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Estimating the costs of serious and organised crime in Australia, 2020–21

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Estimating the cost of serious and organised crime in Australia in 2020–21

Australian Government
Australian Institute of Criminology

Serious and organsed crime cost Australia up to

$60.1 BILLION

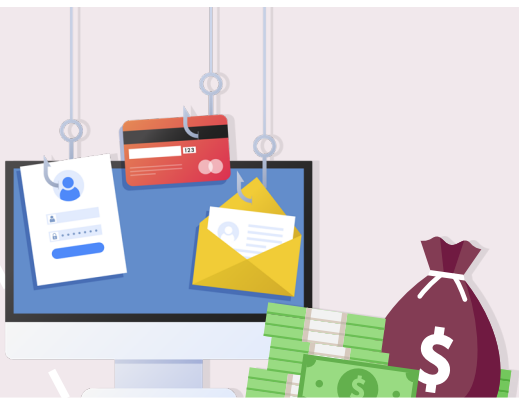
in 2020–21

$16.4 BILLION

for the cost of **prevention and response**.

$10.9b
PUBLIC SECTOR

$5.6b
PRIVATE SECTOR



$43.7 BILLION

for the cost of serious and organised **criminal activity** as well as the serious and organised component of conventional crimes.

$16.5b
ILLICIT DRUG ACTIVITY

$6.4b
CONSEQUENTIAL SERIOUS AND ORGANISED CRIME

$9.4b
ORGANISED FRAUD

$3.5b
PURE CYBER CRIME

$4.9b
ILLICIT COMMODITIES

$2.3b
ENABLERS

$0.7b
CRIMES AGAINST THE PERSON

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Acknowledgements

This report is the third in a series undertaken for the Australian Criminal Intelligence Commission (ACIC) that estimates the cost of serious and organised crime in Australia. The current estimate for 2020–21 relies heavily on the methodological approach developed by John Walker Crime Trends Analysis in 2015, and before that by Satyanshu Mukherjee, to estimate the cost of all crime to the Australian economy. This report pays tribute to the foundational work of Dr Mukherjee, former Principal Criminologist at the Australian Institute of Criminology (AIC), who was instrumental in gathering crime statistics in Australia that now permit cost of crime calculations to be undertaken. Dr Mukherjee died in August 2021, shortly before this report was published. Appreciation is extended to all those who have been involved in the creation, development and execution of the current and previous studies, particularly intelligence analysts from the ACIC and AUSTRAC, subject-matter research specialists from the AIC, and current and former staff of the JV Barry Memorial Library.

Acronyms and abbreviations

ABACUS	Australian Business Assessment of Computer User Security
ABS	Australian Bureau of Statistics
ACC	Australian Crime Commission
ACCC	Australian Competition and Consumer Commission
ACIC	Australian Criminal Intelligence Commission
ACLEI	Australian Commission for Law Enforcement Integrity
AFP	Australian Federal Police
AIC	Australian Institute of Criminology
APRA	Australian Prudential Regulation Authority
ATO	Australian Taxation Office
AUSTRAC	Australian Transaction Reports and Analysis Centre
BOCSAR	Bureau of Crime Statistics and Research
DFAT	Department of Foreign Affairs and Trade
DPP	Director of Public Prosecutions
DUMA	Drug Use Monitoring in Australia
EUIPO	European Union Intellectual Property Office
GDP	gross domestic product
ID	identification
IP	intellectual property
MDMA	3,4-methylenedioxymethylamphetamine
NWDMP	National Wastewater Drug Monitoring Program
OECD	Organisation for Economic Co-operation and Development
PwC	PricewaterhouseCoopers
RBA	Reserve Bank of Australia
SCRGSP	Steering Committee for the Review of Government Service Provision
SOC	serious and organised crime

Abstract

This report estimates the cost of serious and organised crime in Australia in 2020–21 to be between $24.8b and $60.1b. This is the third in a series of reports undertaken for the Australian Criminal Intelligence Commission estimating the cost of serious and organised crime. It updates and improves on the methodology used in the previous report, which estimated the cost of organised crime in 2016–17. As with the previous research, this report considers the direct and consequential costs of serious and organised crime in Australia, as well as the costs to government entities, businesses and individuals associated with preventing and responding to serious and organised crime. While the current estimates were undertaken during the COVID-19 pandemic and may reflect changes in criminality resulting from the pandemic, the full economic impact of serious and organised criminal offending committed during the pandemic will not be known for some time. It is clear, however, that the impact of serious and organised crime on the Australian economy is substantial.

Introduction

This Statistical Report provides an estimate of the cost of serious and organised crime in Australia for the year 2020–21. This is the third in a series of reports undertaken for the Australian Crime Commission (2015a, 2015b) and the Australian Criminal Intelligence Commission (ACIC; Smith 2018a) and draws on a methodological approach first developed by Mukherjee and Walker at the Australian Institute of Criminology (AIC) in the 1980s to estimate the size and cost of all crime in Australia (Mukherjee et al. 1987). The present study is the eighth iteration of the original cost of crime research design, with each report demonstrating improvements in the scope and sophistication of the methodology.

Crime, of course, is continually evolving and adapting to changes in society, the economy and the criminal justice system. Since the last report was written (Smith 2018a), Australia and the world have been subject to the global coronavirus pandemic, which has not only affected the health and wellbeing of individuals but also changed the way in which social relations take place and how business and government operate. The pandemic has also provided many opportunities for criminality to occur (Levi & Smith 2021) and, although some of these have been taken up, the full economic impact of offending committed during the pandemic will not be known for some time.

Accordingly, the estimate of the cost of serious and organised crime for 2020–21 reflects some changes evident in the incidence of crime during the pandemic but is unlikely to show the full impact of such crime identified at the time of writing. It would therefore be inappropriate to attribute any changes in the costs of crime presented in this report, compared with those costs presented in earlier reports, solely to the influence of the pandemic. Further research on individual crime types is required to determine the exact ways in which, and the extent to which, costs have changed from previous estimations.

As with the previous research, this report examines the direct and consequential costs of serious and organised crime and the costs associated with preventing and responding to serious and organised crime by government entities, businesses and individuals or households. The estimated total cost for 2020–21 was between $24.8b (low), $39.9b (medium) and $60.1b (high) and comprised the following cost categories.

Direct serious and organised crimes were estimated to cost up to $37.3b in 2020–21. These are crimes that have a clear and direct link with serious and organised crime (eg illicit drug trafficking, human trafficking and organised financial crime).

Consequential serious and organised crimes were estimated to cost up to $6.4b in 2020–21. These are conventional crimes committed as a consequence of serious and organised crimes. They are crimes that generate funds used to support involvement in serious and organised criminal activities (in particular, the crimes illicit drug users commit to finance drug purchases), crimes that result from involvement in serious and organised crime-related activities (eg violence, sexual assaults and burglaries committed by those using illicit drugs), or conventional crimes committed by organised crime groups (eg organised shop theft) or committed to facilitate serious and organised criminal activities (eg using violence to intimidate businesses or using identity crime to facilitate financial fraud).

Prevention and response costs were estimated to be up to $16.4b in 2020–21. These include costs incurred by law enforcement, the criminal justice system, other government agencies, the private sector and individuals in the community in preventing and responding to crime.

Interestingly, the upper estimate of total direct costs, including consequential costs, of serious and organised crime in 2020–21 ($43.7b) was only slightly less than the total recurrent expenditure of all government agencies with some responsibility for serious and organised crime control in Australia in the same year ($45.1b).

The methodology adopted in this report seeks to estimate costs for the financial year 2020–21. Where data were not available for this period, the Reserve Bank of Australia (RBA; RBA 2021) inflation calculator was used to uprate estimated costs from earlier periods to reflect changes in the cost of living, where appropriate.

In terms of geographical and jurisdictional reach, the same approach was used as in the previous reports: that is, crimes that have an impact on Australia are included even if they were committed by individuals who were not resident in Australia at the time of offending. Similarly, crimes committed by individuals in Australia are included even if the proceeds were moved outside Australia. Where costs are counted from non-Australian jurisdictions, these have been converted to Australian dollars using the purchasing power parity calculator of the Organisation for Economic Co-operation and Development (OECD; OECD 2021).

Where appropriate, subjective indications of the level of confidence attached to the estimates are given (Table 21 below). For some offence categories, confidence levels in the estimates are quite low, given the paucity of statistical and economic data. Since the previous report (Smith 2018a), however, some datasets have become available or improved in quality, making the current report of greater utility than previous versions.

Although the latest published baseline crime statistics were used for many of the current estimates, there are still crime types for which information is unavailable or incomplete, including some that have extensive serious and organised crime group involvement. The principal crime categories that have incomplete data are:

- firearms trafficking;
- migration and visa fraud;
- investment of financial resources by serious and organised crime;
- maritime people smuggling; and
- corruption.

Attempts have been made to estimate costs in some of these areas and to fill gaps in the available data in other areas, although where the incidence or cost of criminality is simply not recorded or is unknown, estimates are not provided and further research is required. Accordingly, the figures in this report should be treated as conservative estimates of all potential costs only.

To indicate the range of likely costs, three estimates are provided—low, medium and high—which reflect the degree of involvement of serious and organised crime group members in the crime type examined. These estimates were developed for the 2013–14 research (Australian Crime Commission (ACC) 2015a, 2015b) by conducting a workshop comprising Australian-based federal, state and territory law enforcement officers experienced in the investigation of conventional, serious and organised crime, as well as regulatory, policy and subject matter experts, criminologists and statisticians. The resulting estimates of serious and organised crime involvement in various forms of criminality examined in this report are much the same as in this earlier study and the AIC's research for 2016–17 (Smith 2018a). As data sources improve and new intelligence products become available, it will be possible to develop more precise and accurate estimations of the level of involvement of serious and organised crime in the crime types examined. Ideally, a new workshop should be conducted before any future cost of crime calculations are undertaken.

Although this report estimates the cost of serious and organised crime in Australia for the year 2020–21, further research is needed upon which to base more accurate estimates. Although costing methodologies are improving, there remains an ongoing need for government and business to invest in the collection of better and more comprehensive data on how serious and organised crime affects their operations. Statistical collections need to document more precisely the nature of organised offending as one of the variables regularly included in official data and crime victimisation surveys. Finally, new research is needed to quantify the prevalence of crime types for which data are inadequate, particularly those in which serious and organised crime groups play a major role, such as organised financial crime, firearms trafficking, human trafficking, environmental crime, corruption, child abuse and money laundering.

Methodological approach

This report provides an estimate of the cost of serious and organised crime in Australia for the year 2020–21. The aim was to update the 2016–17 estimate prepared by the AIC (Smith 2018a) using the methodology developed by John Walker Crime Trends Analysis for the Australian Crime Commission (ACC 2015a, 2015b). That research was based on the cost of crime methodology developed by the AIC in the late 1980s and subsequently, which estimated the economic cost and impact of all crime in Australia (Mukherjee et al. 1987; Walker 1992; Mayhew 2003; Smith et al. 2014).

The conventional approach used to estimate costs of crime is to: quantify the prevalence of various types of crimes reported officially or disclosed in crime victimisation surveys; inflate the incidence numbers using a multiplier for officially recorded offences to account for undetected and unreported crimes; quantify a unit cost for each offence recorded and inflate this to the current date if necessary; multiply the inflated prevalence estimates by the unit cost; add any indirect costs such as intangible impacts, loss of productivity and loss of output caused by the crimes counted; deduct the value of any compensation made or costs recovered and then add any costs incurred by government, businesses and individuals or households in preventing and responding to crime risks (see Mayhew 2003).

In the case of serious and organised crime, it is appropriate to consider the two categories of criminality noted above—direct serious and organised crimes, and consequential serious and organised crimes—when assessing how much of the total cost of crime is attributable to, or consequential upon, the activities of members of serious and organised crime groups. This report adopts the same definition of serious and organised crime as that used in previous research (ACC 2015b; Smith 2018a). It extends the conventional understanding of organised crime groups by adding all serious crime of an entrepreneurial nature or committed to support a criminal enterprise, whether by a group or an individual. Finally, as explained above, an estimation was made of the degree to which serious and organised crime was involved in each type of offending, and an appropriate adjustment made to the estimated costs to reflect this.

Direct serious and organised crime costs

Crimes that have a clear and direct link with serious and organised criminals include illicit drug activity, organised financial crime, some violent crimes committed against individuals, human trafficking and other crimes involving illicit commodities, identity crime and pure cybercrime. Various crime enablers are also directly linked to serious and organised crime. These enablers include money laundering, the use of violence, corruption, the misuse of identity and the use of professional facilitators.

Illicit drug activity

The AIC's last estimate of the cost of serious and organised crime involvement in the illicit drug market for 2016–17 included three cost elements (ACC 2015b; Smith 2018a):

- **medical costs**—including injury, treatment costs and cost of death;
- **lost output**—lost output of drug users while in treatment, or due to death; and
- **expenditure on drugs**—money lost to the economy through payments for illicit drugs.

