is no data available to indicate what proportion of Section 24 reports are accurate.

The level of organised involvement is assumed to be 75%, as in UOC 2013, based on expert opinion on likely organised crime involvement in FY 2010 to 2011. It is unknown if factors suggest any change since this estimate was made.

The fee paid to organised criminals to facilitate a sham marriage is based on cost information obtained from interviews with sham marriage participants between August 2014 and October 2015. The fees paid to facilitators to arrange five sham marriages were obtained. Although this is a very small sample, general information in this area is limited and therefore this reflects the best available updated data, despite it not necessarily being an accurate representation of organised sham marriages as a whole. In FY 2015 to 2016 prices, this estimates the average fee paid to organised criminals for a sham marriage to be approximately £6,800.

These three estimates – noting that uncertainty in all three elements mean estimates provide only an approximate insight as to the scale – suggest that the scale of sham marriages is approximately £13 million.

### *Forged supporting documents*

The Visa Forgery Dataset holds information on forged document entrants and suggests that there were around 12,500 cases in 2016. The median price paid for a forged document is approximately £1,100. This figure is based on a limited number of cases for which information about the price paid was available, hence it may not accurately represent the price paid to organised criminals for forged documents, but is the best available information. The original data is scaled to FY 2015 to 2016 prices for consistency.

The scale of organised forged supporting document cases is £10 million, based on a 75% level of organised involvement, as in UOC 2013.

### *Visa port refusals*

There were approximately 7,200 visa port refusals<sup>40</sup> where migrants were denied entry to the UK having obtained a genuine visa in 2016. It is assumed that 83% of these are attributable to organised crime, based on assumptions made in UOC 2013, determined by examining the country of origin of migrants refused entry at port.<sup>41</sup> The fee paid to organised criminals follows the same method as in UOC 2013, taking the median price paid for forged documents. This is approximately £1,100.

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<sup>40</sup> Of visa nationals: these are visa port refusals where individuals were denied entry to the UK despite having obtained a genuine UK visa after initial decisions to grant a visa were revised following further inspection of the evidence.

<sup>41</sup> Those countries of origin with a large number of refused migrants are assumed to have organised crime networks facilitating entry attempts. While there will be many other factors influencing organised crime involvement, this was felt to be the best proxy measure (Mills, Skodbo, & Blyth, 2013).

Therefore, the scale of organised visa port refusal cases is estimated to be £6 million. It should be noted that uncertainty in the level of refusals seen in 2016 being representative of long-term trends, the accuracy of the proxy measure for organised crime involvement, and the assumed fee for forged documents mean that this estimate provides only an approximate sense of scale.

### *Enforcement arrests*

There were approximately 11,000 recorded enforcement arrests of illegal migrants already in the UK in 2016, based on Border Force Management Information. This cohort is counted within this section in line with the approach taken in UOC 2013. As in UOC 2013, 75% of these cases are assumed to be attributable to organised crime, in the absence of updated data to provide a more specific estimate of organised criminal involvement in such activity. Also, in line with the approach taken in UOC 2013, £1,100 – the approximate median price paid for forged documents – is used as the unit cost in the absence of a more appropriate specific unit cost estimate. The scale of enforcement arrests is therefore estimated to be £9 million.

This estimate relies on significant assumptions made in UOC 2013; for example, for the proportion of organised involvement, and small sample sizes for estimating the average fees paid to organised criminals for facilitating entry into the UK. As a result, the scale estimate may not be an accurate representation of the true size of this activity in FY 2015 to 2016.

### *Social and economic cost*

The social and economic cost of organised abuse of legitimate entry is estimated to be £15 million in FY 2015 to 2016. This is based on estimates of the operational costs as a result of organised abuse of legitimate entry. Estimates of the harms to victims of such activity, for example, reduced quality of life or health costs, are not considered, due to data constraints.

The estimate includes the costs of asylum applications, removals, detentions, and enforcement arrests of illegal migrants who have entered the UK through the abuse of legitimate processes. This follows the scope set out in UOC 2013. Also considered are the pay costs of NDFU. A breakdown of the estimate is shown in. Significant assumptions are made to estimate the volume of abuse of legitimate entry cohorts considered in the scale estimate who are relevant to include in the asylum application, detentions, and removals costs calculations. These are discussed below but there are significant weaknesses of this estimate, reflecting a lack of robust data with which to alternatively estimate these volumes.

Estimates of organised crime involvement are drawn from the scale estimate information in using the scale of organised abuse of legitimate entry crime to estimate the average proportion of organised involvement. This provides an approximate estimate of 76% to apply to the cost calculation, but it should be noted that limitations explained previously around the derivation of these figures provide uncertainty in results derived from their use. Some areas use specific estimates drawn from where the abuse of legitimate entry aligns closely with one of the types of scale estimate presented above.

**Table 21: Social and economic cost of organised abuse of legitimate entry**

	Volume	Unit cost	Total cost <sup>a</sup>
Asylum applications	1,900	£7,062 <sup>b</sup>	£10,000,000
Removals	130	£1,000 to £15,000 <sup>c</sup>	£500,000
Detention	15,700	£91 <sup>d</sup>	£1,000,000
Enforcement arrests	11,000	£220 <sup>e</sup>	£2,000,000
NDFU costs	-	-	£2,000,000
<b>Total</b>			<b>£15,000,000</b>

**Notes:**

- a) Totals may not sum due to independent rounding.
- b) Taken from Home Office (2017).
- c) Taken from Home Office (2013a).
- d) Average unit cost across FY 2015 to 2016 data from Home Office (2016).
- e) Taken from police costs for FY 2015 to 2016 and an average of 5.8 hours per arrest.

*Asylum applications*

Of the total recorded asylum applications of entrants who were served illegal entry papers in FY 2015 to 2016, it is assumed that 5% are attributable to abuse of legitimate entry cases. This proportion is arrived at through various assumptions, and therefore may not accurately represent all abuse of legitimate entry cases who applied for asylum. However, given insufficient robust data in this area, this was deemed the best available method to inform the estimate and attempt to consider the activities covered within the scale estimate.

Available recorded data indicates that in FY 2015 to 2016 there were approximately 600 asylum applications by entrants who were visa port refusal cases. To attempt to consider the cost across all the scale activities considered above, the proportion of visa port refusal asylum applications of total visa port refusal cases in FY 2015 to 2016 (8%) is applied to the recorded volumes of sham marriage cases and forged document cases used in the scale estimate. This results in an estimated 1,900 asylum applications by abuse of legitimate entry cases in FY 2015 to 2016. This methodology has significant limitations; it carries the implicit assumption that the proportion of sham marriage and forged document entrants who apply for asylum is the same as for visa port refusal entrants, which may not be correct. Some forms of abuse of legitimate entry may be more or less likely to apply for asylum; however, there is a lack of robust data to indicate as such, and hence it is assumed that the proportion is the same across all activities considered here. Given these limitations, the social and economic cost estimate provides only an indication of the estimated cost of abuse of legitimate entry activity.

These 1,900 abuse of legitimate entry asylum applicants constitute 5% of the total asylum applications in FY 2015 to 2016. This proportion of the total recorded activity is applied to estimate the volumes of removals and detentions of abuse of legitimate entry cases in FY 2015 to 2016 below.

The unit cost<sup>42</sup> (£7,062) for an asylum application is taken from UK Visas and Immigration (UKVI) Transparency Data for FY 2015 to 2016 (HM Government, 2017). This means the social and

<sup>42</sup> The unit cost is based on a work in progress figure. Costs of an asylum case will vary considerably dependent on the type of

economic cost of asylum applications for organised abuse of legitimate entry is estimated at £10 million, using a weighted average organised involvement of 76% as described above.

This estimate is subject to uncertainty with respect to the volume of asylum applicants, the share assumed to represent 'abuse of legitimate entry', and the accuracy of the proxy measure for organised crime involvement. Therefore, this estimate provides an approximate sense of the cost only.

### *Removals*

There were approximately 130 migrants who were returned following an asylum application in FY 2015 to 2016 attributed to abuse of legitimate entry. This is derived from the assumption that 5% of asylum applicants are attributable to abuse of legitimate entry, based on the proportion of visa port refusal asylum application volumes. This 5% is applied to the total recorded number of asylum applicants who were removed in FY 2015 to 2016. Of these removals, it is estimated that approximately 90 were voluntary and the remaining 40 were enforced. This is calculated by applying the proportion of enforced and voluntary removals of the total FY 2015 to 2016 removal volumes to the 'abuse of legitimate entry' volume. Therefore, this assumes that 'abuse of legitimate entry' cases have the same split between enforced and voluntary removals as for total removal cases; this may not be representative but is the best available way to approximate the split. The unit cost for voluntary removals is £1,000 and £15,000 for enforced removals, based on immigration information from Operation Vaken in 2013 (Home Office, 2013). The social and economic cost of removals is estimated using the 76% average organised involvement applied to these unit costs and volumes to give £0.5 million.

### *Detentions*

There were approximately 15,700 days spent in detention by asylum applicants who were detained prior to removal in 2016 related to abuse of legitimate entry cases. Again, this is derived from applying the 5% approximate proportion of total asylum applications deemed attributable to abuse of legitimate entry to the total recorded days spent in detention by asylum applicants in FY 2015 to 2016. The cost of a day in detention in FY 2015 to 2016 is calculated at £91,<sup>43</sup> based on published Immigration Enforcement data (Home Office, 2016e). This means the social and economic cost of detention for abuse of legitimate entry cases is approximately £1 million, using a weighted average organised involvement of 76%.