The calculation of expenditure on illicit drugs differs in this report from previous AIC and ACC research. Previous estimates calculated illicit drug expenditure based on the value of the quantity of illicit drugs detected at the Australian border. This approach clearly has limitations, as it does not capture the value of undetected drugs brought into the country. The current methodology makes use of data gathered for the National Wastewater Drug Monitoring Program (NWDMP), which provides information on illicit drug consumption across Australia (ACIC 2021b). Although the NWDMP includes data on Australia's largest illicit drug market, the cannabis market, this was not included in the current analysis owing to difficulties in estimating associated national street values for cannabis. As a result, the current estimate is limited to the four illicit drug types for which consistent data were available on quantity consumed and market price.

The ACIC was able to apply the latest national median street values of four types of illicit drugs (see ACIC 2021a) to the estimated annual volume of drugs consumed in 2019–20, the most recent year for which data were available (ACIC 2021c: 5). This enabled a calculation to be made of the amount paid for illicit drugs by users throughout Australia. Although the ACIC was unable to provide data on the annual volume of drugs consumed and the median street values of four types of illicit drugs for the 2020–21 financial year, it was reasonable to assume that both consumption and pricing remained generally constant between 2019–20 and 2020–21. This assumption was based, in part, on the results of the December 2020 quarterly NWDMP data collection (ACIC 2021b, 2021c) and on the findings of the AIC's latest Drug Use Monitoring in Australia (DUMA) report (Voce & Sullivan 2021). While not as nationally representative as the ACIC's data collections, the DUMA data confirm that use and pricing of the four drug types remained fairly constant between 2019–20 and 2020–21, with only a slight reduction in the proportion of detainees using these drugs and a slight increase in the frequency of use.

In addition, the ACIC was able to provide an indication of the level of involvement of serious and organised crime in each of four major illicit drug markets that had dosage data available. These rates were for methylamphetamine (90%), MDMA (3,4-methylenedioxymethylamphetamine: 95%), cocaine (100%) and heroin (100%).

Not all the costs are, however, lost to the Australian economy. While the previous methodology used money leaving Australia through illicit drug importation based on border seizure data, the current estimates have been adjusted to indicate low (20%), medium (50%) and high (100%) proportions of the actual losses suffered by the Australian economy. These proportions were derived from the stakeholder consultations undertaken in 2014 and 2015 (ACC 2015a, 2015b).

Other costs, including the costs of law enforcement action and drug-related offending, are included in other sections of this report. For example, the impact on conventional crimes committed by illicit drug users (such as burglaries, robberies, assaults or domestic violence) is included as part of the consequential serious and organised crime costs below.

Medical and lost output costs

The most recent data from the Australian Bureau of Statistics (ABS; ABS 2020a) show that the age-standardised death rate for drug-induced deaths decreased between 2017 and 2019 from 10.7 to 9.8 (8.4%) for men and from 5.7 to 5.3 (7.0%) for women (the average of the two being 7.7%, or a decrease of 3.9% a year).

Information from the National Hospital Morbidity Database showed that the rate of hospital separations for drug-related principal diagnoses decreased from 565 per 100,000 population in 2016–17 to 558 in 2018–19 (0.6% decrease a year). There was, however, a notable increase in methylamphetamine drug-related principal diagnoses, rising from 7.5 percent of all drug-related principal diagnoses in 2016–17 to 8.6 percent of all such diagnoses in 2018–19 (an increase of 0.6 percentage points a year; Australian Institute of Health and Welfare (AIHW) 2021a, 2021b). Taking these two findings into account, it was considered reasonable to assume that there was no net change between 2017 and 2019 and that this position would be maintained in 2021.

The medical costs and lost output costs estimated for 2016–17 were revised down to account for a 2.8 percent decrease per year in the number of recorded illicit drug offenders between 2016–17 (81,160) and 2019–20 (74,443; ABS 2020e). In addition, the totals were inflated using the RBA's (2021) inflation calculator figure of 1.6 percent a year between 2016–17 and 2020–21.

The resulting estimated medical costs were $894.2m and the lost output costs were $3,701.7m for 2021.

Expenditure on drugs

As noted above, research by the ACIC as part of the NWDMP showed the estimated weight of methylamphetamine, cocaine, MDMA and heroin consumed annually in Australia (see ACIC 2021c: 5). The estimated related street value paid for drugs based on the ACIC's national median street price data was then calculated, as shown in Table 1. The estimated street values for 2020–21 are the ACIC's forward estimates for this year.

Table 1: Estimated street value ($m) of annual methylamphetamine, cocaine, MDMA and heroin consumption (kg) for the National Wastewater Drug Monitoring Program, 2016–17 to 2020–21

Drug	Index	Year				Street value $m/kg	Estimate $m
		2016–17	2017–18	2018–19	2019–20	2020–21	2020–21
Methylam-phetamine	kg	8,405	9,847	11,516	11,147		11,147
	$m	7,240	7,380	8,630	6,960	0.900	10,032.3
Cocaine	kg	3,057	4,115	4,636	5,675		5,675
	$m	1,060	1,540	2,080	1,410	0.400	2,270.0
MDMA	kg	1,251	1,162	2,226	2,630		2,630
	$m	146	114	211	227	0.077	202.5
Heroin	kg	830	750	941	1,021		1,021
	$m	208	375	423	383	0.425	433.9
Total	kg	13,543	15,874	19,319	20,473		
	$m	8,654	9,409	11,344	8,980		12,938.7

Note: Consumption figures were calculated using annual national consumption data between 2016–17 and 2019–20 from the NWDMP (ACIC 2021c: 5). It was assumed that the annual volume of drugs consumed in 2019–20 would remain the same in 2020–21 (based on the latest NWDMP data–ACIC 2021b, 2021c). The latest national median street values for the four drug types are the ACIC's forward estimates for 2020–21, provided to the AIC for this report

The ACIC was also able to estimate the proportion of these costs attributable to serious and organised crime involvement for each of the four drug types (Table 2).

Table 2: Calculations of estimated costs attributable to serious and organised crime involvement in the consumption of four illicit drug types, 2020–21

	Meth.	Cocaine	MDMA	Heroin	All
Estimated street value ($m)	10,032.3	2,270.0	202.5	433.9	12,938.7
Proportion of serious and organised crime involvement in each drug market (%)	90	100	95	100	
Cost attributable to serious and organised crime ($m)	9,029.1	2,270.0	192.4	433.9	11,925.4

Finally, as explained above, an adjustment had to be made to reflect the actual losses suffered by the Australian economy, as opposed to the net amounts paid for each type of illicit drug. These percentages were estimated as being low (20%), medium (50%) and high (100%). Although the upper estimate is arguably possible in cases where illicit drug-related income is transferred overseas by organised crime groups for laundering or investment, this would occur in only a small proportion of the most serious criminal operations, making the overall high estimate of $16.5b possible but in need of further research to verify its likelihood. The final totals for drug expenditure, along with medical and lost output costs, are shown in Table 3, noting that medical and lost output costs are suffered by the economy fully and, unlike drug expenditure, do not require adjustment.

Table 3: Total illicit drug cost estimates, 2020–21 ($m)

Type	Low	Medium	High
Proportion lost to the economy (%)	20	50	100
Drug costs lost to the economy ($m)	2,385.1	5,962.7	11,925.4
Medical[a]	894.2	894.2	894.2
Lost output[a]	3,701.7	3,701.7	3,701.7
Total	6,981.0	10,558.6	16,521.3

a: Deflated by 2.8% a year to account for the decrease in the number of recorded illicit drug crime offenders between 2016–17 and 2019–20 (ABS 2020e) and inflated by 1.6% a year to reflect 2021 values (RBA 2021)

Organised financial crime

The AIC's previous estimate of the cost of organised financial crime for 2016–17 was between $2.6b and $8.6b (Smith 2018a). Serious and organised financial crime continues to target Australia's banking, investment and superannuation sectors, as well as individuals, businesses and government entities, through complex financial frauds that result in direct losses and indirect damage to institutional reputations and personal financial security. In estimating the financial impact of these crimes, caution is needed to avoid double-counting of offences recorded in other categories, particularly those relating to pure cybercrime, identity misuse and financial payment fraud.

The current estimate of the cost of financial crimes associated with serious and organised crime for 2020–21 made use of similar methodologies to those previously used (ACC 2015a, 2015b; Smith 2018a). By uprating data provided by the ACIC, it can be estimated that in 2020–21 financial crimes committed by serious and organised crime cost between $2,804.7m (low), $5,827.4m (medium) and $9,412.8m (high).

Tax and revenue crime

Serious and organised crime has been identified as being involved in a number of types of taxation and revenue crime in the past in Australia (ACIC 2017b). This has included dishonest activities that target each of the taxation revenue streams administered by the Australian Taxation Office (ATO), offshore tax evasion, illegal phoenix activities (in which new companies are created to continue the business of companies that have been deliberately liquidated to avoid paying their debts), misuse of trusts to conceal income and superannuation fraud (see below).

Each year, the ATO conducts a range of complex compliance and enforcement activities (ATO 2021c). In 2020–21, it undertook 198 successful summary prosecutions of individuals for tax-related offences, resulting in 192 convictions, $56,400 in reparation orders and $1.65m in fines being imposed. The number of successful summary prosecutions has declined each year from the 2,190 in 2016–17, with the number in 2020–21 being 90 percent lower than in 2016–17, due largely to the ATO's involvement in maintaining the integrity of the coronavirus stimulus measures and the effects on court proceedings of public health regulations.

More serious matters were prosecuted by the Commonwealth Director of Public Prosecutions, with 20 convictions obtained in 2020–21 and reparation orders worth $550,000 made and $56,000 in fines imposed (ATO 2021c). Again, there was a 33 percent decline in case numbers since 2016–17, partially due to the effects of the pandemic.

The most serious cases, including those in which serious and organised crime are often likely to be involved, were investigated by the Serious Financial Crime Taskforce, which completed 1,375 audits and reviews between 1 July 2015 and 30 June 2021, leading to 15 convictions and raising $1,088m in liabilities, of which $510m has been collected (ATO 2021b).

Using information provided by the ACIC, it was possible to estimate the costs of serious and organised crime associated with tax refund fraud, tax evasion, abusive use of trusts and departmental expenditure. The previous estimates for 2016–17 were inflated by 6.7 percent to account for changes in the cost of living (RBA 2021), with the total costs of tax fraud attributed to serious and organised crime ranging from $1,580.2m (low—5%), $2,528.8m (medium—15%) to $4,986.1m (high—25%) in 2020–21.

No increase was made to account for changes in the ATO's prosecution caseload since 2016–17 owing to the fact that the substantial decline in prosecutions in 2019–20 and 2020–21 was mainly due to the effects of the coronavirus pandemic on compliance and enforcement activity.

Future estimates of the cost of serious and organised financial crime will need to take account of any fraud perpetrated against the government's coronavirus stimulus measures. In 2020–21, the ATO was responsible for administering $69,434m of the Australian Government's economic response to the coronavirus, comprising $12,159 for boosting cash flow for employers, $57,241m for JobKeeper payments and $34m for JobMaker hiring credits (Department of the Treasury 2021a: 199). Levi and Smith (2021) have reviewed the fraud risks associated with pandemics, including the current coronavirus pandemic, and although the full extent of fraud will not be known for some time there have been indications that a proportion of stimulus payments have been subject to fraud (Parliament of Australia 2021). Until the effects of the pandemic on tax fraud have been fully quantified, no estimate of potential losses can be included in the present assessment.

In addition, the estimate of the cost of illegal phoenix activity provided in 2016–17 (Smith 2018a) based on the report by PricewaterhouseCoopers (PwC 2018) prepared for the inter-agency Phoenix Taskforce was also inflated by 6.7 percent to account for changes in the cost of living (RBA 2021). Applying the ACIC's assessment of the level of serious and organised crime involvement, the resulting estimates of the economic cost to business and government of phoenix activity for 2020–21 ranged from $278.3m (low—5%), $1,306.5m (medium—15%) to $1,388.2m (high—25%).

Taxation and revenue crime is also relevant to a number of the other crime types examined in this report, including superannuation fraud, illicit tobacco, cybercrime, identity crime and money laundering. Efforts have been made in the current analysis to avoid double-counting of costs across multiple categories.

The resulting total cost of serious and organised crime involvement in tax and revenue crime ranges from $1,858.5m (low), $3,835.3m (medium) to $6,374.3m (high) (Table 4).

Table 4: Cost of serious and organised crime involvement in taxation fraud, 2020–21

Value ranges	Low	Medium	High
Serious and organised crime involvement (%)	5	15	25
Organised crime value (excluding phoenix activity) ($m)	1,580.2	2,528.8	4,986.1
Organised crime phoenix activity ($m) (based on PwC 2018)	278.3	1,306.5	1,388.2
Total ($m)	1,858.5	3,835.3	6,374.3

Superannuation fraud

Superannuation funds continue to be attractive targets for serious and organised crime because of the substantial value of financial resources being managed each year (AFP 2019). The Australian Prudential Regulation Authority (APRA 2021b) reported that, at 30 June 2021, $2,262.7b in superannuation assets were under management in APRA-regulated funds, with a further $1,040.5b in self-managed funds, totalling $3,303.2b. In 2020–21, superannuation contributions totalled $127b (APRA 2021b).

Superannuation fraud can arise from non-compliance by employers with their superannuation payment obligations such as through sham contracting, misuse of the cash economy or phoenix activity, as well as from dishonest withdrawal of funds through misuse of personal information, such as identity crime. In 2013–14, the ACC (2015a, 2015b) estimated that superannuation fraud could amount to 0.14 percent of superannuation assets under management. Applying this rate to all superannuation assets in 2021, exposure could amount to $4,624.5m.

In addition to these conventional superannuation fraud risks, during the coronavirus pandemic the potential for fraud in connection with the government's Superannuation Early Release Scheme has become important. This scheme enabled individuals to withdraw up to $20,000 from personal superannuation savings, which are normally preserved until retirement age. The aim was to support individuals who had lost income due to lockdowns and other restrictions.

Giving evidence to the Senate Select Committee on COVID-19, the ATO confirmed that it approved requests under the scheme made by 3.05 million people seeking to withdraw approximately $38b (Parliament of Australia 2021: 25). A proportion of this may have been provided to individuals who dishonestly made claims outside the strict eligibility requirements, or to individuals who sought to steal funds by making unauthorised applications for early release payments from other members' accounts without their knowledge or permission. Again, in evidence to the Senate Select Committee on COVID-19, the ATO believed that the rate of suspected fraudulent applications under the scheme was 0.05 percent (APRA 2021a; Parliament of Australia 2021: 25).

The ATO and AFP are aware of at least 150 cases of COVID-19 related identity fraud, in which individuals allegedly attempted to obtain early access to superannuation funds fraudulently (AFP 2019; Roddan 2020) and in evidence to the Senate Select Committee on COVID-19, the ATO stated that 1,200 matters had been referred to the Serious Financial Crimes Taskforce for investigation. This represents a small proportion of the 230,000 applications for withdrawal that the ATO rejected for various reasons (Parliament of Australia 2021: 26). Information is, however, unavailable on the proportion of payments that might have been subject to criminal fraud by serious and organised crime. Accordingly, an estimate for fraud related to the government's Superannuation Early Release Scheme has not been included in the current assessment.

Assuming the involvement of serious and organised crime in conventional superannuation non-compliance at the rates estimated by the ACC (2015a, 2015b) to range between 10 percent (low), 30 percent (medium) and 50 percent (high), the total estimate of superannuation non-compliance potentially involving serious and organised crime would range from $462.5m (low), $1,387.4m (medium) to $2,312.3m (high).

Payment fraud

Payment fraud statistics are collected each year by the Australian Payments Network (AusPayNet 2021), which is a network of 140 members and participants with an interest in payment systems and transactions. Twice yearly, payment fraud statistics collected by Australia's financial institutions and card schemes are published, providing a reliable indication of the extent and cost of payment fraud perpetrated against financial institutions, merchants and individuals in Australia. These data include fraud perpetrated on Australian-issued cheques and cards and fraud perpetrated in Australia on cards issued overseas.

For the financial year 2019–20, 3.7m fraudulent transactions, worth $454.2m, took place on Australian-issued cheques and cards, making up 0.0338 percent of all transactions that year. In addition, there were 386,812 fraudulent transactions perpetrated in Australia on cards issued overseas, worth $94.7m. The total value of these fraudulent transactions for 2019–20 was $548.9m. In 2019–20, the total value was 11.8 percent less than the $622.1m recorded in 2018–19, and this was 5.1 percent less than the $655.3m recorded in 2017–18. Assuming that this rate of decline will continue in 2020–21, it can be estimated that the total value of all fraudulent transactions in 2020–21 would be $483.1m (12% less than in 2019–20; AusPayNet 2021). These declining rates of payment fraud are due to the continued blurring of online and offline payment channels and increasing consumer acceptance of mobile payments rather than physical cards during the pandemic (White 2021).

Estimates previously provided by the ACIC showed that organised crime involvement in payment fraud ranged from 20 percent (low), to 40 percent (medium), to 60 percent (high). Applying these percentages of serious and organised crime involvement to the estimated value for 2020–21 of $483.1m gives an estimated range of $96.6m (20% involvement), to $193.2m (40% involvement), to $289.9m (60% involvement).

Other financial transaction fraud

In addition to payment fraud relating to credit, debit and charge cards, proprietary debit cards, cheques and overseas-issued payment cards used in Australia, fraud can involve financial transactions such as interception or alteration of electronic funds transfers, online banking, share market transactions and direct payment instructions.

Organised crime involvement in these forms of financial transaction fraud was estimated to range from 50 percent (low), to 75 percent (medium), to 95 percent (high) and these rates were maintained for the current estimation. In 2016–17, financial transaction fraud was estimated to amount to $483.9m (low), $514.4m (medium) or $545.4m (high). Between 2016–17, when the last AIC estimates were published (Smith 2018a), and 2020–21, payment transaction fraud in Australia declined by 20 percent and it is reasonable to apply the same rate of deflation to estimate other types of transaction fraud. On this basis, and applying the deflation of 20 percent, other financial transaction fraud was estimated to amount to $387.1m (low), $411.5m (medium) or $436.3m (high).

Crimes against the person

The costs associated with crimes against the person in 2020–21 were estimated for human trafficking (excluding forced marriage, where organised crime involvement is unlikely to be apparent) and child sexual abuse. The estimated costs of serious and organised crime involvement in these two crime types ranged from $296.0m (low), to $478.9m (medium), to $672.8m (high).

Human trafficking and modern slavery

Serious and organised crime is closely involved in the commission of human trafficking, slavery and slavery-like practices. Although forced marriage is included in the generally accepted definition of modern slavery, there is no evidence of organised crime involvement and, accordingly, forced marriage is not considered in this review. Many victims of human trafficking and modern slavery are moved domestically or across international borders for the purposes of exploitative practices. Organised crime groups have a central role in facilitating such activities, as substantial profits can be made.

The potential costs to the Australian economy associated with human trafficking include the funds paid to organised crime to facilitate recruitment, harbouring and movement of victims, health and social costs experienced by victims, and the cost to government entities of preventing and responding to the problem. These prevention and response costs are included in the final estimates in Table 21. The various costs paid by victims of trafficking to organised crime, if paid outside Australia by foreign citizens, would not involve a cost to the Australian economy and are not included. Where travel and associated costs are initially paid by recruiters and recovered from victims during their servitude in Australia, these are counted as a direct cost of trafficking and slavery.

The remaining cost category concerns the personal, health and social costs experienced by individual victims once in Australia. In Australia, these have not been estimated, but the United Kingdom Home Office (Reed et al. 2018) has recently provided a comprehensive analysis of these costs based on new research into the economic and social costs of modern slavery, including labour exploitation, sexual exploitation and domestic servitude. These cost estimations, although based on the situation in the United Kingdom, can be adapted to similar crime types present in Australia where the personal cost burden would be comparable. Some additional costs associated with debt bondage, loss of earnings during forced employment and living expenses during servitude have not yet been assessed, and the calculation of these costs requires future research.

Prevalence

Anti-Slavery Australia reports that, since 2004, 31 offenders have been convicted of trafficking offences (Stewart 2021), with half of these offences involving multiple offenders. Not all offenders were necessarily involved in organised crime syndicates, as some were family members of the victims. In 2016–17, eight operations or task forces investigated trafficking, two of which resulted in multiple offenders being charged (Stewart 2021).

Between 2014, when human trafficking was first criminalised, and 30 June 2017, the AFP received 841 referrals relating to human trafficking, slavery and slavery-like offences, including forced marriage. Since forced marriage was criminalised in March 2013, the AFP has received 186 referrals relating solely to forced marriage to 30 June 2017 (AFP 2021b).

For the present costing, the latest AFP statistics were used for 2020–21. In this financial year, the AFP assessed 224 reports of human trafficking and modern slavery. Of these, 79 relating to forced marriage were unlikely to have serious and organised crime involvement and these have not been counted for present purposes. The remaining 145 matters related to various types of human trafficking, sexual and other forms of exploitation and slavery and, of these, 97 were accepted for investigation by the AFP in 2020–21 (AFP 2021b).

The 97 cases that progressed to AFP investigation comprised: 30 of sexual exploitation, 26 of forced labour, 10 of domestic servitude, eight of trafficking, six of exit trafficking (and another six of child trafficking), six of slavery, four of debt bondage and one of organ trafficking (AFP 2021b).

Because AFP data relate to the number of referrals, it is necessary to estimate the number of victims involved. AFP (2021b) data record 224 matters assessed in 2020–21, including forced marriage, relating to an estimated 264 victims (1.18 victims per referral assessed). Applying this same rate to the 97 matters the AFP progressed to investigation, excluding forced marriage, these would have involved an estimated 114 individual victims.

To account for cases not detected and reported to police, the AIC's estimate of a 26 percent detection rate based on a multiple systems estimation approach (see Lyneham, Dowling & Bricknell 2019) was applied, which gives an estimated number of cases of 445 for 2020–21 that were both detected and undetected (multiplier of 3.9). This is a more precise multiplier than that previously used. Each of these types of trafficking has the potential for serious and organised crime involvement, but an assessment has not yet been undertaken of the extent of such involvement for each type. Based on the workshopped estimates undertaken for the ACC's (2015a, 2015b) report, the overall estimate of serious and organised crime involvement in these cases ranged between 25 percent (low), 35 percent (medium) and 50 percent (high). These rates will be used in the current calculations.

Cost estimations

In the AIC's estimate of human trafficking and slavery costs in 2013–14 (ACC 2015b), the unit costs for assault of $2,776 (low), $3,001 (medium) and $3,654 (high) were used as approximating the economic harm experienced by victims of these crimes. Since then, the United Kingdom Home Office has analysed the economic and social costs of modern slavery and provided more comprehensive estimates of the unit costs applicable (Reed et al. 2018). Although these relate to crimes experienced in the United Kingdom, they can be applied to Australia where the circumstances of victimisation and the harms experienced are similar.

Some of the Home Office's unit costs relate to prevention and response costs, which are dealt with in other sections of this report, but the remaining mean unit costs for 2016–17 relating to physical and emotional harm (£271,190) and lost output (£47,040) are relevant to the current estimation.

When these are converted to Australian currency using the OECD (2021) purchasing power parity calculator (1.472), the costs are $399,192 (for physical and emotional harm) and $69,243 (for lost output), totalling $468,435. Uprating this total mean unit cost for inflation to 2020–21 figures (RBA 2021) gives an estimate of $499,799 and, using the above estimates of serious and organised crime involvement, the cost of human trafficking is estimated to be between $55.5m (low), $78.0m (medium) and $111.5m (high) for 2020–21 (Table 5).

Table 5: Human costs of serious and organised crime involvement in human trafficking and slavery, excluding forced marriage, 2020–21

Serious and organised crime involvement	Low	Medium	High
AFP referrals accepted 2020–21 (*n*)	114	114	114
Multiplier	3.9	3.9	3.9
Estimated total victims (*n*)	445	445	445
Organised crime involvement (%)	25	35	50
Organised crime victims (*n*)	111	156	223
Unit cost 2020–21 ($)	499,799	499,799	499,799
Cost 2020–21 ($m)	55.5	78.0	111.5

Child sexual abuse

For the purposes of this report, organised child sexual abuse entails sexual offences committed against children, such as rape and acts of indecency, grooming of children for sexual purposes, and conduct involving the production, dissemination, accessing or possession of child abuse materials.

The cost of these crimes to the Australian economy is difficult to quantify, as many children who are subject to abuse are located outside Australia, where their abuse is filmed and traded online—either in cash or in exchange for other images. There is also some overlap between victimisation of children during the process of producing child abuse material and recorded sexual crimes against children. Official statistics are generally limited to contact offences that do not entail the production of child abuse material such as photographs or films.

The involvement of serious and organised crime in child abuse is likely to be high, although precise data are largely unavailable. The costs associated with the online child abuse material market, as it affects Australia, include money paid by Australian residents to purchase access to images, and the costs incurred by law enforcement, victim support agencies and charities in Australia in preventing and responding to such offending. These latter costs are included in the prevention and response estimates, presented later. The amount of money paid by Australians to purchase access to images is, at present, unknown.

Prior estimates

It is difficult to gauge the prevalence of child sexual abuse perpetrated against children in Australia. Both the Australian Law Reform Commission (2010) report into family violence and the Royal Commission into Institutional Responses to Child Sexual Abuse (Australian Government 2021b, 2021c) note the need for further research to quantify the problem.

Between February 2019 and 30 June 2020, there was an 80 percent increase in the number of individuals charged by the AFP with child exploitation offences, arising from 58 operations that led to 53 arrests and the rescue of 194 child victims in collaboration with the Philippine Internet Crimes against Children Centre (AFP 2020: 56).

In August 2021, the ABS (2021c) published a compilation of data on all forms of sexual violence from its Personal Safety Survey and its *Recorded crime – victims, Australia* collections. Although of historical relevance, this publication does not provide current data on the prevalence of sexual abuse of children but presents data from these sources up to 2019. The 2016 Personal Safety Survey (ABS 2017d) collected information about men's and women's experiences of physical and/or sexual abuse before the age of 15 years by any adult (male or female), including the person's parents. It found that one in six women (16% or 1.5 million) and one in 10 men (11% or 991,600) aged 18 years and over had experienced abuse before the age of 15. These data are, however, retrospective and do not capture the current prevalence of sexual abuse of children or child-on-child sexual abuse.

The Office of the Children's eSafety Commissioner (2021) has conducted research into the negative online experiences of Australian children aged 12 to 17 years and found that 44 percent of children have had at least one negative online experience in the past six months, with 20 percent receiving inappropriate online content. In 2019–20, the office received 14,573 reports about potentially prohibited online content and identified 13,392 URLs hosting material that was sufficiently serious to warrant referral to law enforcement. More than 99 percent of these provided access to child sexual abuse material (Office of the Children's eSafety Commissioner 2021).