### *Enforcement arrests*

There were around 11,000 enforcement arrests of illegal migrants made in-country in 2016, based on Border Force Management Information data. It is assumed that the cost of these arrests is equivalent in time and cost to the average cost of a normal arrest. This unit cost is £220. The social and economic cost of these enforcement arrests of illegal abuse of legitimate entry case migrants is £2 million, assuming a 75% organised involvement as with the scale calculation.

### *NDFU costs*

The pay costs for the NDFU for FY 2015 to 2016 are included in the scope of this section. It is assumed that 99% of their work is related to organised crime based on discussion with the

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case as well as barriers to documentation, legal challenges, logistical and practical challenges (HM Government, 2017).  
<sup>43</sup> This figure is the average across published quarterly data for FY 2015 to 2016.

NDFU, hence 99% of these costs are included in this estimate. These costs amount to approximately £2 million.

### *Results from UOC 2013*

In UOC 2013, the scale of organised abuse of legitimate entry was estimated to be approximately £26 million. This was based on the number of sham marriages, forged supporting document cases, visa port refusals, and enforcement arrests of entrants, and the estimated fees paid to organised criminals to facilitate entry to the UK in these ways. The level of organised involvement assumed for each aspect was estimated based on available data, intelligence, and expert opinion.

The social and economic cost of abuse of legitimate entry was estimated to be approximately £11 million. This includes the costs of removing irregular migrants detected both at the border and within the UK, the costs of asylum claims resulting from removal processes being started, and the costs of detaining irregular migrants prior to removal. The operating costs of the NDFU were also included.

#### 2.10.2. People smuggling

##### **Key findings:**

- The **scale** of organised people smuggling in FY 2015 to 2016 is estimated to be **£75 million**. This includes clandestine entrants, inadequately documented arrivals, and enforcement arrests of entrants who have successfully entered the UK and are subsequently picked up and not matched to a visa.
- The **social and economic cost** of organised people smuggling is **£31 million**. This considers the costs of asylum applications, detentions, and removals of this cohort of OIC.
- **Limitations:**
  - the method used to estimate the volumes of people smuggling is different to that in UOC 2013 so the estimates are not comparable across reports
  - the level of organised involvement and fees paid to organised criminals for clandestine entry are based on a limited sample
  - the fees paid by inadequately documented arrivals to organised criminals to facilitate entry are from UOC 2013, as are volumes of enforcement arrests
  - the social and economic cost considers only operational costs
  - significant assumptions are made to estimate the volume of people smuggling cohorts who applied for asylum, and were detained and removed

People smuggling involves facilitating the entry of irregular migrants to the UK. OIC networks consist of individuals flexibly operating in chains. People smugglers collaborate to move migrants wanting to travel to the UK; this includes smuggling migrants with the necessary documents to enter the UK, or providing transport from the country of origin to the UK.

The figures presented in this section do not account for activity unknown to the authorities, given the lack of information with which to inform a robust method to multiply up volume

figures, thus they are a partial representation of organised people smuggling activity. Furthermore, data for which there was no available update since UOC 2013 have been scaled up in line with inflation (using a GDP deflator) or for the 2015 population, thus weakening the accuracy of the estimate.

Both estimates in this report are less than those in UOC 2013. The scale estimate, despite higher volumes of clandestine, inadequately documented arrivals (IDAs), and enforcement arrests, has fallen due to lower unit costs for the average fee for facilitation, based on the data available for this update. The social and economic cost estimate has fallen, reflecting considerably lower volumes than those reported in UOC 2013. This is the result of a different methodology being used to retrieve this data for this update, but this updated method is more robust than that used previously, despite being more partial and contributing to an underestimate of activity. The volumes used in this estimate are based on internal analysis of management information carried out in December 2015. Further limitations of this data and changes since UOC 2013 are outlined in the cost section. Further, the social and economic cost in this update does not consider UK Border Agency expenditure related to OIC, as UOC 2013 did. Instead, Immigration Enforcement expenditure on OIC activity is included in the overall OIC total.

### *Scale*

The scale of organised people smuggling is estimated to be £75 million.

This estimate is based on the volume of clandestine and IDAs and the fees paid to organised criminals to facilitate migrants' entry into the UK in this way, and the number of in-country enforcement arrests of entrants who have successfully entered the UK and are subsequently picked up and not matched to a visa.

### *Clandestines*

There were approximately 10,100 detected clandestine entrants to the UK in 2016 (Border Force, 2016). The average fee paid to organised criminals for facilitating entry into the UK in this way is approximately £5,600. This is based on a weighted average of the average fee paid per route taken and the proportion of entrants travelling on these routes.<sup>44</sup> Since this estimate is based on a specific sample of debriefed entrants to the UK it may not be representative of total organised clandestine entrants as a whole, which makes this estimate less certain. It is assumed that 75% of these incidents are attributable to organised crime. This is based on an average reported organised crime involvement across 12 Debriefing Analysis reports (FY 2016 to 2017) carried out by the Joint Debriefing Team.<sup>45</sup> These figures relate to all migrants debriefed, not specifically clandestine entrants, therefore this may not accurately represent the level of agent use of clandestine entrants, but is a reasonable average to take in the absence of specific data. The scale of clandestine entrants is estimated to be approximately £42 million.

There is a degree of uncertainty within this estimate due to the use of the fees paid and average organised involvement estimates. These figures are not necessarily representative of

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<sup>44</sup> This is based on the average fees recorded by the Joint Debriefing Team for FY 2016 to 2017. This is the average based on the proportion of clandestines travelling on routes from Africa, Asia and Europe. This figure has then been scaled to FY 2015 to 16 prices using the GDP deflator from December 2016.

<sup>45</sup> Debriefing Analysis Reports January 2016 to February 2017, excluding February 2016 and August 2016.



organised clandestine entrants overall, but is the best available information given the difficulty in measuring this activity and its hidden nature.

#### *Inadequately documented arrivals (IDAs)*

There were around 3,400 IDAs recorded in 2015. These are largely assumed to be facilitated by organised crime; however, specific data relating to the level of organised criminal involvement in such activity is limited. Hence, following consultation with subject matter experts it was deemed appropriate to assume that 90% of such activity is organised, in line with a Europol report on migrant smuggling (Europol, 2016). Unfortunately, updated data on the average fees paid to organised criminals by migrants in order to enter the UK in such a manner was not available. Therefore, the figure of £4,600 used in UOC 2013 has been scaled up to FY 2015 to 2016 prices and an average fee of approximately £5,000 is used. This is a considerable weakness in the methodology for this section since it fails to reflect any changes in the fees paid, and routes taken by IDA entrants since FY 2010 to 2011. As a result, the certainty of this estimate is reduced. The scale of IDAs is therefore estimated to be £15 million.

#### *Enforcement arrests*

Updated data on the number of enforcement arrests of entrants to the UK who were subsequently picked up and could not be matched to a visa is not available. As a result, the 3,900 figure used in UOC 2013 is scaled up to the 2015 UK population using ONS population estimates to give an estimated 4,000 enforcement arrest cases. This is a significant limitation of this estimate as it fails to reflect any changes in the nature of this activity since UOC 2013. In line with the method used in UOC 2013, the organised involvement for these incidents is assumed to be 83% which averages that of clandestine entrants and IDAs. The average fee is again assumed to be a weighted average of the fee for clandestines and IDAs, based on the assumption that 50% of these migrants entered clandestinely and 50% were IDA entrants from UOC 2013. The scale of enforcement arrests is therefore estimated to be £18 million.

The scale estimate uses the best available data where specific information is lacking. However, as covered above there are various limitations to the estimate with respect to the level of organised involvement and fee paid to organised criminals for clandestine entrants, the fee paid to organised criminals for IDAs, and the volume of enforcement arrests for organised people smuggling. These limitations generate uncertainty within the estimate, therefore this estimate gives only an insight into the approximate sense of the scale of organised people smuggling in FY 2015 to 2016.

**Figure 11: Scale of organised people smuggling**

	Volume	Organised crime involvement	Fees paid to organised criminals	Total cost <sup>a</sup>
Clandestines	10,100	75% <sup>b</sup>	£5,500 <sup>c</sup>	£42,000,000
Inadequately Documented Arrivals	3,400	90% <sup>d</sup>	£5,000 <sup>e</sup>	£15,000,000
Enforcement Arrests	4,000	83% <sup>f</sup>	£5,200 <sup>f</sup>	£18,000,000
<b>Total</b>				<b>£75,000,000</b>

**Notes:**

a) Totals may not sum due to independent rounding.

- b) Based on an average reported organised crime involvement across 12 Debriefing Analysis reports (FY 2016 to 2017) carried out by the Joint Debriefing Team.
- c) Based on a weighted average of the average fee paid per route taken and the proportion of entrants travelling on these routes.
- d) Taken from Europol (2016).
- e) Taken from UOC 2013, scaled to FY 2015 to 2016 prices.
- f) Based on the average across clandestine entrants and IDAs.

### *Social and economic cost*

The social and economic cost of organised people smuggling is estimated to be £31 million. This is based on estimates of the operational costs as a result of organised people smuggling. The costs to the victims of this activity, for example reduced quality of life or health costs, are not considered due to data constraints. This is consistent with the method used in section 2.10.1.