One indication of the costs of child exploitation in Australia comes from the National Redress Scheme, which provides support to people who have experienced institutional child sexual abuse (Australian Government 2021c). The scheme provides up to $150,000 in compensation to the estimated 60,000 victims of child sexual abuse perpetrated by or alleged against members of the 4,000 institutions examined in the Royal Commission. Although the National Redress Scheme is managed by the Commonwealth Department of Social Services, its funding is provided by the institutional members and, accordingly, could be considered as a cost to the Australian economy.

At 19 March 2021, the scheme had received 9,908 applications; 5,139 payments had been made, totalling approximately $432m, and 700 offers were awaiting decision. The Royal Commission estimated that 60,000 survivors would potentially be eligible to make a redress claim under the national scheme, but in 2020 the scheme's actuarial advice revised this to 40,000 based on non-participation by responsible institutions, the number and characteristics of applicants, and the impact of changes in the law that have made it easier to pursue civil claims. As a result, it was estimated that the scheme would only receive 32,300 applications (Australian Government 2021b: 46).

Assuming that the current mean payment made is approximately $84,000 and that 32,000 successful claims will be made, total payments could amount to $2.69b (Australian Government 2021b: 42). In 2019–20, $205,016,984 in redress payments were made and, by 31 December 2020, $152,164,942 in payments had been made (Australian Government 2021b: 40), which, grossed up to 30 June 2021, could amount to more than $304m for 2020–21.

Not all payments are, however, made in respect of crimes involving serious and organised crime, although it is arguable that the conduct of groups of individuals in some institutions in committing abuse and concealing it from authorities would fall within the definition of organised criminal activity. More importantly, the National Redress Scheme provides financial redress to individuals who have been victimised at any time in the past, and using the total payments would overstate considerably the economic cost for the financial year 2020–21 alone.

Current costing methodology

Rather than use the estimates of the cost of child sexual abuse referred to above, the present study adopted a conventional cost of crime approach by estimating the number of reports to police, using a multiplier to account for unreported cases and applying unit costs for relevant categories of economic loss.

The latest official recorded crime statistics for victims of sexual assault in Australia (ABS 2021b) have data relating to victims' age at the time of reporting. In 2020, 15,518 victims were aged 19 years or younger, and it can be estimated that, of these, 12,627 were aged 17 years or younger—falling within the definition of 'child' for present purposes. Applying a 4.8 percent increase in numbers between 2019 and 2020 results in an estimated number of child victims in 2021 of 13,280.

To account for unreported cases, a multiplier of 5.1 was used, representing a 19.7 percent reporting rate identified by survivors of child sexual abuse who gave evidence during private sessions of the Royal Commission into Institutional Responses to Child Sexual Abuse (2017: 37) saying that they had reported the abuse to police or a representative of the criminal justice system. Applying this multiplier resulted in a total of 67,728 reported and unreported cases for 2021.

Unit costs for harms experienced by child victims of sexual abuse in 2016–17 were derived from the Deloitte Access Economics (2018) report *The economic cost of violence against children and young people*. Focusing on cost estimates relating to those under 18 years of age—and considering the annual costs across Australia relating to sexual abuse only, comprising health system costs, lost productivity, disability adjusted life years and premature death caused by sexual offending—a unit cost per person of $22,182 was derived. Inflated to 2020–21 values, this was estimated to be $23,667. This unit cost was multiplied by the 67,728 cases to total $1,603.6m in 2020–21 prices.

Using the workshopped estimates of serious and organised crime involvement in child sexual offences (ACC 2015b) of 10 percent (low), 15 percent (medium) and 25 percent (high), the range of estimated losses are $240.5m (low involvement of serious and organised crime), $400.9m (medium involvement) and $561.3m (high involvement).

Illicit commodities

The serious and organised crime costs associated with illicit commodities include: money lost to the Australian economy through purchasing of illicit goods offshore and the evasion of duty on imports; trade in illicit markets such as illegal tobacco, fishing, logging, mining and waste disposal; wildlife trafficking; and intellectual property crime. There is limited information available to assess the extent and economic impact of these illicit markets and, in the case of firearms trafficking, no further information has become available since the ACC's (2015a, 2015b) previous assessment.

The estimate of the cost of illicit commodities ranged between $1,446.1m (low), $3,171.4m (medium) and $4,907m (high) for 2020–21.

Intellectual property crime

In the present context, intellectual property (IP) crime refers to three types of crime markets: counterfeit goods, digital piracy and the theft of trade secrets. IP crime in Australia comprises cross-border importation of counterfeit goods such as clothing, luxury goods and footwear and the domestic manufacture of goods that infringe copyright such as films, music, games and software. Those involved in IP crime range from members of the public to professionally organised networks. The degree of serious and organised crime involvement varies considerably depending on the commodities in question: much online infringement is carried out by individuals who make use of digital services coordinated by organised crime groups. There is also considerable debate about the extent and economic impact of IP infringement, globally and in Australia, for which variable and contested methodologies exist (AIC 2008).

Counterfeit and pirated goods

Data published in 2019 by the OECD and the European Union's Intellectual Property Office (EUIPO) estimated that the trade in counterfeit and pirated goods amounted to approximately 3.3 percent of world trade, which in 2016 was worth an estimated US$509b (OECD–EUIPO 2019). Between 2013 and 2016 this percentage increased by 0.8 percentage points (0.27 percentage points a year). Applying the same increase over the five years from 2016 to 2021 gives an estimated rate of 4.7 percent for 2020–21.

The OECD–EUIPO rate of trade in counterfeit and pirated goods is, however, subject to several qualifications. First, it focuses primarily on the infringement of copyright, trademarks, design rights and patents, and excludes intangible infringement such as online piracy. The infringement rate is also based on all types of goods and merchandise, some of which would be unlikely to attract the attention of serious and organised crime. In addition, the infringement rate is based on all countries, including those that are high producers of infringing goods. In Australia, for example, the opportunities for serious and organised crime involvement would be less than, for example, in China, which is the top producer of counterfeit goods. In addition, border controls and enforcement activities differ considerably across countries. The impact on serious and organised criminal activity in Australia would, for example, be greater than in some countries where enforcement is weak.

To account for these limitations, some adjustment is required. In Australia, the two-way trade in goods in 2019–20 was valued at A$693.8b (DFAT 2021). Not all trade in goods would entail a risk of copyright infringement and it is necessary to limit this by reference to the value of trade potentially at risk.

One estimate of this is the value of the contribution of Australia's copyright industries to the economy, which PricewaterhouseCoopers (PwC 2017) estimated to be $122.8b for 2015–16. This was based on the methodology developed by the World Intellectual Property Organization, which defined copyright industries as those which rely on copyright protection. Between 2012 and 2016, this value add increased by 5.3 percent. Assuming the same rate of increase over the next four years, the value add in 2020 would be $129.3b. Accordingly, the copyright industry proportion of Australia's total two-way trade in goods for 2020 would be 18.6 percent.

Inflating the estimate of $129.3b by 1.6 percent to 2021 values (RBA 2021) results in a trade value of $131.4b. Applying the total counterfeit trade rate of 4.7 percent would amount to A$6,174m in 2021.

Online content

In the case of online content, rates of infringement differ considerably from those for other non-digital goods. In 2020, ORIMA Research (2020) conducted a survey on behalf of the Australian Government Department of Infrastructure, Transport, Regional Development and Communications to assess the rate of online consumer copyright infringement. Participants were asked about their consumption of online content in the three months preceding data collection from 15 to 28 June 2020. A total of 2,421 individuals aged 12 years or over who used the internet participated. It was found that 75 percent of respondents had consumed online content while 34 percent had consumed *some* content that was likely to be unlawful. However, only one percent of respondents had consumed content that was solely unlawful.

Research into the economic impact of piracy on the Australian economy was undertaken by Sphere Analysis for the Australian Content Industry Group (2011), with projections to 2016. It was estimated that the projected loss to retail content industries (music, film, publishing, games and software development) would be $5.2b in 2016, with a further projected revenue loss to the Commonwealth of $1.1b, totalling $6.3b. This took account of growth in the population and the number of internet users but assumed that all pirated goods resulted in a loss of retail sales, which cannot be assumed for all products counterfeited. Inflating this to 2021 values (RBA 2021) results in an estimated loss for 2021 of $6.8b.

Serious and organised crime involvement

Adding the estimated value of counterfeit and pirated goods in the Australian market in 2021 of $6,174m to the value of online retail content infringement of $6,800m gives a total estimate of the value of relevant IP infringement for 2021 of $12,974m.

As noted above, not all of IP infringement would involve serious and organised crime. Based on the estimated rate of organised crime involvement in IP crime developed by the ACIC (2015a, 2015b) and the AIC (Smith 2018a) ranging from five percent (low), to 15 percent (medium), to 25 percent (high), it could be concluded that the cost of IP infringement committed by serious and organised crime in Australia in 2021 would range between $648.7m (low), $1,946.1m (medium) and $3,243.5m (high), as shown in Table 6. For present purposes, these estimates will be included in the total of illicit commodities.

Table 6: Estimates of intellectual property crime involving serious and organised crime in Australia, 2020–21

	Rate 2021 %	Value 2021 $m	Source
Copyright industry value add		$131,370	PwC (2017)
Counterfeit and pirate goods	4.7	$6,174	OECD–EUIPO (2019)
Online retail content infringement		$6,800	Sphere Analysis (2011)
Total IP infringement (goods and online)		$12,974	
Serious and organised crime rate (low)	5	$648.7	
Serious and organised crime rate (medium)	15	$1,946.1	
Serious and organised crime rate (high)	25	$3,243.5	

Environmental crime

Environmental crime is now regarded as the fourth largest crime sector globally. The United Nations Environment Programme and INTERPOL estimate that illegal trade in natural resources cost between US$91b and US$258b in 2016, a 26 percent increase since 2014 (Henriksen et al. 2016). Serious and organised crime is now engaged in trafficking waste, chemicals, ozone-depleting substances, illegally caught seafood, timber and other forest products, as well as conflict minerals, including gold and diamonds.

In Australia, the ACIC (2017a: 38) noted that 'environmental crime is seen principally in the trade of illegal wildlife and in incidents of [illegal, unreported and unregulated] fishing'. Native vegetation clearance and water theft have previously been recognised as additional environment crime types unique to Australia. The exact level of serious and organised crime involvement in environmental crime in Australia is unknown.

In the absence of more authoritative data on environmental crime in Australia, the UNEP–INTERPOL estimates were used as a benchmark for 2016 with values as a percentage of world gross domestic product (GDP) applied to Australian GDP for 2016 and then uprated and converted to local currency for 2020–21. The ACC (2015a, 2015b) has previously provided estimates of the extent of serious and organised crime involvement in environmental crime generally, ranging from five percent (low), to 10 percent (medium), to 15 percent (high). The calculations are as indicated in Table 7.

However, these provide only a general indication of the extent of serious and organised crime involvement, and further research is needed to quantify the rates more precisely in each category of environmental crime. In one recent study, for example, the involvement of serious and organised crime in wildlife trafficking in Uganda and China was found to be less than previously estimated and was focused in only certain specific stages of the trafficking process (Moreto & Van Uhm 2021).

Table 7: Cost of serious and organised crime involvement in environmental crime, 2020–21

	UNEP 2016 Low US$b	UNEP 2016 High US$b	UNEP 2016 Mean US$b	As % of world GDP (%)	Applied to Aust GDP US$b	Converted to A$b for 2016 (PPP 1.45)	Inflated to 2021 RBA A$b	SOC Low 5% A$m	SOC Med 10% A$m	SOC High 15% A$m
Logging	51	152	102	0.133	1.608	2.332	2.5	127	253	380
Fisheries	11	24	18	0.023	0.278	0.403	0.4	22	44	66
Mining	12	48	30	0.039	0.472	0.684	0.6	32	63	95
Waste	10	12	11	0.014	0.169	0.245	0.3	14	27	41
Wildlife	7	23	15	0.020	0.242	0.351	0.4	19	38	57
All							4.3	212.5	425.0	637.5

Note: World GDP in 2016 was US$76,417b and Australian GDP in 2016 was US$1,209b (World Bank 2021). Values converted from US$ to A$ using purchasing power parity (PPP) for 2016 of 1.45 (OECD 2021) and inflated to 2020–21 8.5% (RBA 2021)

Sources: UNEP–INTERPOL (Henriksen et al. 2016). Wildlife estimates are based on CITS data (ACIC 2017a: 39)

Illicit tobacco

Since the AIC's last estimation of the cost of serious and organised crime involvement in the illicit tobacco market in Australia, which ranged between $1.09b (low), $1.49b (medium) and $1.91b (high) for 2016–17 (Smith 2018a), there have been several new analyses of the market and its impact on the economy. In 2020, the results of the National Drug Strategy Household Survey for 2019 were released (AIHW 2020b), which included data on the extent to which Australians use illicit tobacco products and how this has changed since 2007. In addition, the report of the Commonwealth Parliamentary Joint Committee on Law Enforcement's inquiry into illicit tobacco was tabled on 12 November 2020 (Parliament of Australia 2020). This inquiry examined the use and consequences of illicit tobacco in Australia, including the importation of contraband, counterfeit and unbranded tobacco as well as domestically grown illicit tobacco. The inquiry also analysed the available industry and government data on the size of the illegal tobacco market, including reports from KPMG, major tobacco manufacturers and the ATO. As a result, there is now an improved, although not perfect, evidence base upon which to estimate the cost of serious and organised crime involvement in the market in Australia.

Illicit tobacco comprises loose-leaf tobacco ('chop-chop') and pre-rolled cigarettes, which include counterfeit tobacco manufactured illegally, contraband tobacco illegally smuggled into Australia and 'illicit whites' smuggled into Australia illegally and sold without payment of tax. All locally grown tobacco in Australia is now illicit, as no licences to grow tobacco have been issued since 2015.

Illicit market size and loss of revenue

The Parliamentary Joint Committee on Law Enforcement's inquiry (2020) reviewed a range of estimates of the size and value of the illicit tobacco market in Australia, citing tobacco usage data (AIHW 2020b), Australian Border Force seizure data, industry estimates (KPMG 2020) and tax gap estimations (ATO). It found that domestic seizures have declined in recent years and represent a small proportion of the market (the ATO reported 41 tonnes seized in 2018–19), while international seizures have increased (the Australian Border Force seized 633 tonnes of illicit tobacco in 2018–19). According to AIHW (2020b), while the use of legal tobacco declined between 2016 and 2019, the use of unbranded, illicit product has increased during this time.

Industry estimates prepared by KPMG on behalf of British American Tobacco, Imperial Tobacco Australia and Philip Morris use different methodologies to measure tobacco consumption. These are not directly comparable with AIHW estimates and are considerably higher. In 2019, for example, KPMG found that 20.7 percent of tobacco consumption was illicit, while AIHW found 17.7 percent. In terms of lost revenue, KPMG's estimate amounted to $3,413m for 2019, a 69 percent increase on 2018 (KPMG 2020). The Parliamentary Joint Committee (2020) concluded that the different estimates were largely due to methodological differences in the research.

The Parliamentary Joint Committee on Law Enforcement (2020) preferred the estimates produced by the ATO's tax gap analysis, which showed the net tobacco tax gap for 2017–18 was five percent of revenue or $647m. This is a decline from 5.5 percent in 2015–16 due to 'better detection and disruption of illicit tobacco both at the border and domestic cultivation' (Parliament of Australia 2020: 18). The committee concluded: 'The ATO estimate is likely to now be the most independent and verifiable data to estimate the size of the illicit tobacco market' (2020: 19). In 2018–19, the net tobacco tax gap was six percent (ATO 2021c).

The latest ATO (2021a) estimate of the excise value lost to the illicit tobacco market at 30 June 2021 was $571m or 4.3 percent of the estimated revenue from the legal tobacco market of $13,372m in 2021.

Health and social costs

In addition to loss of revenue, the illicit tobacco market has various social costs. These can be estimated using the National Drug Strategy Household Survey's (AIHW 2020a—Supplementary Data Table 2.55) estimate of current tobacco usage. In 2019, AIHW found that 2.9 million Australians over the age of 14 were current smokers, 100,000 fewer than in 2016, with the decline solely relating to men. If this rate of decline (1.1% a year) continues, it is estimated that there will be 2.84 million smokers in 2021.

In 2019, 17.7 percent of current smokers had smoked unbranded tobacco in their lifetime, an increase on the 16.5 percent reported in 2016. Both men and women reported increased use of unbranded tobacco in their lifetime between 2016 and 2017. Applying the same rate of increase (0.4% a year) to the number of current smokers estimated for 2021 gives an estimated 525,400 Australians in 2021 who have used unbranded tobacco, or two percent of the Australian population in 2021.

Whetton et al. (2019) estimated the tangible heath care and workplace costs of tobacco for 2015–16 to be $19,243m, or $798 per person. Inflating this to 2021 prices gives an estimate of $866 per person. Applying this to the 525,400 Australians in 2021 who have used unbranded tobacco gives an estimated cost of $455m for 2021.

Serious and organised crime involvement

According to the evidence presented to the Parliamentary Joint Committee, the involvement of serious and organised crime in this market has increased. Imperial Tobacco submitted that the illicit tobacco market 'has become so lucrative that it is, to a large extent, driven by well organised and orchestrated criminal gangs' (Parliament of Australia 2020: 16). The description of the role of serious and organised crime by the Financial Action Task Force continues to be valid in 2021:

> …some Organised Crime Groups (OCGs) will manage all aspects of the production process, from sourcing raw tobacco product, through to developing specific tobacco packaging that will generate suitable market interest and/or appear legitimate in counterfeit product. Others will rely on the work of key facilitators, often based overseas, who engage with smaller legitimate tobacco manufacturers in sourcing the tobacco goods and associated packaging. The OCG then agrees a distribution route with the facilitator and agrees risk mitigation mechanisms to ensure successful delivery. Certain groups simply exploit lower cross-border prices of genuine tobacco products and smuggle them to their chosen destination for sale. (FATF 2012: 7)

Information provided by the ACC in 2014 estimated that serious and organised crime involvement in the illicit tobacco market was between 57 percent (low), 78 percent (medium) and 100 percent (high). Applying these proportions to the ATO's estimate of $571m in lost government revenue, and adding the estimated social cost of $455m in 2021, results in an estimated total cost of illicit tobacco attributable to serious and organised crime of between $584.9m (low), $800.3 (medium) and $1,026.0m (high) for 2020–21 (Table 8).

Table 8: Estimated cost of serious and organised crime involvement in illicit tobacco, 2020–21 ($m)					
Cost component	Net cost	SOC low 57%	SOC med 78%	SOC high 100%	Sources
Tangible healthcare and workplace costs	$455.0	$259.4	$354.9	$455.0	AIHW (2020a) Whetton et al. (2019)
Loss of excise (4.3% tax gap)	$571.0	$325.5	$445.4	$571.0	ATO (2021a, 2021b)
Total	$1,026.0	$584.9	$800.3	$1,026.0	

Pure cybercrime

Because information and communications technologies are used widely throughout society and are instrumental to government, business and consumer activities, there is considerable overlap between the estimated costs of cybercrime and the costs of other crime types, particularly economic crimes, banking and financial crimes, transnational crime, online commerce and computer-enabled crime such as consumer fraud, online dissemination of child abuse material and intellectual property infringement. There are also potential areas of overlap between cybercrime affecting government, business and individuals, as costs may be calculated in one or more categories relating to the same victimisation event. Many of the previous estimates of cybercrime have also included the indirect cybersecurity costs of prevention and response by government, businesses and households.

The present estimate sought to avoid this double-counting and, accordingly, is limited to computer-dependent or so-called 'pure' cybercrimes, involving unauthorised access to networks (hacking), modification of data and impairment of systems. The cybersecurity prevention and response costs are also separately reflected in the general indirect cost of crime calculations below.

The AIC's previous cost of serious and organised crime report (Smith 2018a) found an estimated cost of serious and organised pure cybercrime for 2016–17 of between $521m (low), $729m (medium) and $937m (high). Since then, several new estimates of the cost of cybercrime have been released. Two principal new sources of information are a nationally representative survey conducted by the AIC on pure cybercrime affecting individuals in Australia (Teunissen, Voce & Smith 2021) and the Australian Cyber Security Centre's (ACSC 2021) *Annual cyber threat report* for 2020–21. Although not all victimisation sectors are covered in full, the level of confidence in the available information has improved. In the case of the ACSC's (2021) report, victim self-report data are given for cybersecurity incidents, which approximate to the current definition of pure cybercrime, and cybercrime incidents, which mainly relate to cyber-enabled criminality.

Individuals

In relation to pure cybercrime affecting individuals but excluding businesses and sole traders, a survey conducted by the AIC in 2019 found that 14 percent of the adult Australian population had been victimised in the preceding 12 months (June 2018 to May 2019), with the total economic impact of pure cybercrime amounting to $3,499m. This comprised $1,914m directly lost by victims, $597.4m spent dealing with the consequences of victimisation, and $1,376m spent on prevention costs. Victims recovered $388.7m (Teunissen, Voce & Smith 2021).

Using the net loss of $2,123m after recoveries, excluding prevention costs and inflating this by 1.6 percent over two years using the RBA inflation calculator (RBA 2021) results in an estimate of $3,397m for economic loss in 2021.

In addition to the AIC's research, information on cybercrime affecting individuals was recorded by the ACSC's (2021) report, based on victim reports to the ReportCyber online portal. In 2020–21, over 67,500 cybercrime reports were made to ReportCyber. Two percent of these related to malware, another two percent involved threats and a further four percent related to bulk extortion. These eight percent, totalling 5,400 reports, were most likely to be forms of pure cybercrime. Included among them were 500 ransomware cybercrime reports. The remainder related to cyber-enabled crime such as fraud and online shopping and banking crimes. In 2020–21, seven percent of cybercrime reports related to business email compromise, which had self-reported financial losses totalling $81.5m, with mean losses of $50,673 for each such successful transaction.

Total self-reported losses in 2020–21 from all forms of cybercrime reported to ReportCyber amounted to $33m, with mean losses for small business of $8,899, for medium business of $33,442 and for large business of $19,306. These reports were primarily cyber-enabled crime and so are relevant to other sections of this report, including personal fraud, fraud against business, identity theft, sexual offending online and internet fraud.

Business pure cyberscams

Information relating to pure cybercrime affecting businesses has been recorded in several reports.

The ACCC's *Targeting scams* report (2021) found that businesses reported two types of pure cybercrime in 2020: scams involving hacking (425 with losses worth $1,419,353, mean $3,340) and ransomware or malware incidents (42 with losses worth $74,076, mean $1,764). These categories declined by 72 percent and 53 percent, respectively, between 2019 and 2020, probably due to increased reporting to the ACSC's ReportCyber portal. Using the same rates of reduced reporting, the estimated losses for 2021 would be $391,741 for hacking scams and $35,038 for ransomware or malware, totalling $426,779. Because these represent a small proportion of all business-related pure cybercrime costs, because they are included in the larger totals recorded by the ACSC and because it is not known if these cases involved cyber-dependent or cyber-enabled crime, they will not be further included in the current calculations.

Business and government computer security incidents

In addition to the potential pure cyberscams reported to the ACCC (2021), both business and government organisations have reported some types of pure cybercrime to the ACSC, classified by the ACSC as 'cybersecurity' incidents. In 2020–21, the ACSC responded to 1,632 cybersecurity incidents that were almost entirely cyber-dependent, pure cybercrime. Of these, 160 incidents related to ransomware, the largest proportion being reported in the professional, scientific and technical services sectors. No estimates of loss were provided by the ACSC for these incidents.

Because publicly available data are not reported on the associated losses involved in each category, an estimation process was undertaken in respect of both business and government losses.

Although somewhat dated, the AIC's Australian Business Assessment of Computer User Security (ABACUS) was Australia's first large-scale, national study of computer security incidents against businesses in Australia, using a representative sample of small, medium and large businesses from all industry sectors and weighting data to reflect the whole Australian business population (Richards 2009). The ABACUS survey measured 'computer security incidents', which were defined as 'any unauthorised use, damage, monitoring attack or theft of business information technology'. Thus, it covered many of the same categories of pure cybercrime as the ACSC's (2020) cybersecurity reports.

The ABACUS survey analysed 4,000 usable questionnaire responses completed on paper, online or via computer-assisted telephone interviews and found that 14 percent of all businesses were victimised one or more times in 2006–07—interestingly, the same percentage as individuals victimised in 2019 (Teunissen, Voce & Smith 2021). The mean financial losses resulting from computer security incidents for businesses that experienced such incidents during the period was $4,469. For small businesses the mean loss was $2,431, for medium businesses it was $12,405 and for large businesses it was $49,246.

The ABACUS survey also found that only two percent of small businesses, four percent of medium businesses and five percent of large businesses reported their most significant incident to an external computer security incident response team. Since then, the AIC has undertaken a new Australian Cybercrime Survey, which found official reporting of ransomware by small and medium businesses ranged on average from 5.2 percent for employees to 10.1 percent for business owners (AIC 2021). These rates varied according to the organisation to whom reports were made. The highest rates were reported to ReportCyber, banks and anti-malware companies. For present purposes, a multiplier of 12.5 will be applied, representing an overall reporting rate of eight percent.

Using the ACSC's security incident classification matrix (ACSC 2021: Figs. 6 and 7, 19–20), it is estimated that reports for 2020–21 were made by 182 small organisations and sole traders, 365 by medium-sized organisations including schools, 440 large organisations, 566 federal and state or territory government entities, and 79 individual members of the public.

Applying the ABACUS mean losses for these sectors, after inflation to reflect changes between 2006–07 and 2020–21 (RBA 2021), the following estimates were calculated (Table 9).