The social and economic costs include the costs of clandestine asylum applications, removals, detentions, and enforcement arrests, as per the scope in UOC 2013, for clandestine entrants only. The IDA cohort could not be included within the social and economic cost estimate due to data limitations.

The volumes of asylum applications, removals, and detentions are based on internal analysis of management information carried out in December 2015. This is the best information available. However, it was drawn from data held across two different case working systems and it was not always possible to match individuals across the systems. This means that that not all clandestines will be represented in the analysis and this estimate is likely to underestimate the cost for these aspects. As a result, this estimate provides only an approximate insight into the cost of organised people smuggling. However, this was the best available updated information to inform these estimates.

#### *Asylum applications*

For the year FY 2014 to 2015 it is estimated that there were approximately 3,600 asylum applications by individuals whose clandestine entry can be attributed to organised crime. This is based on the internal analysis of management information discussed above, and the assumption of 75% organised crime involvement being used to scale the estimate for all clandestine entrants over this time period. This level of organised involvement is consistent with that used in the scale estimate above. The unit cost of an asylum application is £7,062 for FY 2015 to 2016 (HM Government, 2017). Therefore, the cost of these asylum applications is estimated at £25 million.

#### *Removals*

In the year to March 2015 it is estimated that, of clandestine entrants recorded in FY 2014 to 2015, there were approximately 250 removals of clandestines that can be attributed to organised crime, using the 75% scaling factor as described above. Of these, 230 were enforced removals, for which the unit cost is approximately £15,000 (Home Office, 2013). The

remaining<sup>46</sup> removals have a unit cost of £1,000 (Home Office, 2013). Therefore, the cost of these removals is approximately £4 million.

Note that there is often a lag between the initial detection and the removal of a clandestine individual, so further removals of clandestines detected in FY 2014 to 2015 may have occurred in subsequent years while clandestines detected in previous years may have been removed in FY 2014 to 2015 but not included in this analysis.

### *Detentions*

Organised crime-facilitated clandestine entrants detected in FY 2014 to 2015 spent an estimated 13,700 days in detention over this time period (a figure derived as described previously by scaling the total volume of detained clandestine individuals). The average detention length was six days. The cost per night of detention is £91 based on an average across Immigration Enforcement data for FY 2015 to 2016 (Home Office, 2016e). Again, there were likely to be costs associated with clandestine entrants detected in previous years and detained during FY 2014 to 2015, which have not been accounted for here. The cost of detentions is therefore estimated to be approximately £1 million.

### *Enforcement arrests*

There were approximately 4,000 in-country enforcement arrests of entrants to the UK subsequently picked up and not matched to a visa for 2015. All of these cases are deemed attributable to organised crime, in line with the methodology used in UOC 2013. The unit cost for these arrests is £218, and is based on police costs and the average number of hours of an arrest. The cost of these enforcement arrests is estimated to be £0.9 million.

**Table 22: Social and economic cost of organised people smuggling**

	Volume	Unit cost	Total cost <sup>a</sup>
Asylum applications	3,600	£7,062 <sup>b</sup>	£25,000,000
Removals	250	£1,000 - £15,000 <sup>c</sup>	£4,000,000
Detentions	13,700	£91 <sup>d</sup>	£1,000,000
Enforcement arrests	4,000	£218 <sup>e</sup>	£900,000
<b>Total</b>			<b>£31,000,000</b>

**Notes:**

- a) Totals may not sum due to independent rounding.
- b) Volumes are rounded, therefore may not sum to total cost.
- c) Unit cost taken from UKVI Transparency Data FY 2015 to 2016.
- d) Unit cost taken from immigration information from October 2013.
- e) Unit cost is an average taken from Immigration Enforcement data for FY 2015 to 2016.
- f) Unit cost taken from police costs and an average of 5.8 hours for an arrest.

The volumes of asylum applications, removals, and detentions reported here have changed somewhat since those reported in UOC 2013. The increase is likely to be as result of multiple factors, including an increase in the volumes of clandestines being detected, changes in the

<sup>46</sup> The enforced and voluntary removals figures may not sum due to rounding from proportioning the total figures to organised crime.

way that clandestine detections are recorded, and a change in the methodology by which the overall volumes have been extracted, in addition to changes in the department's operational processes. In particular, it was necessary to adopt a different methodology to extract these volumes than that used in UOC 2013, due to changes in recording and to ensure a reliable estimate. As a result this estimate is not directly comparable to that in UOC 2013.

### *Results from UOC 2013*

In UOC 2013, the scale of organised people smuggling was estimated to be £88 million. This estimate is partial, reflecting only the attempted entrants to the UK detected by authorities. UK Border Agency<sup>47</sup> management information was used for the volume of clandestine entrants, IDAs, and in-country enforcement arrests of migrants who could not be matched to a visa. The scale is estimated as the fees paid by migrants to organised criminals for facilitating their entry to the UK vary depending on the country of origin and route taken.

The social and economic cost of organised people smuggling was estimated to be £140 million. This includes the costs of any asylum application processed by those successfully entering the UK illegally, the costs of removing irregular entrants detected at the border and within the UK, and the costs of detaining irregular migrants prior to removal. Border Agency expenditure on the Risk and Liaison Overseas Network<sup>48</sup> and Regional Crime Teams attributable to organised crime is also included. These costs apply to all areas of OIC so may contribute to an overestimate of the costs of organised people smuggling specifically.

## 2.11. Counterfeit currency

### **Key findings:**

- The **scale** of organised counterfeit currency is estimated to be **£7 million** in FY 2015 to 2016.
- The **social and economic cost** of organised counterfeit currency is **£9 million**. This includes CJS costs in addition to the value of banknotes removed from circulation.
- **Limitations:**
  - the scope considers only counterfeit notes
  - it only accounts for detected activity
  - additional social and economic costs that could not be quantified include the costs to retailers of training staff to detect counterfeits and of installing inspection devices and costs to the Bank of England of designing currency in response to specific counterfeit threats

The main focus here, due to data availability, is on organised criminals counterfeiting UK banknotes, including Bank of England notes, Scottish, and Northern Irish Sterling banknotes.

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<sup>47</sup> Now UK Border Force

<sup>48</sup> Now Immigration Enforcement International

### 2.11.1. Scale

The scale of organised counterfeit currency is estimated to be £7 million in FY 2015 to 2016. The same methodology is used to estimate the scale of counterfeit currency as in UOC 2013. The number of banknotes removed from circulation, and their value, is available for Bank of England, Scottish, and Northern Irish sterling notes from the Bank of England, The Committee of Scottish Bankers, and the Association of Commercial Banknote Issuers (ACBI), respectively. All data is for 2015.

It is estimated that 360,426 counterfeit banknotes were taken out of circulation in 2015, with a face value of £7 million. It is assumed that 100% of counterfeit currency crime is organised due to the complex procedures and technology needed to produce counterfeit notes. The face value figure is scaled up to FY 2015 to 2016 prices to give a scale estimate of £7 million.

**Table 23: Scale of counterfeit currency**

Banknotes	Volume withdrawn from circulation	Total value <sup>a</sup>
Bank of England	248,000 <sup>b</sup>	£5,000,000
Scotland	105,789	£2,000,000
Northern Ireland	6,637	£90,000
<b>Total</b>	<b>360,426</b>	<b>£7,000,000</b>

**Source:** Bank of England, ACBI, The Committee of Scottish Bankers

**Notes:**

- a) In FY 2015 to 2016 prices; scaled up using the GDP Deflator, December 2016.
- b) Rounded to the nearest 1,000.

The narrow scope of this estimate to focus only on counterfeit notes, due to the lack of available data, is a limitation of the figure presented here. Also, the volume of counterfeit notes reflects only detected activity and so is an underestimate of total organised counterfeit currency activity. This estimate does not reflect the impact of changes in banknote technology and the replacement of more easily counterfeiting notes that have come into place since FY 2015 to 2016. These changes are intended to result in a reduction in the scale of counterfeit currency in the future.

### 2.11.2. Social and economic cost

The social and economic cost of counterfeit currency is estimated to be £9 million. This includes the lost sales revenue incurred by individuals and businesses handing in counterfeit currency, and the face value of banknotes removed from circulation. This is estimated above at £7 million.

CJS costs are also included – the cost to Her Majesty’s Court and Tribunal Service, The Legal Aid Agency, and Her Majesty’s Prison and Probation Service. For FY 2015 to 2016 these costs total approximately £2 million for sections 14 to 19 of the Forgery and Counterfeiting Act 1981.

Additional costs that could not be costed include the costs to retailers of training staff to detect counterfeits and of installing detection devices. Further, costs to the Bank of England of designing currency in response to specific counterfeit threats are in scope but estimates could

not be formulated. This would likely make a significant contribution to the social and economic costs, since the Bank of England had an ongoing cost of banknote production and issuance of £70 million in FY 2014 to 2015. The limitations of the scale estimate outlined above also apply to the social and economic cost estimate. Therefore, the social and economic cost estimate will underestimate the true costs.

### 2.11.3. Results from UOC 2013

In UOC 2013, the scale of counterfeit currency crime was estimated using the number of counterfeit notes taken out of circulation, as recorded by the Bank of England and ACBI. This gave a scale estimate of £7 million.

Weaknesses of this method include the underestimation of the scale of counterfeit currency because these figures reflect only that which is identified and removed from circulation, and also it covers only sterling notes; coins are not considered. The total market size would include counterfeit sterling coins and also non-sterling currencies which are produced in the UK.

The social and economic costs were not quantified beyond the losses incurred by individuals and businesses handing on counterfeit currency and thus losing that value in sales revenue. Therefore, the social and economic cost estimate was also £7 million.

## 3. Conclusions

This analysis aims to improve our understanding of organised crime markets and the harms that they cause. The findings will help to inform future work in this area by providing an updated framework with which to estimate costs and as a first attempt at costing new crime types included in this version which may subsequently be built upon. The estimates produced in this report improve upon those in UOC 2013 through methodological refinements and the use of newly available data. Further advances in data collection and availability will likely ensure continuing improvements in estimates in the future.

The research demonstrates that the impact of organised crime on the UK is significant in terms of the social and economic cost, which is estimated to be approximately £37 billion in FY 2015 to 2016. Of those crimes for which calculations can be reasonably made, the largest costs are estimated to be drugs supply (£20 billion), organised economic crime (£8 billion) and modern slavery (£2 billion).

Scale figures are also estimated in this report. These provide an indication of the size of the criminal activity and revenues in each market. The total scale of organised crime is estimated to be £13 billion in FY 2015 to 2016. In this respect, the largest markets are estimated to be organised economic crime (£7 billion), drugs supply (£4 billion) and organised acquisitive crime (£0.7 billion).

The key findings from the FY 2015 to 2016 estimates are:

- The total estimated social and economic cost of organised crime to the UK has increased from £24 billion in FY 2010 to 2011 to £37 billion in FY 2015 to 2016.

This increase is driven by additional harm caused by organised crime, methodological changes across various crime types, inflation, and the inclusion of new crime types. The additional harms caused by organised crime largely reflect the increase in the social and economic cost of drugs supply.

- The social and economic cost of drugs supply in the UK has increased by approximately £9.3 billion since FY 2010 to 2011.

This increase is driven by improvements in the methodology for estimating the cost of DRAC and also by a considerable increase in the volume of drug-related deaths. This increase is a large contributor to the overall rise in the social and economic cost of crime since FY 2010 to 2011.

- This report includes an estimate of the social and economic cost of cyber-dependent crime against individuals and of organised waste crime, neither of which were estimated in UOC 2013.
- The social and economic cost estimates for all crime types in this report, apart from OAC

have increased since FY 2010 to 2011. This may not mean that the situation has got worse; in many cases this reflects improved methodologies and more complete estimates.

- The social and economic cost of OAC has fallen since UOC 2013, reflecting the general downward trend in the volume of these crimes. This is somewhat offset by more complete cost of crime unit costs in this report from ESCC 2018 (Heeks, Reed, Tafsiri, & Prince, 2018).

The estimates produced are conservative and often partial since they only focus on particular aspects of organised crime. As a result, the total figures will underestimate the impact of organised crime on the UK. In some cases, a lack of reasonably reliable and robust data has prevented the production of an estimate. Incomplete data is highlighted in the relevant sections, and these are areas where improvements in data collection would be valuable to inform future work.



# Annex A: Proportions of crime types that are ‘organised’

**Table 24: Organised proportion of crime types and sources of assumption**

Sector	Proportion of total crime type that is organised	Source and comments
Drugs supply	100%	Same assumption as in UOC 2013. Although there may be examples in which people grow drugs for their own personal use, this is thought to be uncommon.
<b>Economic crime:</b>		
Fraud	Various	Same assumptions as in UOC 2013. Banking fraud based on Dubourg and Prichard (2007). Insurance fraud based on estimates by the Association of British Insurers. NS&I fraud based on NS&I estimate. Benefit fraud based on Department of Work & Pensions estimate. Tax fraud assumed to be 100%. Telecommunications fraud based on the Telecommunications UK Fraud Forum. Mortgage fraud estimate is only organised portion for the NFA AFI.
Illicit tobacco and cigarette supply	100%	Smuggling involves considerable planning and coordination so is assumed to be organised.
Child sexual exploitation	-	N/A
<b>Organised acquisitive crime:</b>		
Cash and valuables in transit	100%	Same assumption as in UOC 2013. Such robberies typically require planning and preparation and typically more than one offender.
Distraction burglary	100%	Same assumption as in UOC 2013. Evidence suggests offenders work in pairs (Home Office, 2001).
Metal theft	54%	Same method as in UOC 2013. Proportion of British Transport Police metal theft offences in FY 2015 to 2016 flagged as ‘organised’.
Plant theft	100%	Same assumption as in UOC 2013. Covers only larger plant items (self-driven or towed).
Road freight crime	100%	Same assumption as in UOC 2013. Stealing goods in this way requires planning and coordination.
Vehicle crime	61%	Same method as in UOC 2013. Proportion of unrecovered stolen vehicles in the FY 2015 to 2016 CSEW.
<b>Organised immigration crime:</b>		
Abuse of legitimate entry	76%	Same assumption as in UOC 2013. Average organised involvement across aspects included.

Sector	Proportion of total crime type that is organised	Source and comments
People smuggling	83%	Average organised involvement across aspects included. Clandestines based on the average reported across 12 Debriefing Analysis reports (FY 2016 to 2017) (75%). IDAs based on Europol research (Europol, 2016) (90%). Enforcement arrests averages clandestines and IDAs (83%).
Modern slavery	-	N/A
Cyber crime	67%	Based on operational and intelligence-led assumptions following consultation with partners. Computer virus offences 80%; unauthorised access 40%.
IP crime	22%	Weighted average across goods included in lost sales. Business software same assumption as in UOC 2013 (BSA, 2011) (7%). Physical goods same assumption as in UOC 2013 based on the definition of organised crime (100%). Digital goods based on discussion with IPC and PIPCU (40%).
<b>Environmental crime:</b>		
Waste crime	100%	Various assumptions across aspects included. Tax evasion based on consultation with EA (100%). EA spend based on consultation (100%). Fly-tipping proportioned based on EA official guidance.
Wildlife crime	-	N/A
Firearms supply	-	N/A
Counterfeit currency	100%	Same assumption as in UOC 2013. Covers only counterfeit notes which require complex procedures and technology to produce.
Money laundering	-	N/A

# Annex B: Drugs supply additional tables

**Table 25: Drug-related acquisitive crime**

Crime type	Estimated incidences (England & Wales) <sup>a</sup>	Cost per crime <sup>b</sup>	Drug-related proportion <sup>c</sup>	Total cost (England & Wales) <sup>d</sup>	Total cost (UK) <sup>d</sup>
Vehicle theft	81,670	£13,030	16.2%	<b>£170,000,000</b>	<b>£190,000,000</b>
Theft from vehicle	643,000	£970	30.9%	<b>£190,000,000</b>	<b>£220,000,000</b>
Domestic burglary	695,000	£5,930	56.9%	<b>£2,300,000,000</b>	<b>£2,600,000,000</b>
Commercial burglary	206,220	£15,460	43.3%	<b>£1,400,000,000</b>	<b>£1,600,000,000</b>
Commercial robbery	136,150	£15,000	36.0%	<b>£730,000,000</b>	<b>£830,000,000</b>
Personal robbery	193,470	£11,320	19.2%	<b>£420,000,000</b>	<b>£470,000,000</b>
Theft from person	459,240	£1,380	39.2%	<b>£250,000,000</b>	<b>£280,000,000</b>
Theft from shop	3,854,460	£130	65.6%	<b>£330,000,000</b>	<b>£370,000,000</b>
Other theft	343,690	£1,270	14.5%	<b>£63,000,000</b>	<b>£71,000,000</b>
Non-investment fraud	1,098,730	£1,290	21.0%	<b>£300,000,000</b>	<b>£330,000,000</b>
Credit fraud	2,517,730		40.0%	<b>£1,300,000,000</b>	<b>£1,500,000,000</b>

**Notes:**

- a) Taken from PRC FY 2015 to 2016 data, the CSEW FY 2015 to 2016, or the ESCC 2018.
- b) Based on Heeks *et al.* (2018).
- c) Taken from Roe and Vincent (2013).
- d) Figures may not sum due to independent rounding.

**Table 26: Drug-related deaths**

Region	Drug-related deaths (2015) <sup>a</sup>	'Value of a life' estimate <sup>b</sup>	Total cost <sup>c</sup>
England & Wales	2,479	£2,343,730	<b>£5,800,000,000</b>
Northern Ireland	114		<b>£270,000,000</b>
Scotland	706		<b>£1,700,000,000</b>

**Notes:**

- a) Taken from ONS (2016b); National Records for Scotland (2016); and Northern Ireland Statistics and Research Authority (2015).  
b) Based on Heeks *et al.* (2018).  
c) Figures may not sum due to independent rounding.

**Table 27: 'Value of a life' estimates**

	Defensive expenditure <sup>a</sup>	Insurance administration <sup>a</sup>	Physical and emotional harm <sup>a</sup>	Lost output <sup>a</sup>	Health services <sup>a</sup>	Victim services <sup>a</sup>	Police costs <sup>a</sup>	CJS costs <sup>a</sup>	Total <sup>b</sup>
Homicide (ESCC)	£61,060	£10	£2,082,430	£254,710	£1,120	£5,480	£11,960	£800,980	<b>£3,000,000</b>
Drug misuse death	Not included	Not included	£2,082,430	£254,710	£1,120	£5,480	Not included	Not included	<b>£2,000,000</b>

**Notes:**

- a) Taken from Heeks *et al.* (2018).  
b) Figures may not sum due to independent rounding.