Table 9: Estimated cost of pure cybercrime for business and government by sector, 2020–21

Sector	Mean loss 2007 ($)	Mean loss 2021 ($)	Number of reports 2020 (*n*)	Multiplier (% reported)	Reported and unreported totals (*n*)	Estimated total losses $m
Small business	$2,431	$3,210	182	12.5 (8%)	2,275	$7.3
Medium business	$12,405	$16,380	365	12.5 (8%)	4,563	$74.7
Large business	$49,246	$65,026	440	12.5 (8%)	5,500	$357.6
Government	$4,469	$5,901	566	12.5 (8%)	7,075	$41.7
Total						$481.3

Note: Means and multipliers for unreported cases were derived from Richards (2009) and AIC (2021); report numbers were derived from ACSC (2021); loss estimates were inflated using the RBA (2021) calculator. Government mean was based on the mean for all business sizes reported in ABACUS (Richards 2009). No separate data were available for the mean losses involved in reported and unreported incidents

Serious and organised crime involvement in pure cybercrime is likely to vary considerably across cybercrime types. Some types, such as ransomware and denial of service, may have high levels of involvement, while phishing and business email compromise will have much lower levels of involvement. For example, Wall (2021: np) argued that 'ransomware has effectively become a sophisticated billion-dollar business and ransomware actors are now supported and facilitated, by a "professional" ecosystem that is incentivised by the profitability of cybercrime, the high crime yield'.

The present study used the previous estimates of the involvement of serious and organised crime in pure cybercrime categories, which ranged from 50 percent (low), to 70 percent (medium), to 90 percent (high). Future research should revise these percentages following the methodologies used in previous reports (ACC 2015a, 2015b; Smith 2018a) to take account of the changing involvement of serious and organised crime in pure cybercrime in recent years, particularly during and following the coronavirus pandemic.

Because the estimates of individual pure cybercrime were derived from a national victimisation survey (Teunissen, Voce & Smith 2021), there is no need to apply a multiplier to account for unreported matters by individuals.

Using the AIC's nationally robust estimate of pure cybercrime losses to individuals, the nationally robust estimates of business and government computer security losses derived from the AIC's ABACUS survey (Richards 2009) and the ACSC's (2021) cybersecurity reports for 2020–21, the estimated cost of serious and organised crime involvement in pure cybercrime for 2021 was estimated to be between $1,939.8m (low), $2,714.9m (medium) and $3,490.1m (high) (Table 10).

Table 10: Estimated cost of serious and organised crime involvement in pure cybercrime, 2020–21 ($m)					
Pure cybercrime victim type	Net cost $m	SOC low 50% $m	SOC med 70% $m	SOC high 90% $m	Source
Individuals	$3,397	$1,699	$2,378	$3,057	Teunissen, Voce & Smith (2021)
Small business	$7.3	$3.7	$5.1	$6.6	Derived from Richards (2009) and ACSC (2021)
Medium business	$74.7	$37.4	$52.3	$67.2	
Large business	$357.6	$178.8	$250.3	$321.8	
Government	$41.7	$20.9	$29.2	$37.5	
Total	$3,878.3	$1,939.8	$2,714.9	$3,490.1	

Serious and organised crime enabling costs

The cost of serious and organised crime enablers includes the costs of identity crime, commissions paid for laundering the proceeds of crime, corruption of public officials to facilitate serious and organised crime, and violence used to intimidate and extort funds from victims.

Previous research (ACC 2015a, 2015b; Smith 2018a) included an examination of the income that could be generated by the investment of assets which are held by organised crime groups and lost to the economy through lost taxation revenue. The inclusion of this enabler, however, depends on quantification of the value of assets held by serious and organised crime groups. Current estimates of the value of such assets could not be provided by ACIC for this report, and further research is needed.

The total cost of enabling crime for 2020–21 ranged between $931.8m (low), $1,657.0m (medium) and $2,342.3m (high).

Identity crime

Misuse of personal information, popularly known as identity crime, was estimated to cost Australia $2,130m in 2018–19 in direct costs alone, excluding prevention and response costs (Smith & Franks 2020). Using the same methodology but applying the most recent data, Table 11 below presents the estimated direct costs of identity crime for 2020–21. These are based on AIC research that estimated the cost of identity crime in 2018–19 (Smith 2018b; Smith & Franks 2020), using the cost of fraud and dishonesty offences as the basis and apportioning these to estimate the amount attributable to identity crime. This was undertaken by examining four ways in which cost of identity crime may be captured and then assessing the proportion that had serious and organised crime involvement.

Commonwealth entities

For Commonwealth entities, the estimate was based on the AIC's Fraud Against the Commonwealth census for 2020 (Teunissen 2021), adjusted by the same rate of changes recorded in the census data between 2019 and 2020 (a 7.2% increase in the number of investigations, a 21.2% increase in the unit cost of investigations and a 95% decrease in funds recovered). The same multiplier of 1.15, and the same percentage of 40 percent attributable to identity crime, was used.

Additional direct costs were based on the 4.8 percent reported in the United States by Harrell (2021) for 2018, converted to Australian dollars and inflated to 2021 values.

Individuals

In the case of identity crime against individuals, the same methodology used by Smith and Franks (2020) was adopted, using an identity fraud victimisation rate of 10 percent of the adult Australian population aged over 15 years, then applying an 80 percent rate for victims suffering a direct financial loss and applying a median cost of $369 per victim (inflating the previous median cost by 23 percent as recorded in the ACCC's (2021) scams report on increased victim costs of scams in 2020). This resulted in a direct loss estimate of $504.0m for 2021.

Additional direct costs were based on the 4.8 percent reported by Harrell (2021) for 2018, converted to Australian dollars and inflated to 2021 values, but estimating that 90 percent of these additional direct costs would have involved identity crime. This resulted in an estimate of an additional $3.2m, making a total direct loss for individuals of $507.2m in 2021.

Serious identity crime

In addition to volume identity crimes targeting individuals and government entities, a proportion of identity crimes entail large economic losses for victims. These could relate to misuse of personal information to defraud victims in relation to complex economic crimes such as payroll fraud, invoicing fraud or investment scams (Smith 2018b).

To quantify such cases, the estimated number of incidents identified in 2016–17 (325; Smith 2018a) was inflated by eight percent based on the increase in identification (ID) theft reported by businesses in the ACCC's (2021) scams report for 2020. The same multiplier (2.17) was used to represent 46 percent of cases being reported officially. The unit cost of $1.5m was maintained based on the latest industry reports (ACFE 2020; PwC 2020), but an allowance of 14 percent was deducted for recoveries, again based on the recoveries recorded in the Asia–Pacific region by ACFE (2020). In total, 40 percent of losses were attributable to identity crime, as in previous reports.

Again, additional direct costs were included based on 4.8 percent of identity crime incidents having such costs, using the latest unit mean cost of additional costs of US$160, converted to Australian dollars and inflated to 2021 figures (Harrell 2021). The total estimated identity crime cost relating to serious matters was $392.2m for 2020–21.

Police-recorded offences

Finally, and importantly, losses attributable to police-recorded fraud and deception offences were estimated for the year 2020–21, based on the number of offences recorded by police for 2020–21 (138,070 offences). Added to this number were an estimated 30 referrals from Commonwealth entities accepted by the AFP in 2020–21, bringing the total to 138,100 fraud offences. Deductions to avoid double-counting were then made for 108 Commonwealth fraud cases referred to state and territory police, and 337 serious fraud matters referred to above. The total was also reduced by 65,000 reported incidents of personal fraud, counted as part of individual identity crime above. The remaining 72,655 offences were then used to estimate costs.

A multiplier of four was applied to account for unrecorded matters (based on Mayhew's (2003) reporting rate for fraud of 25%). Mayhew's (2003) unit costs for recorded matters ($15,808 for 2020–21 after uprating for inflation) and unrecorded matters ($2,539) were then applied to the 72,655 recorded matters and 217,965 unrecorded matters, giving a total cost of all frauds of $1,701.9m for 2020–21. It was estimated from previous research that 68 percent of frauds would entail misuse of personal information, resulting in an estimated direct cost of $1,157.3m for 2020–21.

Again, additional direct costs were added based on 4.8 percent of identity crime incidents having such costs, based the latest unit mean cost of additional costs of US$160, converted to Australian dollars and inflated to 2021 figures (A$238; Harrell 2021). The total estimated identity crime cost relating to police-recorded fraud offences was $801.9m for 2020–21 (Table 11).

Table 11: Estimated direct costs of identity crime, 2020–21

Category	Obtained ID cost ($m)[a]	Additional ID cost ($m)[b]	Total direct ID cost ($m)
Commonwealth entities	116.2	0.003	116.2
Individuals	619.9	3.2	623.1
Serious fraud	392.2	0.008	392.2
Police-recorded	1,157.3	2.3	1,159.6
Total	2,285.6	5.5	2,291.1

a: 'Obtained ID cost' refers to the monetary amount the offender obtained from misusing a victim's account or personal information, including the estimated value of goods, services, credit, loans or cash obtained

b: 'Additional ID cost' refers to costs incurred by the victim as a result of misuse, or attempted misuse, of personal information, including legal fees, bank fees on dishonoured cheques or funds transfers, and other miscellaneous expenses such as postage, phone calls and court costs

This estimate excludes the indirect costs of preventing and responding to identity crime incurred by government, business and individuals (see Smith 2018b). Those costs are included in the indirect costs of prevention and response below.

Serious and organised crime is involved in acquiring and selling personal information as well as using stolen credentials to facilitate other types of crime. Information provided by the ACC (2015a, 2015b) estimated serious and organised crime involvement to range from 20 percent (low), to 40 percent (medium), to 60 percent (high).

Applying these proportions of serious and organised crime involvement to the latest estimate of direct identity crime costs for 2020–21 results in a cost of between $458.2m (20%), $916.4m (40%) and $1,374.7m (60%). These costs were not included in the consequential costs of serious and organised fraud, presented later.

Laundering the proceeds of crime

Although some estimates of the global proceeds of crime have been exceedingly high (King & Walker 2014; Reuter & Truman 2004), and organised crime is thought to be responsible for a considerable proportion of the criminal activity that generates these proceeds of crime, the bulk of these costs have been counted in other categories in the current report. The only element that has not already been counted is the money lost to the economy in respect of commissions charged by individuals who carry out money laundering on behalf of serious and organised crime. The ACIC has estimated that the value of commissions charged in Australia for laundering the proceeds of crime ranges between six and seven percent of proceeds available for laundering. For present purposes, a mean rate of 6.5 percent will be used.

One example of the payment of commissions for laundering involved:

> …a real estate agency that received more than $400,000 in proceeds of crime from known criminals with a transaction description of ‘loan’. The funds were then used by the real estate agency to invest in property development. In return, the real estate agency paid the criminals a weekly ‘consultancy fee’, thus legitimising the proceeds of crime. (AUSTRAC 2021: 26)

Information provided by the ACIC estimates that serious and organised crime involvement in money laundering ranges from 50 percent (low), to 75 percent (medium), to 95 percent (high). This entails the collection of proceeds of crime, obtaining professional advice, transferring funds as advised and paying a commission to those undertaking the laundering activities.

The present study focused on the estimated proceeds of crime generated by each of the criminal activities examined as the baseline amount of funds available for laundering in Australia (see column 2 in Table 21 below). Proceeds of crime generated outside Australia but brought into Australia for laundering have not been counted, as the quantification of this activity remains incomplete. It is, however, potentially a large sum, as can be seen from the *Report of the inquiry under section 143 of the Casino Control Act 1992 (NSW)*. This report noted, inter alia, that transactions totalling A$346m were indicative of the laundering of proceeds of crime both locally and overseas taking place in Australian casinos (New South Wales Parliament 2021: 228). Accordingly, the present estimate of money laundering commission payments is likely to be highly conservative.

Not all proceeds of crime are, however, dealt with by organised crime in a way that requires a commission to be paid to money launderers such as professional financial advisers, as many methods of laundering simply entail the purchase of assets using methods to disguise their origins and to ensure the identity of purchasers cannot be traced. In this sense, money available for laundering does not equate to actual proceeds of crime or the size of the criminal economy, as the Home Office has recently noted:

> “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). (Fell et al. 2019: 113)

It can reasonably be estimated that one-quarter (25%) of proceeds of crime may require the assistance of professional launderers, especially large-scale proceeds generated through drug trafficking and financial crime.

The present study has estimated the net proceeds of crime derived from all the crime types examined, which total $53,740.8m.

Using the current estimate of proceeds of crimes that are likely to warrant professional laundering (25% of total proceeds of crime—$13,435.2m), and assuming an average commission charged by money launderers of 6.5 percent (totalling $873.3m), it is estimated that the cost of commissions paid to money launderers attributable to serious and organised crime would range between $436.7m (low—50%), $655.0m (medium—75%) and $829.6m (high—95%).

Corruption

Previous estimates of the cost of corruption have included the World Economic Forum's estimate of more than five percent of global GDP and corruption comprising up to 10 percent of the total cost of doing business globally (Australia Institute 2018).

PricewaterhouseCoopers (PwC 2016) analysed the relationship between corruption and GDP per capita and estimated that a one-point increase in perceived corruption using Transparency International's Corruption Perceptions Index (Transparency International 2021) is associated with a A$486 decrease in GDP per capita. Based on the Australia Institute's (2018) methodology, the 10-point decline experienced in Australia's rating between 2010 and 2020 (87 to 77) would equate to a reduction in GDP of $125.4b, or $12.5b a year. This is highly dependent on the validity of the Corruption Perceptions Index and is likely to be over-inclusive and to overstate the estimated costs of corruption in Australia.