**Table 28: Healthcare costs**

Total cost estimates	Individual episode (UK) <sup>a</sup>	Of which emergencies <sup>a</sup>	Additional cost per emergency <sup>b</sup>	Average cost per episode <sup>b</sup>	Total cost <sup>c</sup>
Drug-related mental and behavioural disorders	15,970	4,520	£138	£2,092	<b>£34,000,000</b>
Drug-related overdoses and poisonings	34,750	12,900	£138	£407	<b>£16,000,000</b>
Drug-related neonatal disorders	1,440	10	£138	£1,681	<b>£2,000,000</b>

**Notes:**

- a) Taken from NHS Digital (2016) and NHS Wales Informatics Service (2016).  
b) Taken from Department of Health (2016).  
c) Figures may not sum due to independent rounding.

**Table 29: Changes in the social and economic cost estimates compared to UOC 2013**

		UOC FY 2015 to 2016 estimate <sup>a</sup>	Change compared to UOC 2013 (FY 2015 to 2016 prices) <sup>a</sup>
Crime	Drug-related acquisitive crime	£8,400,000,000	£2,400,000,000
	Drug possession and trafficking offences - criminal justice costs	£2,300,000,000	£1,600,000,000
Deaths	Drug-related deaths	£7,700,000,000	£4,600,000,000
Healthcare costs	Drug-related mental and behavioural disorders	£34,000,000	£1,000,000
	Drug-related overdoses and poisonings	£16,000,000	-£700,000
	Drug-related neonatal disorders	£2,000,000	£400,000
	Drug-related infectious diseases	£44,000,000	£15,000,000
	Drug treatment costs	£680,000,000	-£70,000,000
Enforcement costs	Police spend on drug enforcement	£570,000,000	£190,000,000
	Border force spend on drug enforcement	£74,000,000	£3,000,000
	Other enforcement costs	£140,000,000	£140,000,000
Other costs	Drug-related media and information activities	£200,000	£200,000
<b>Totals</b>		<b>£20,000,000,000</b>	<b>£8,900,000,000</b>

**Notes:**

a) Figures may not sum due to independent rounding.

# Annex C: Child sexual exploitation vulnerabilities

The following are typical vulnerabilities in children prior to abuse (Office of the Children's Commissioner, 2015):

- Living in a chaotic or dysfunctional household (including parental substance use, domestic violence, parental mental health issues and parental criminality)
- History of abuse (including familial child sexual abuse, risk of forced marriage, risk of 'honour'-based violence, and physical and emotional abuse and neglect)
- Recent bereavement or loss
- Gang association either through relatives, peers or intimate relationships (in cases of gang-associated CSE only)
- Attending school with young people who are sexually exploited
- Learning disabilities
- Unsure about their sexual orientation or unable to disclose sexual orientation to their families
- Friends with young people who are sexually exploited
- Homeless
- Lacking friends from the same age group
- Living in a gang neighbourhood
- Living in residential care
- Living in a hostel, bed and breakfast accommodation, or a foyer
- Low self-esteem or self-confidence
- Young carer

# Annex D: Firearms supply additional tables

**Table 30: Firearm supply unit cost composition**

	ESCC 2018 equivalent	ESCC 2018 estimate	Recorded crime adjustment	Outcome-based adjustment	Police costs (AFOs)	Prison cost adjustment	Unit cost
Attempted murder and other acts (including wounding, endangering life)	Violence with injury	£14,050	£4,220	£4,050	£2,180	£4,780	£29,290
Burglary	Domestic burglary	£5,930	£5,340	£3,750	£2,180	£4,250	£21,460
Criminal damage	Criminal damage – other	£1,350	£600	£3,950	£2,180	£5,240	£13,320
Drug offences	Criminal damage – other	£1,350	£600	£3,990	£2,180	£5,240	£13,360
Homicide	Homicide	£3,217,740	-	-	£2,180	-	£3,219,920
Other offences	Criminal damage – other	£1,350	£600	£3,910	£2,180	£5,240	£13,280
Other theft offences	Theft from person	£1,380	£2,400	£3,990	£2,180	£5,090	£15,040
Other violence against the person	Violence without injury	£5,930	£1,140	£3,870	£2,180	£5,210	£18,340
Robbery	Robbery	£11,320	£16,600	£3,850	£2,180	£1,310	£35,260
Rape	Rape	£39,360	£18,760	£3,760	£2,180	£3,630	£67,690
Other sexual offences	Other sexual offences	£6,520	£13,090	£3,990	£2,180	£3,630	£29,410

**Note:**

Figures may not sum due to independent rounding.

# Annex E: Money laundering

Money laundering legitimises the revenues of criminals and enables criminals to hide, store, and benefit from the proceeds of their crimes (Home Office, 2016a). The procedures to launder money are typically highly complex and by design hard to trace so that eventually the laundered money appears lawful without detection (Edmonds, 2016). Money laundering can pervade many sectors of the economy, from cash intensive industries such as car washes and nail salons even to the football sector (FATF, 2009). It is usually split between two key categories:

- **Cash-based money laundering**, which can involve the physical movement of currency over national borders, as well as the use of companies with high cash throughput as a cover, with payments being broken down into smaller amounts to avoid detection.
- **High-end money laundering**, which is specialist, usually involves transactions of substantial value, and involves the abuse of the financial sector and so-called ‘professional enablers’ (NCA, 2017a).

The process itself usually involves three stages:

1. **Placement** – moving the illicit funds
2. **Layering** – disguising the trail
3. **Integration** – making the illicit funds available to the criminal as legitimate funds (FATF, 2017)

At the end of this process, the illicit funds appear legitimate and are recycled back into the legitimate economy.

The size of the UK’s financial and professional services sector, the openness of our economy, and the attractiveness of London’s real estate to investors make the UK unusually exposed to international money laundering (Home Office, 2016a). This exposure, the potential damages large scale money laundering can cause, and the importance of the financial services industry to the UK economy have led money laundering to be classed as a national security issue and prioritised in the National Security Strategy (NCA, 2016b).

In UOC 2013, neither the scale nor the social and economic cost of money laundering was estimated due to the substantial data challenges and the potential of double counting with other crimes. These challenges still exist and, even if estimates were able to be produced in this report, it would not be appropriate to include them in the total estimates because of double counting with other crime types. To date of this publication, no significant progress has been made on robust estimations of the scale of money laundering worldwide or in the UK since UOC 2013. Levi *et al.* (2017) support this stance, claiming that “*there are no credible estimates of the total amount laundered, either globally or nationally*”. Therefore, this section reviews the available data and literature on the scale and the social and economic cost of money laundering in the UK.



## Scale

As above, there is no exact estimate for the scale in the UK. The NCA assess that “*many hundreds of billions of pounds of international criminal money is laundered through UK banks, including their subsidiaries, each year*” (NCA, 2017a). One of the key difficulties of estimating money laundering in the UK is measuring the inflow of international criminal money into and through the UK’s financial sector. As the NCA states “*the proceeds of a significant amount of international serious and organised crime (including corrupt Politically Exposed Persons seeking to launder the proceeds of their corruption and hide stolen assets in the UK) is believed to be laundered into and through the UK*” (NCA, 2017a). The lack of data aside from intelligence on this makes a robust estimate difficult. In addition to the indicative scale of hundreds of billions, it is possible to identify through investigations the destination of money laundering and the methodology used, such as real estate or mirror trades, detailed below, but this form of data does not lend itself to more precise estimates (NCA, 2015b; Financial Conduct Authority, 2017).

Money laundering is often measured on a global rather than national scale. The most recent comprehensive estimate by the UN gave a best estimate of the amount of money laundered at close to 2.7% of GDP or US\$1.6 trillion (UNODC, 2011). It also estimated global criminal proceeds at 3.6% of GDP or US\$2.1 trillion in 2009 (UNODC, 2011). These estimates are widely quoted and used by various bodies such as the NCA since they are arguably the best available estimates, however their robustness and accuracy is still weak (NCA, 2016b).

Proceeds of crime differ from laundered money in that if the proceeds are used directly without a means of storing or transferring value then they are not considered laundered (Levi, 2014). Levi illustrates this through either staffing costs which are paid directly in cash or low-level organised criminals who do not earn significantly enough to require their income to be laundered (for uses other than those that can be purchased through cash). Therefore, money laundering does not equal the proceeds of crime or the criminal economy.

An alternative estimate for global money laundering, proposed by the International Monetary Fund (IMF), stated that the global extent of money laundering might amount to between 2% and 5% of global GDP (IMF, 1998). However, this estimate has been criticised as being without a clear methodology or supporting evidence as no supporting material was produced to support the estimate or has been since (Schneider, 2007). This IMF estimate has since been discredited, most recently by Levi *et al.* (2017).