In Australia, allegations of corrupt conduct are examined by each of Australia's eight principal anti-corruption agencies: Victoria's Independent Broad-based Anti-corruption Commission (IBAC 2020); New South Wales' Independent Commission Against Corruption (ICAC NSW 2020); Queensland's Crime and Corruption Commission (CCC Qld 2020); Tasmania's Integrity Commission (IC Tas 2020); South Australia's Independent Commission Against Corruption (ICAC SA 2020); Western Australia's Crime and Corruption Commission (CCC WA 2020); the Northern Territory's Independent Commission Against Corruption (ICAC NT 2020) and the Commonwealth's Australian Commission for Law Enforcement Integrity (ACLEI 2020). Not all these bodies have sole jurisdiction over corruption matters that could potentially involve serious and organised crime, and there is some potential overlap with other sections dealt with in this report. Nonetheless, examining the caseload and outcomes of these eight agencies provides some indication of the extent of corrupt conduct in Australia.

In 2019–20, the eight agencies received 13,273 complaints, reports or notifications of alleged corrupt conduct that fell within their individual jurisdictions. Each agency has differing jurisdiction over corrupt conduct and deals with and resolves matters in different ways, but their annual reports for 2019–20 show that 137 matters were reviewed and assessed as potentially involving serious corrupt conduct and, in 35 matters, allegations were substantiated. Convictions were obtained in some cases and other formal outcomes determined.

Although some of the eight agencies' annual reports provide information about the potential economic losses involved (such as in Queensland, where assets of $7,181,000 were forfeited in 2019–20), the reports do not give precise indications of the actual costs to the economy of the 137 matters, nor in the 35 substantiated cases. Quantification of cost is also difficult in cases in which the impact of corruption had no direct financial impact.

To provide a general indication of the potential costs involved, however, the present study has applied the median losses found by the Association of Certified Fraud Examiners' (ACFE 2020) Asia–Pacific supplement to its annual *Report to the nations*. In respect of 51 percent of the occupational fraud cases committed in the Asia–Pacific region involving corruption, the median loss was US$239,000 per case. This survey was based on 198 responses from certified fraud examiners in the Asia–Pacific region in 2019.

As a general indication of the potential cost of corruption throughout Australia, the ACFE's (2020) median loss was converted to Australian dollars (A$320,000) and inflated to 2020–21 values (A$325,188; RBA 2021). To account for unreported matters, a multiplier of 2.7 was applied, based on an estimated reporting rate of 37 percent to government authorities, which is a rate applicable to fraud offences generally (PwC 2020: 10). This totalled an estimated 370 reported and unreported cases. The median unit cost of $325,188 was then applied to the 370 estimated corruption matters in 2019–20. This resulted in a total estimated cost of corruption of $120.3m.

Applying the ACC's (2015a, 2015b) workshopped estimate of the involvement of serious and organised crime in cases of corruption, it is estimated that the costs could range from $12.0m (low—10% involvement), to $48.1m (medium—40%), to $90.2m (high—75%).

Violence as an enabler

The cost of some violent crimes that are not included in the consequential costs of serious and organised crime can be estimated using recorded crime statistics. The ABS (2020b) dataset, *Recorded crime – victims*, found there were 402 victims of kidnapping and abduction offences in 2020 (noting that data for New South Wales may be slightly inflated) and 522 victims of blackmail and extortion offences. Both these crime types could relate to serious and organised criminal activity used to enable or facilitate other serious crimes.

Although police-recorded crime statistics for these two offence types exist for 2020–21 in some jurisdictions, offence categories differ considerably: some jurisdictions include other offence types, such as threatening behaviour, stalking and harassment, or fail to disaggregate these offences from offences against the person generally. In New South Wales, data are also published for incidents rather than offences. As a result, the ABS *Recorded crime – victims* was used as the most complete and uniform dataset, although crimes involving intimidation and threatening behaviour were excluded.

If it is assumed that the same multiplier and cost elements apply as for assault offences (after inflation to 2020–21 values), and applying the ACC's (2015a, 2015b) estimates of serious and organised crime involvement in these offences, it is estimated that the cost of organised crime involvement in these violent crimes could be between $80,270 (low), $173,228 (medium) and $527,925 (high) for 2020–21—the upper estimate being 13 percent lower than in 2016–17 (Table 12).

Table 12: Cost of serious and organised violent crime enablers, 2020–21

Serious and organised crime involvement	Low	Medium	High	Low	Medium	High	Low	Medium	High
Crime type	**Kidnapping/abduction**			**Blackmail/extortion**			**Both crime types**		
Victims[a] 2021 (*n*)	307	307	307	480	480	480			
Multiplier	1	1	1	5	5	5			
Total victims (*n*)	307	307	307	2,400	2,400	2,400			
Organised crime involvement (%)	1	2	5	1	2	5			
Organised crime victims (*n*)	3.1	6.1	15.4	24.0	48.0	120.0	27.1	54.1	135.4
Unit cost 2013–14 ($)	2,776	3,001	3,654	2,776	3,001	3,654	2,776	3,001	3,654
Unit cost 2020–21 ($)[b]	2,962	3,202	3,899	2,962	3,202	3,899	2,962	3,202	3,899
Cost 2020–21[b] ($)	9,182	19,532	60,045	71,088	153,696	467,880	80,270	173,228	527,925

a: The number of victims for 2021 is estimated based on the percentage difference between 2019 and 2020 in *Recorded crime – victims* (ABS 2021b, 2020d)—Abduction/kidnapping, 23.6% decline; blackmail/extortion, 8.1% decline

b: Unit cost estimates for 2021 were inflated from 2013–14 (ACC 2015a, 2015b) using the RBA (2021) calculator

Consequential organised crime costs

Consequential organised crime costs relate to the cost of conventional crimes committed as a consequence of serious and organised criminal conduct. They are crimes that generate funds used to support involvement in serious and organised criminal activities (in particular, crimes committed by illicit drug users to finance drug purchases), crimes that result from being involved in serious and organised crime-related activities (eg violence, sexual assaults and burglaries committed by those using illicit drugs), or conventional crimes committed by organised crime groups (eg organised shop theft) or committed to facilitate serious and organised criminal activities (eg using violence to intimidate businesses or using identity crime to enable financial fraud).

The estimated costs of consequential organised crime for the year 2020–21 are shown in Table 13. These estimates were made by undertaking three calculations.

First, figures published by the AIC for 2016–17 (Smith 2018a) of the total estimated cost of organised crime for each crime type were inflated by 6.7 percent to 2020–21 values using the RBA (2021) calculator to account for cost-of-living increases over the preceding four years. The baseline figures for 2016–17 incorporated all the costing elements present in the cost estimations for each crime type, based on the methodologies developed by the AIC and ACC since 2011. These include: officially recorded police offence numbers; multipliers to account for unrecorded offences; the workshopped proportion attributable to serious and organised crime developed in 2014 and 2015 (ACC 2015a, 2015b); estimated property loss estimations based on prior research; medical costs associated with crimes of violence; and lost output due to victimisation and intangible costs experienced by victims.

Second, the percentage changes in the number of police-recorded offences for the crime types in question between 2016–17 and 2020–21 were calculated using official police statistics for 2020–21. This is a change from the AIC's previous work, which used offender and victim counts and crime victimisation survey data published by the ABS. At the time of writing, ABS data were not available for 2020–21, whereas police offence data were available from individual states and territories. The change in offence numbers was examined between 2016–17 and 2020–21 rather than between 2013–14 and 2020–21, owing to the need to take account of the most recent trends, as affected by the coronavirus pandemic since 2019.

Third, the inflated estimated serious and organised crime costs for 2020–21, based on the AIC's estimate for 2016–17, were multiplied by the estimated percentage change in offence numbers between 2016–17 and 2020–21 for each individual crime type. This provided a general indication of the change in the cost of serious and organised crime over the four years for each crime type considered.

Future editions of this publication should seek to update each of the costing elements for each crime type based on the latest research and using the latest crime statistics. Future calculations should also take into account clearance rates for police-recorded offences, as these can vary considerably between crime types: property offences attract the lowest clearance rates, while offences against the person attract much higher rates (eg rates exceeding 90 percent for homicides). Using clearance rates for incidence rather than police offence recording rates would reduce the overall cost estimates but would provide a more robust estimate of criminality capable of being proved in court. For present purposes, and to ensure consistency with previous cost of crime reports, clearance rates have not been used for 2020–21.

Table 13: Estimated cost of consequential serious and organised crime ($m)

Crime category[a]	% change in incidence 2016–17 to 2020–21[b]	Level of serious and organised crime involvement					
		Low		Medium		High	
		2016–17	2020–21	2016–17	2020–21	2016–17	2020–21
Murder/manslaughter	+17.4	15.3	19.2	42.3	53.0	139.5	174.8
Driving causing death	+54.1	0.57	0.94	16.9	27.8	76.8	126.2
Attempted murder[c]	–28.0	27.0	20.8	72.4	55.7	179.2	137.8
Assault	+11.4	116.6	129.9	158.9	188.9	243.2	289.1
Sexual offences	+93.6	0.67	1.4	2.7	5.6	8.9	18.4
Robbery	–5.2	26.7	27.0	52.8	53.4	96.7	97.8
Burglary	–30.6	336.6	249.4	669.3	495.8	1,021.1	756.5
Vehicle theft	+4.9	72.5	81.1	196.5	219.9	328.8	368.0
Theft from vehicles	–24.5	0.26	0.21	0.67	0.54	3.84	3.09
Shop theft[d]	+2.5	32.8	35.9	50.2	54.9	71.4	78.1
Other theft	–5.9	36.4	36.6	46.4	46.6	56.1	56.4
Criminal damage	+1.3	91.2	98.6	141.4	152.8	401.9	434.4
Arson[e]	–26.2	10.9	8.6	32.3	25.4	226.3	178.2
Conventional fraud[f]	–5.8[g]	989.1	931.5	2,010.1	1,893.2	3,885.8	3,659.7
Total		1,808.0	1,640.9	3,592.2	3,273.5	6,930.7	6,378.3
% SOC cost change 2016–17 to 2020–21			–9.2%		–8.9%		–8.0%

a: 2020–21 offence data sourced from ACT Policing 2021; BOCSAR 2021; NT Department of the Attorney-General and Justice 2021; QPS 2021; SA Police 2021; Tasmania Police 2021; WA Police Force 2021. Only April 2020–March 2021 data were available for Victoria (CSA 2021). Previous reports used ABS offender data (2017b)

b: The change in baseline cost between 2016–17 and 2020–21 includes an increase of 6.7% for inflation (RBA 2021) and the percentage change in the number of recorded offences over the four years shown in column 2

c: South Australia (SA) and Tasmania do not disaggregate homicide into completed and attempted offences. Attempts are recorded in total murder–manslaughter numbers in SA but are not recorded in total murder–manslaughter numbers in Tasmania

d: Shop theft offence numbers for the Northern Territory (NT) were unavailable and were estimated based on mean rates per 100,000 population for Western Australia and Queensland, then applied to the NT adult population

e: Arson offence numbers were unavailable for the ACT and NT. These were estimated to be 500 offences each year for each territory as in previous reports (ACC 2015a, 2015b; Smith 2018a)

f: A number of crime types have the potential for double-counting with police-recorded fraud, although the organised financial crime types already counted are unlikely to have state and territory dishonesty offences charged, as they predominantly relate to Commonwealth offences. Payment and transaction fraud is also unlikely to involve conventional dishonesty offences, as these would rarely be reported to police, instead being dealt with by financial institutions directly with cardholders. Pure cybercrime also involves computer crime and telecommunications offences rather than state and territory dishonesty offences. There is some potential for double-counting in relation to identity crimes and consumer frauds, but deductions were made for this when calculating identity crimes against individuals and identity crimes derived from police-recorded offences. A proportion of identity crime would also be charged as specific identity crime offences or as cyber-enabled personal fraud. Between 2016–17 and 2020–21 there was a 11.3 percent decline in police-recorded fraud, dishonesty and deception offences across all jurisdictions

g: Recorded fraud offence categories differed across jurisdictions and in some cases statistics for 2020–21 were unavailable, requiring estimations to be made based on recent trends. Police statistics used for this table were:

Victoria: Deception offences April 2020 to March 2021

New South Wales: Criminal fraud incidents 2020–21

Western Australia: Fraud and related offences 2020–21

South Australia: Fraud deception and related offences 2020–21

Tasmania: Fraud and similar offences in 2019–20 (993), inflated by 5.1%, being the increase in offences between 2018–19 (945) and 2019–20 (993) = 1,044 for 2020–21

Queensland: Fraud offences 2020–21, excluding specific fraud offence types

Northern Territory: Fraud offences were included within theft and related offences. All theft and related offences in 2019–20 (411) were deflated by the 3.97% decline in offences between 2019–20 and 2020–21 = 395

ACT: Fraud offences were included within theft, excluding motor vehicle theft. The decline in all theft, excluding motor vehicle theft offences of 6.0% between 2019–20 and 2020–21, applied to yearly total for 2019–20 of 1,297 = 1,219 for 2020–21

Indirect costs of preventing and responding to serious and organised crime

Previous cost of crime research has estimated various indirect costs of crime. These indirect costs generally include (Smith & Jorna 2018):

- **prevention costs**—sometimes known as defensive expenditure, including the costs associated with document security, computer security software, credit checks, awareness-raising campaigns, legislative and policy development by government, and other measures to guard against victimisation;
- **intangible impacts**—not easily measured in monetary terms, such as the costs associated with psychological harm and reputational damage;
- **response costs**—including expenses incurred in dealing with the consequences of victimisation, such as repairing a credit rating, reissuing credentials, reinstating systems, reporting to official agencies, and liaising with police and regulatory agencies to assist with their investigations; and
- **lost output**—including lost opportunity costs, business disruption costs due to the misuse of personal and business information, and the cost of victims not being able to work.