## Money laundering methodologies

Methodologies to estimate money laundering on a national scale tend to rely upon estimates of the proceeds of crime. However, this excludes the flow of money laundering abroad from sources such as grand corruption or international drugs trade, which for economies such as the UK or US as centres of international finance may be material omissions. The Department of Treasury in the United States’ National Money Laundering Risk Assessment 2015 estimates criminal proceeds at \$300 billion by estimating the scale of the drugs market and fraud but acknowledging the limited data set available (US Treasury, 2015). It does not go as far as labelling the total volume of money laundering as it does not estimate the inflow and outflow of international criminal finances laundered through the US financial system. These approaches

often focus on the illegal drugs market and scale this up to the whole illicit market. Levi *et al.* (2017) suggest that the illicit drug market is the most studied area with respect to estimating the proceeds of crime. The original Financial Action Task Force estimate took this approach, estimating the global drugs market, resulting in an estimate of 2% of global GDP (IMF, 2001). On a national scale, this discounts the flow from international sources, while on a global scale can discount various sources such as corruption and bribery' and over rely upon valuation of illicit goods market.

Academics have devised various other methodologies to attempt to work around the issues of the lack of data to estimate international flows of illicit capital. One method applies the gravity models from international trade economics to money laundering. Known as 'The Walker Model' after Alan Walker who first applied this methodology to money laundering, they have been used to estimate the criminal money flowing into various countries such as the Netherlands and Australia (Walker & Unger, 2009). It assumes that there are various factors that make a country attractive to launder money in, including the absence or existence of an anti-money laundering policy, language, and colonial background. This is expressed in a formula to estimate the amount of money laundered in a certain country. The models estimate the relative flows to a country from global criminal money, but needs a separate estimate of 'world criminal money' to provide an absolute volume of money laundering expressed in currency.

Some academics have shed doubts upon whether previous and further estimates are worthwhile. Levi argues that estimates of money laundering are at best "*speculative guesstimates*" (Levi, 2012). And Reuter agrees that not only are estimates unfeasible but that ultimately they are not useful for policy purposes; estimating the total volume is a diversion of attention from a true understanding of money laundering (Reuter, 2013). Reuter even goes so far to argue that "*there is no prospect... for developing persuasive estimates*" (Reuter, 2013). Whether the current estimates have a role to play in policymaking is equally unclear; there have been arguments that the numbers provided do not meet the minimal standards required for policy purposes (Reuter & Truman, 2004). However, it is clear from the various estimates that there is consensus that the scale of money laundering is large and that these estimates give weight to the importance of countering money laundering and the risk it poses.

### Case study: Deutsche Bank

In 2017, the Financial Conduct Authority fined Deutsche Bank £163 million after uncovering an estimated \$10 billion was transferred between 1 January 2012 and 31 December 2015 through the bank from Russia through the UK to offshore accounts (Financial Conduct Authority, 2017). This was done through mirror trades – at one end of a bank stocks or securities are sold which are then mirrored at another end of the bank by a purchase of the same volume and value of securities. The customers on each side are connected and use this as a way of transferring or exchanging the money, often losing a small amount due to commission and fees. In this case, this was done through sales in Moscow which were mirrored in London, enabling the conversion of Roubles into US Dollars and covert transfer of the funds out of Russia into offshore accounts (Financial Conduct Authority, 2017). The scale of these trades could only be identified after they were discovered and the trades tracked backwards. Indeed, the laundering method itself was not widely documented before. How evidence or investigations like this could be used to extrapolate upwards to a scale of money laundering is unclear.

## Social and economic cost

Although estimates of the global scale of money laundering exist, no estimates of the social and economic cost exist. Legitimising criminal revenue is a critical enabler of organised crime, but the direct costs associated with it are difficult to quantify. This section aims to briefly explore the various social and economic costs that are associated with money laundering in the available literature.

Money laundering is an enabler of organised crime; if it was not possible to launder the illicit profits from crime then the underlying criminal activities would not have been committed without the financial incentive behind them (UNODC, 2011). Money laundering into and through the UK financial system can often involve the proceeds of grand corruption overseas (Home Office, 2016a).

## Distortionary and macroeconomic effects

There is a significant distortion in investment and consumption through illicit financial flows in comparison to a 'normal investor' (UNODC, 2011). Criminals tend towards safe investment options such as real estate, moving away from high-risk investments, and towards industries that are familiar to them such as bars and restaurants, and for consumption towards high-end goods such as electronics and luxurious cars (Kleemans, Brienen, & van de Bunt, 2007).

Both NCA and Transparency International have been quoted arguing that laundered money has skewed the London property market, driving up the prices artificially (NCA, 2015b; Transparency International, 2016). This is a key area of concern for the UK, with NCA specifically stating in 2015 that foreign criminals launder billions of pounds through the property market through complex offshore corporations, pushing up house prices (NCA, 2015b). In the UK, house prices are the most clear distortionary effect on show as evidenced by NCA (NCA, 2015b).

Other distortionary effects, such as on the exchange rate, exports or economic growth, are unlikely to have a significant impact due to the sheer scale of money laundering that is required relative to the size of the economy (UNODC, 2011). For these macroeconomic effects, certain thresholds must be passed which make smaller economies more vulnerable to disruption (UNODC, 2011). This explains why only very few countries show these effects on a macroeconomic scale; indeed the IMF only found two instances where it has occurred – Latvia in the 1990s and the Dominican Republic in 2002 (IMF, 2011).

## Instability and loss of confidence in financial system

Money laundering can lead to financial systems being exposed to a high level of volatility (UNODC, 2011). The flow of illicit finance is not as stable or predictable as that of legitimate finance and thus can lead to instability if it becomes a large proportion of the economy. Similarly, some banks that find themselves involved, either willingly or unwillingly, in money laundering can find their reputations significantly damaged (UNODC, 2011). In a small number of marginal cases, bank runs<sup>49</sup> have been noted as occurring resulting from this; for example,

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<sup>49</sup> A bank run occurs when a large number of depositors simultaneously try to withdraw their funds immediately due to fear of the bank's ability to repay their deposits in full and on time. Given that banks only hold a small fraction of their deposits in cash they must somehow generate cash quickly to meet depositors' demands (Kaufman, 2017).

a bank run in the Balkans after reports that it was engaged in major money-laundering operations (Bartlett, 2002).

### Compliance costs of anti-money laundering regimes

Anti-money laundering regimes aim to reduce the harms to society from money laundering by persuading financial institutions to assume responsibility for policing attempts to use the financial system criminally (Levi, Reuter, & Halliday, 2017).

There is a significant cost for the banking system of compliance with anti-money laundering regimes. The BBA (now UK Finance), the lead trade association for the UK banking sector, has estimated through consultations with its members that compliance against core financial crime costs their members around £5 billion per year (BBA, 2015). This is not specifically against money laundering but covers a range of financial crime and compliance measures.

# References

- ACBI. (2017). *Counterfeit Northern Ireland Banknotes 2015*. Retrieved from acbi.org.uk:  
[http://www.acbi.org.uk/Counterfeit\\_banknotes\\_2015.php](http://www.acbi.org.uk/Counterfeit_banknotes_2015.php)
- Action Fraud. (2017, March 03). *What is Fraud and Cyber Crime?* Retrieved from Action Fraud:  
[www.actionfraud.police.uk/what-is-fraud](http://www.actionfraud.police.uk/what-is-fraud)
- ActionFraud. (n.d.). *Mass marketing fraud*. Retrieved from ActionFraud:  
<https://www.actionfraud.police.uk/types-of-fraud/mass-marketing-fraud>
- Bank of England. (2015). *Counterfeit Bank of England Banknotes*. Retrieved from  
[bankofengland.co.uk](http://www.bankofengland.co.uk):  
<http://www.bankofengland.co.uk/banknotes/Pages/about/counterfeits.aspx>
- Bartlett, B. L. (2002). The negative Effects of Money Laundering on Economic Development.  
*Report for the Asian Development Bank*, 11.
- BBA. (2015, November 6). *Response to Cutting Red Tape Review The Effectiveness of the UK's AML Regime*. Retrieved from BBA: <https://www.bba.org.uk/policy/bba-consultation-responses/bba-response-to-cutting-red-tape-review-effectiveness-of-the-uks-aml-regime/>
- Blake, A., & Curtin, S. (2009). *The Economic Impact of Wildlife Tourism in Scotland*. Edinburgh: Scottish Government.
- Border Force. (2016). BF MI Data.
- Brand, S., & Price, R. (2000). *The Economic and Social Costs of Crime*. London: Home Office.
- BSA. (2011). *BSA Global Survey of PC User Attitudes 2010-2011*. BSA.
- BSA. (2016). *Seizing Opportunity Through License Compliance: BSA Global Software Survey*. BSA.
- BSIA. (2015). *Annual Report 2015*. BSIA.
- BSIA. (2017). *About Us*. Retrieved from <https://www.bsia.co.uk/about-us.aspx>
- Burg, A., Nachum, G., Moshe, S., Haviv, B., Heller, S., Velkes, S., & Dudkiewicz, I. (2009). Treating Civilian Gunshot Wounds to the Extremities in a Level 1 Trauma Center: Our Experience and Recommendations. *Israel Medical Association Journal*, 546-551.
- College of Policing. (2017, March). *Major investigation and public protection: Responding to child sexual exploitation*. Retrieved from <https://www.app.college.police.uk/app-content/major-investigation-and-public-protection/child-sexual-exploitation/>
- Department for Education. (2017). *Child Sexual Exploitation*. London: HM Government.
- Department for Environment, Food & Rural Affairs. (2017). *Fly-tipping statistics for England, 2015/16*. London: Defra.

- Department for Transport. (2016). *Transport Analysis Guidance: WebTAG data book, July 2016*. London: Department for Transport.
- Department of Health. (2016). *Reference costs guidance 2015-16*. London: Department of Health. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/497127/Reference\\_costs\\_guidance\\_2015-16.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/497127/Reference_costs_guidance_2015-16.pdf)
- Department of Work and Pensions. (2016). *Fraud and Error in the Benefit System*. London: DWP.
- Dubourg, R., & Prichard, S. (2008). *The impact of organised crime in the UK: revenues and economic and social costs*. London: Home Office.
- Edmonds, T. (2016). Money Laundering Law. *Number 2592*. London: House of Commons Library.
- Edwards, C., & Jeffray, C. (2014). *On Tap: Organised Crime and the Illicit Trade in Tobacco, Alcohol and Pharmaceuticals in the UK*. London: RUSI.
- Energy Networks Association. (2017). *Metal Theft Overview*. Retrieved March 2017, from energynetworks: <http://www.energynetworks.org/news/public-information/metal-theft/overview.html>
- Environment Agency. (2016). *Waste Crime Data*. London: Environment Agency.
- ESAET. (2017). *Rethinking Waste Crime*. London: Environmental Services Association Educational Trust.
- European Commission. (2017). *Environmental Crime*. Retrieved from European Commission: [ec.europa.eu/environment/legal/crime](http://ec.europa.eu/environment/legal/crime)
- Europol. (2016). *Migrant Smuggling in the EU*. Europol.
- FATF. (2009). *Money Laundering through the Football Sector*. Paris: Financial Action Task Force.
- FATF. (2017). *Money Laundering*. Retrieved from Financial Action Task Force: <http://www.fatf-gafi.org/faq/moneylaundering/>
- Financial Conduct Authority. (2017, January 31). *FCA fines Deutsche Bank £163 million for serious anti-money laundering controls failings*. Retrieved from FCA: <https://www.fca.org.uk/news/press-releases/fca-fines-deutsche-bank-163-million-anti-money-laundering-controls-failure>
- Financial Fraud Action UK. (2016). *Fraud the Facts 2016*. London: FFA UK.
- Frontier Economics. (2009). *The Impact of Counterfeiting on Governments and Consumers*. London: Frontier Economics.
- Frontier Economics. (2017). *The Economic Impacts of Counterfeiting and Piracy*. London: Frontier Economics.
- Gorden, C., & Buchanan, J. (2013). A Systematic Literature Review of Doorstep Crime: Are the Crime-Prevention Strategies More Harmful than the Crime? *The Howard Journal*, 52(5), 498-515.

- Heeks, M., Reed, S., Tafsiiri, M., & Prince, S. (2018). *The Economic and Social Costs of Crime*. London: Home Office.
- HM Government. (2011). *Local to Global: Reducing the Risk from Organised Crime*. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/97823/organised-crime-strategy.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/97823/organised-crime-strategy.pdf)
- HM Government. (2013). *Serious and Organised Crime Strategy*. London: The Stationery Office. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/248645/Serious\\_and\\_Organised\\_Crime\\_Strategy.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/248645/Serious_and_Organised_Crime_Strategy.pdf)
- HM Government. (2017). *Asylum Transparency Data*. Retrieved from gov.uk: <https://www.gov.uk/government/publication/asylum-transparency-date-february-2017>
- HM Revenue & Customs. (2016a). *Measuring tax gaps 2016 edition: Tax gap estimated for 2014-15*. London: HMRC.
- HM Revenue & Customs. (2016b). *Measuring tax gaps 2016 edition: Tobacco tax gap estimates for 2015-16*. London: HMRC.
- HM Treasury. (2018, March). *GDP deflators at market prices, and money GDP*. Retrieved from gov.uk: <https://www.gov.uk/government/statistics/gdp-deflators-at-market-prices-and-money-gdp-march-2018-quarterly-national-accounts>
- Home Office. (2001). *Tackling Distraction Burglary*. London: Home Office.
- Home Office. (2012). *Impact Assessment 0058: Tackling Metal Theft - prohibit cash payments and higher fines*. London: Home Office.
- Home Office. (2013). *Operation Vaken: Evaluation Report - October 2013*. London: Home Office. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/254411/Operation\\_Vaken\\_Evaluation\\_Report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/254411/Operation_Vaken_Evaluation_Report.pdf)
- Home Office. (2015, August 27). *Border Force Transparency Data*. Retrieved from gov.uk: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/456098/border\\_force\\_transparency\\_data\\_q2\\_2015.ods](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/456098/border_force_transparency_data_q2_2015.ods)
- Home Office. (2016a). *Action Plan for anti-money laundering and counter-terrorism finance*. London: Home Office.
- Home Office. (2016b, December 1). *Border Force Transparency Data*. Retrieved from gov.uk: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/573429/Border\\_Force\\_Transparency\\_Data\\_Q3\\_2016.ods](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/573429/Border_Force_Transparency_Data_Q3_2016.ods)
- Home Office. (2016c, February 25). *Border Force Transparency Data*. Retrieved from gov.uk: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/503144/border\\_force\\_transparency\\_data\\_q4\\_2015.ods](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/503144/border_force_transparency_data_q4_2015.ods)
- Home Office. (2016d). *Counting Rules for Recorded Crime*. London: Home Office.
- Home Office. (2016e). *Immigration Enforcement Transparency Data*. Retrieved from GOV.UK: <https://www.gov.uk/government/publications/border-force-transparency-data-may-2016>

- Home Office. (2017). *An evaluation of the governments drug strategy 2010*. London: HM Government.
- Home Office Distraction Burglary Taskforce. (2002). *A National Distraction Burglary Taskforce Report*. London: Home Office.
- Home Office Science Advisory Council. (2018). *Understanding the costs of cyber crime*. London: Home Office. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/674046/understanding-costs-of-cyber-crime-horr96.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/674046/understanding-costs-of-cyber-crime-horr96.pdf)
- Ibisworld. (2016, April). *Tobacco Product Manufacturing in the UK: Market Research Report*. Retrieved from IBIS world: <https://www.ibisworld.co.uk/market-research/tobacco-product-manufacturing.html>
- IMF. (1998, February 10). *Money Laundering: the Importance of International Countermeasures*. Retrieved from IMF Speeches: <http://www.imf.org/external/np/speeches/1998/021098.htm>
- IMF. (2001). *Financial System Abuse, Financial Crime and Money Laundering - Background Paper*. Washington, D.C.: International Monetary Fund.
- IMF. (2011). *Anti- Money Laundering and Combating the Financing of Terrorism (AML/CFT) – Report on the Review of the Effectiveness of the Program*. Washington, DC: IMF.
- Institute for European Environmental Policy. (2016). *Wildlife Crime in the United Kingdom*. Brussels: European Parliament.
- Insurance Fraud Bureau. (2016). *Crash for Cash*. London: IFB.
- Intellectual Property Office. (2011). *IP Crime Report 2010/11*. London: Intellectual Property Office.
- Intellectual Property Office. (2015). *Online Copyright Infringement Tracker: Wave 5 (Covering period Mar 15 - May 15)*. Newport: IPO.
- Intellectual Property Office. (2016, February 22). *Guidance: Intellectual property crime and infringement*. Retrieved from gov.uk: <https://www.gov.uk/guidance/intellectual-property-crime-and-infringement>
- Kaufman, G. G. (2017). *Bank Runs*. Retrieved from The Concise Encyclopedia of Economics: <http://www.econlib.org/library/Enc/BankRuns.html>
- Klahr, R., Shah, J. N., Sheriffs, P., Rossington, T., Pestell, G., Button, M., & Wang, V. (2017). *Cyber Security Breaches 2017*. London: DCMS.
- Kleemans, E., Brienens, M., & van de Bunt, H. (2007). Georganiseerde criminaliteit in Nederland, tweede rapportage op basis. In B. Unger, *The Scale and Impacts of Money Laundering* (pp. 109-182). Cheltenham: Edward Elgar Publishing Company.
- Langton, L., & Truman, J. (2014). *Socio-emotional Impact of Violent Crime*. US Department of Justice, Bureau of Justice Statistics.
- Leukfeldt, E. R., Lavorgna, A., & Kleemans, E. R. (2016). Organised Cybercrime or Cybercrime that is Organised? An Assessment of the Conceptualisation of Financial Cybercrime as Organised Crime. *European Journal on Criminal Policy Research*, 1-14.



- Levi, M. (2012). The Organisation of Serious Crime for Gain. In M. Maguire, R. Morgan, & R. Reiner (Eds.), *The Oxford Handbook of Criminology* (pp. 595-622). Oxford: Oxford University Press.
- Levi, M. (2014). Money Laundering. In L. Paoli, *The Oxford Handbook of Organized Crime* (pp. 419-443). New York: Oxford University Press.
- Levi, M., Innes, M., Reuter, P., & Gundur, R. V. (2013). *The Economic, Financial & Social Impacts of Organised Crime in the European Union*. Brussels: European Union.
- Levi, M., Reuter, P., & Halliday, T. (2017). Can the AML system be evaluated without better data? *Crime Law Soc Change*, 1-22.
- Lusthaus, J. (2013). How organised is organised cybercrime. *Global Crime*, 52-60.
- Mills, H., Skodbo, S., & Blyth, P. (2013). *Understanding organised crime: estimating the scale and the social and economic costs*. London: Home Office.
- Molloy, D. (2011). *Wildlife at Work: The economic impact of white-tailed eagles on the Isle of Mull*. RSPB.
- Morgan, N., Hoare, J., & Byron, C. (2015). *Research Report 80: An evaluation of government intervention/law enforcement interventions aimed at reducing metal theft*. London: Home Office.
- National Audit Office. (2013). *Progress in tackling tobacco smuggling*. London: The Stationery Office.
- National Fraud Authority. (2013). *Annual Fraud Indicator*. London: NFA.
- National Offender Management Service Annual Report and Accounts. (2016). *Costs per place and costs per prisoner by individual prison*. London: Ministry of Justice.
- National Records for Scotland. (2016). *Drug-related Deaths in Scotland in 2015*. Edinburgh: National Records for Scotland.
- National Savings & Investments. (2016). *Annual Report and Accounts and Product Accounts 2015-16*. Glasgow: NS&I.
- NCA. (2015a). *National Strategic Assessment of Serious and Organised Crime 2015*. London: NCA.
- NCA. (2015b, July 25). Cash from crime lords drives up house prices. (S. O'Neill for The Times, Interviewer)
- NCA. (2016a). *Cyber Crime Assessment 2016*. London: National Crime Agency.
- NCA. (2016b). *National Strategic Assessment of Serious and Organised Crime 2016*. London: NCA.
- NCA. (2017). *Modern slavery and human trafficking*. Retrieved from NCA: <http://www.nationalcrimeagency.gov.uk/crime-threats/human-trafficking>
- NCA. (2017a). *Money Laundering*. Retrieved from National Crime Agency: <http://www.nationalcrimeagency.gov.uk/crime-threats/money-laundering>
- NCA. (2017b). *National Strategic Assessment of Serious and Organised Crime 2017*. NCA.

- Network Rail. (2017). *National Performance Affecting Cable Theft Report*. Fusion Intelligence Unit.
- NHS Digital. (2016). *Hospital Admitted Patient Care Activity, 2015 to 2016*. London: National Health Service.
- NHS Wales Informatics Services. (2016). *Annual PEDW Data Tables*. Cardiff: NHS Wales.
- Northern Ireland Statistics and Research Authority. (2015). *Drug Related and Drug Misuse Deaths 2006-2015*. Belfast: Northern Ireland Statistics and Research Authority.
- NWCA. (2017a). *National Wildlife Crime Unit Tactical Assessment 2016*. Livingston: NWCU.
- NWCA. (2017b, March 30). *Priorities*. Retrieved from National Wildlife Crime Unit: [www.nwcu.police.uk/how-do-we-prioritise/priorities/](http://www.nwcu.police.uk/how-do-we-prioritise/priorities/)
- Ofcom. (2016). *Communications Market Report 2016*. London: Ofcom.
- Office of the Children's Commissioner. (2015). *"If it's not better, it's not the end" - Inquiry into Child Sexual Exploitation in Gangs and Groups: One year on*. London: Office of the Children's Commissioner.
- ONS. (2010). *Sentencing Statistics: England and Wales 2009*. London: Ministry of Justice. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/218034/sentencing-stats2009.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/218034/sentencing-stats2009.pdf)
- ONS. (2016a). *Crime in England and Wales: year ending March 2016*. London: Office for National Statistics.
- ONS. (2016b). *Deaths Related to Drug Poisoning, England and Wales*. London: Office for National Statistics.
- ONS. (2016c). *Nature of Crime: Burglary*. London: Office for National Statistics.
- ONS. (2016d). *Population Estimates*. Retrieved from GOV.UK: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates>
- ONS. (2017a). *Annual Business Survey*. ONS.
- ONS. (2017b). *Consumer trends, UK: July to September 2017*. ONS. Retrieved from <http://webarchive.nationalarchives.gov.uk/20110218140138/http://rds.homeoffice.gov.uk/rds/pdfs/06/rdsolr1606.pdf>
- ONS. (2017c). *Crime in England and Wales*. London.
- Pinotti, P. (2015). The Causes and Consequences of Organised Crime: Preliminary Evidence across Countries. *The Economic Journal*, 125, 158-174. doi:10.1111/eoj.12238
- POST. (2017). *Environmental Crime - Postnote 547*. London: UK Parliament.
- Price, D. (2013). *Sizing the Piracy Universe*. NetNames.
- Public Health England. (2016). *Shooting Up Infections among people who injected drugs in the UK, 2015 - An Update: November 2016*. London: Public Health England.
- Pudney, S., Badillo, C., Bryan, M., Burton, J., Conti, G., & Iacovou, M. (2006). Estimating the size of the UK illicit drug market. In N. Singleton, R. Murray, & L. Tinsley (Eds.),

*Measuring different aspects of problem drug use: methodological developments* (2 ed., pp. 46-85). Home Office. Retrieved from <http://webarchive.nationalarchives.gov.uk/20110218140138/http://rds.homeoffice.gov.uk/rds/pdfs06/rdsolr1606.pdf>

Reed, S., Roe, S., Grimshaw, J., & Oliver, R. (2018). *The Economic and Social Costs of Modern Slavery*. London: Home Office.

Reuter, P. (2013). Are estimates of the volume of money laundering either feasible or useful? In B. Unger, & D. van der Linde, *Research Handbook on Money Laundering* (pp. 224-231). Cheltenham: Edward Elgar Publishing.

Reuter, P., & Truman, E. M. (2004). *Chasing Dirty Money*. Washington, D.C.: Peterson Institution International Economics.

Roe, S., & Vincent, I. (2013). *Measuring the cost of drug related crime*. London: Home Office.

Schneider, F. (2007). *Money Laundering: Some Preliminary Empirical Findings*.

Scottish Government. (2016). *Recorded Crime in Scotland*. Edinburgh: Scottish Government.

Sidebottom, A. (2012). *Metal Theft*. London: UCL Jill Dando Institute. Retrieved from <http://www.ucl.ac.uk/jdibrief/crime/metal-theft>

Silverman, B. (2014). *Modern Slavery: an application of Multiple Systems Estimation*. London: Home Office. Retrieved from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/386841/Modern\\_Slavery\\_an\\_application\\_of\\_MSE\\_revised.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/386841/Modern_Slavery_an_application_of_MSE_revised.pdf)

Sina, S., Gerstetter, C., Porsch, L., Robert, E., O. Smith, L., Klaas, K., & Fajardo de Castillo, T. (2016). *Wildlife Crime*. Brussels: European Parliament.

Taylor, S. (2016). *Understanding and preventing drug-related deaths: The report of a national expert working group to investigate drug-related deaths in England*. London: Public Health England. Retrieved from <http://www.nta.nhs.uk/uploads/phe-understanding-preventing-drds.pdf>

The Committee of Scottish Bankers. (2015). *Counterfeit Notes 2015*. Retrieved from [scotbanks.org.uk](http://www.scotbanks.org.uk): <http://www.scotbanks.org.uk/banknotes/counterfeit-notes/counterfeit-notes-2015.html>

The Crown Prosecution Service. (2017). *Mandatory and Minimum Custodial Sentences*. Retrieved March 2017, from [CPS.gov.uk](http://www.cps.gov.uk): [http://www.cps.gov.uk/legal/l\\_to\\_o/mandatory\\_and\\_minimum\\_custodial\\_sentences/#firearms](http://www.cps.gov.uk/legal/l_to_o/mandatory_and_minimum_custodial_sentences/#firearms)

Trading Standards. (2016). *Tackling Illicit Tobacco 2015-16*.

Transparency International. (2016, April 6th). How laundered money shapes Londons' property market. (J. Evans for the Financial Times, Interviewer)

United Nations Environment Programme. (2016). *The Rise of Environmental Crime: A Growing Threat to Natural Resources, Peace, Development and Security*. Nairobi: UNEP.

University of Portsmouth. (2016). *Annual Fraud Indicator 2016*.

- UNODC. (2011). *Estimating Illicit Financial Flows Resulting from Drug Trafficking and Other Transnational Organized Crimes*. Vienna: United Nations Office on Drugs and Crime.
- US Treasury. (2015, June). *National Money Laundering Risk Assessment*. Retrieved from US Treasury: <https://www.treasury.gov/resource-center/terrorist-illicit-finance/Documents/National%20Money%20Laundering%20Risk%20Assessment%20%E2%80%932006-12-2015.pdf>
- Wainer, L., & Summers, L. (2011). *Understanding the Harms of Cash and Valuables in Transit (CVIT) Robbery*. London: Jill Dando Institute.
- Walker, J., & Unger, B. (2009). Measuring global money laundering: the Walker gravity model. *Review of Law and Economics*, 821-853.
- Wall, D. S., & Chistyakova, Y. (2015). *How Organised Crime in the UK has Evolved Beyond the Mafia Model*. Retrieved from [theconversation.com/how-organised-crime-in-the-uk-has-evolved-beyond-the-mafia-model-40782](http://theconversation.com/how-organised-crime-in-the-uk-has-evolved-beyond-the-mafia-model-40782)

ISBN: 978-1-78655-721-6

ISSN: 1756-3666



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