The level of information available to quantify each of these components is variable, although some improvements have occurred since the last cost of serious and organised crime report was published (Smith 2018a). For example, the *Commonwealth cyber security posture in 2020* report indicated that the Australian Government will invest $1.67b over 10 years to address cyberthreats (Australian Government 2021a) or $167m a year on average. As noted above in the analysis of pure cybercrime costs, the AIC found that in 2019 individuals spent $1,376m on the prevention of pure cybercrime in Australia (Teunissen, Voce & Smith 2021).

Information provided by the ACIC has indicated the extent to which each of these indirect costs of crime could be attributable to serious and organised crime involvement. To maintain comparability with previous costing methodologies, the three estimates of serious and organised crime involvement (low, medium, high) developed previously for each costing element (ACC 2015b: 40–41) have been maintained, while changes in government appropriations attributable to relevant agencies have been uprated using data from individual entities' annual reports and portfolio budget statements for 2020–21. The indirect costs associated with individuals and the private sector were also uprated to 2020–21 values by applying the RBA (2021) inflation calculator (Table 15). Details of the methodology are contained in the ACC (2015b) report.

Public sector costs

Public sector costs refer to the expenses of Commonwealth, state and territory government entities that are related to preventing and responding to all crime and to the proportion of those costs that relate to serious and organised crime. In the case of operational agencies such as police and crime commissions, this includes the matters actually dealt with as well as their other functions.

This report considered all government agencies in the justice, law enforcement and crime and justice policy sectors across each Commonwealth, state and territory jurisdiction. The total expenditure of each agency was sourced from its annual report for 2019–20 and then uprated to 2020–21 values (RBA 2021). Excluded from uprating was the expenditure reported by the Office of National Intelligence, which was sourced from its *Portfolio budget statements* for 2021–22 (Department of the Treasury 2021c). In addition, expenditure statistics for all courts and correctional agencies were sourced from the *Report on government services 2021* (SCRGSP 2021).

While not every government agency is mandated to respond to or prevent crime specifically, this report applied the same methodology as previous reports and attributed a proportion of annual recurrent expenditure to crime-related activities, then assessed the proportion which was attributed to serious and organised crime, based on the workshopped proportions developed in 2013–14 (ACC 2015a, 2015b). For example, annual expenditure attributed to crime in each police agency was assessed to be 80 percent of the total, while the proportion attributed to serious and organised crime was determined to be 10 percent (low), 15 percent (medium) and 20 percent (high) consistently across each jurisdiction. A similar assessment was made for each of the 69 separate agencies examined.

Table 14 presents an indication of the range of percentage allocations for different types of government entities. In some cases, a range of percentages is specified (eg 8–10%) to reflect the relevant percentages involved in various subdivisions of entities' operations. For example, some state justice departments' subdivisions have a differing focus on crime issues and on serious and organised crime-related matters. In South Australia, for example, the Attorney-General's Department has jurisdiction over Forensic Science, which is 100 percent relevant to crime, and legal and legislative services, which were assessed as having a 35 percent relevance to crime. These different proportions affect the proportion of total budget attributable to crime and serious and organised offending.

Table 14: Allocations for crime and serious and organised crime (SOC) in public sector entities' annual recurrent expenditure

Type	% crime	% low SOC	% medium SOC	% high SOC
Commonwealth				
Attorney-General/Australian Law Reform Commission	25	5	10	15
Australian Federal Police	70	30	40	50
ACLEI/ACIC	30–100	80	90	100
AIC	100	40	50	60
Home Affairs	40	15	30	50
Federal courts/Parliamentary Counsel	10–30	1	1–2	3–5
CDPP	100	5	10	20
Regulatory/compliance entities	50	3	5	7
Prime Minister and Cabinet	30	3	5	7
Australian Taxation Office	30	10	15	18
State/territory				
Attorney-General	50–100	1–10	1–15	2–20
Justice	80–100	8–10	10–20	20–25
ICAC/crime commissions	80–100	25	45	60
Police	80	10	15	20
DPP	100	5	10	20
Criminal courts	100	8	15	20
Corrections	100	50	60	75

In addition to determining the proportion of annual recurrent expenditure attributable to crime and serious and organised offending, an allowance was made for the value of proceeds of crime recoverable from offenders under Commonwealth, state and territory proceeds of crime legislation. Only proceeds of crime that had actually been confiscated and/or forfeited were counted, and amounts that were restrained but not yet recovered were excluded as deductions. The results of calculating the public sector cost of serious and organised crime are detailed in Table 15.

Table 15: Estimated public sector costs of preventing serious and organised crime, 2020–21 ($m)							
Jurisdiction	Annual expenses	Recovered proceeds	Net expenses	Expenses on crime	SOC cost low	SOC cost medium	SOC cost high
Cth	11,769.3	39.0	11,730.3	4,965.4	1,011.9	1,506.5	2,005.0
NSW	11,594.1	5.8	11,588.3	9,868.7	1,622.9	2,195.9	2,946.9
Vic	10,069.0	24.5	10,044.5	9,257.8	1,556.8	2,084.0	2,854.5
Qld	4,203.1	12.3	4,190.8	3,568.5	664.6	885.1	1,173.9
SA	1,542.8	4.1	1,538.6	1,311.9	248.9	332.8	432.1
WA	4,235.3	25.3	4,210.0	3,062.6	554.6	750.1	980.0
Tas	463.0	0.3	462.8	394.3	76.6	102.4	132.3
NT	710.2	0.5	709.7	622.2	124.8	165.8	214.5
ACT	541.6	2.2	539.4	467.9	66.1	97.6	127.2
Total	45,128.4	114.0	45,014.4	33,519.3	5,927.4	8,120.3	10,866.4

Note: Departmental recurrent expenditure is sourced from 2019–20 annual reports and uprated to 2020–21 (RBA 2021), other than for ONI, where it was sourced from the *2021–22 Portfolio budget statements*, and other than for courts and corrections, where it was sourced from SCRGSP (2021). Serious and organised crime (SOC) proportions were based on previous research (ACC 2015a, 2015b)

Private sector and other costs

Previous reports by the ACC (2015a, 2015b) and the AIC (Smith 2018a) included estimates of the private sector and community costs of preventing and responding to crimes that had serious and organised crime involvement. Conventional costs of crime methodologies (eg Mayhew 2003) include such costs as property losses and property repair costs, medical treatment costs, lost output due to work absences and a number of intangible costs and expenses. Mayhew (2003) found that these add an additional 40 percent to the estimated direct costs of crime.

Not all these indirect costs are applicable to crime types that involve serious and organised crime, although it is important to include a number of them. Key among these are indirect costs incurred by the financial sector, costs of computer security and security management generally, insurance administration, household security measures and identity security. The cost of dealing with personal victimisation can also be included in cases where individuals have been harmed, maimed or killed by serious and organised criminal activities.

The following estimates provide an indication of the level of these costs, noting that many areas require considerable further research before losses can be quantified more precisely.

Financial services

The financial services sector spends large amounts each year on managing investments and transactions securely. These include computer hardware and software expenses and personnel costs of compliance and economic crime prevention activities. Not all of these are, however, relevant to the various types of transactional risks that involve serious and organised crime. In addition, some costs have already been counted in other sections of this report, particularly those relating to cybercrime, identity crime and fraud.

Of the costs incurred by the financial services sector, one relevant component relates to compliance with the *Anti-Money Laundering and Counter-Terrorism Financing Act 2006* (Cth). In 2014, the Financial System Inquiry (Department of the Treasury 2014: 259) received evidence that the estimated annual cost of compliance with the know-your-customer requirements of this legislation was between $299m and $435m annually, relating to personnel and infrastructure costs required to administer the system. This is in addition to implementation costs estimated to be between $647m and $1b. For these purposes, and inflating the midpoint cost of $367m to 2020–21 values (RBA 2021), the annual compliance costs are estimated to be $410.7m.

Regulated entities are also required to pay AUSTRAC an industry contribution levy that includes an earnings component and a component for transaction-reporting activities. In 2020–21, the industry contribution levy was budgeted to be $90.8m (Department of the Treasury 2021b: 206).

Assuming that 70 percent of these regulatory costs relate to crime-related prevention, and allowing that a proportion were incurred because of serious and organised crime involvement in financial transactions, it is reasonable to estimate that the cost of preventing serious and organised crime involvement in financial services is as shown in Table 16, allowing for costs already counted in other sections of this report. The proportion of serious and organised crime involvement ranges from 20 percent (low), to 40 percent (medium), to 60 percent (high) in line with the other financial crimes examined in this report.

Table 16: Estimated cost of preventing serious and organised crime involvement in financial services, 2020–21 ($m)

Annual regulatory cost elements	Expenditure 2020–21 $m	Crime-related cost $m	SOC low $m	SOC med $m	SOC high $m
		70%	20%	40%	60%
Know-your-customer compliance	410.7	287.5	57.5	115.0	172.5
AUSTRAC levy	90.8	63.6	12.7	25.4	38.2
Total	501.5	351.1	70.2	140.4	210.7

Investigation and security services

In 2020–21, the investigation and security services industry in Australia sold goods and services (exclusive of excise and sales tax) worth $10,980m. Wages for the same year were $5,742 and industry value add was worth $6,609m (IBISWorld 2021). Industry value add represents the market value of goods and services produced by the industry, minus the cost of goods and services used in production, and is arguably the most appropriate indication of the cost to the economy of investigation and security services.

The services provided in this sector comprise:

> …security, protection or private enquiry services other than those provided by police forces and government security agencies. In addition, services include guards and patrols, monitored security systems, locksmiths, casual and permanent security staff and crowd controllers. Some security companies also offer ATM and cash-collection services, and some aspects of secure document and computer data storage. (IBISWorld 2021: 5)

Using the same estimated proportion of these costs that would relate to protection from criminal as opposed to other forms of activity (70%—$4,626.3m), and applying the same previous estimates of serious and organised crime involvement of low (8%), medium (10%) and high (15%), it is estimated that security costs would range between $370.1m (low), $462.6m (medium) and $693.9m (high).

Cybersecurity

The costs of serious and organised crime involvement in pure cybercrime presented above excluded the costs of responding to incidents such as staff costs in repairing the damage caused, loss of revenue due to an incident or any other cost that was a direct result of an incident. These costs of preventing incidents, such as measures implemented either before or after victimisation to enhance computer security, need to be taken into account in estimating indirect costs relating to cybercrime.

The estimated costs of preventing and responding to cyber-enabled offending are included in the costs of individual crime types and conventional cost estimates above. In addition, government expenditure on the prevention of, and response to, cybercrime is included in public sector estimates of expenditure, also above.

In relation to cyber-dependent offending (pure cybercrime) affecting individuals (excluding businesses and sole traders), the AIC survey conducted in 2019 found that $1,376.0m had been spent on prevention costs in the preceding 12 months (June 2018 to May 2019). Inflating this by three percent over two years using the RBA inflation calculator (RBA 2021) results in an estimate of $1,417.0m for 2020–21.

In respect of businesses, the AIC's ABACUS national survey on computer security incidents against businesses in Australia found the annual cost of protection against computer security incidents for Australian businesses to be $1,370m to $1,950m for 2006–07. The most robust estimate for expenditure by businesses of all sizes that used a predicted value for each non-responding business was $1,740m (Richards 2009). Inflating this by 2.2 percent each year over 14 years using the RBA inflation calculator (RBA 2021) results in an estimate of $2,353.2m for 2020–21.

Not all of this expenditure is attributable to serious and organised crime and, accordingly, the previous estimates of the involvement of serious and organised crime in cybercrime—which ranged from 50 percent (low), to 70 percent (medium), to 90 percent (high)—were applied. This results in the estimates of cybersecurity expenditure presented in Table 17.

Table 17: Estimated cybersecurity expenditure of individuals and businesses, 2020–21 ($m)

	Expenditure $m	SOC low 50% $m	SOC med 70% $m	SOC high 90% $m
Individuals	$1,417.0	$708.5	$991.9	$1,275.3
Businesses	$2,353.2	$1,176.6	$1,647.2	$2,117.9
Total	$3,770.2	$1,885.1	$2,639.1	$3,393.2

Identity security

In addition to the direct costs of serious and organised crime involvement in identity crime, listed above, individuals and businesses incur various indirect costs in preventing and responding to identity crime each year. The costs of prevention and response incurred by public sector entities are included in the above estimates for public sector expenditure.

Smith and Franks (2020) estimated the indirect costs of preventing and responding to identity crime in 2018–19 for individuals were $201.1m and, for the private sector, $20.4m. Inflating these estimates to 2020–21 values using the RBA inflation calculator (RBA 2021) results in costs for individuals of $207.1m and for the private sector of $21.1m for 2020–21.

Serious and organised crime is involved in acquiring and selling personal information and using stolen credentials to facilitate other types of crime. Information provided by the ACIC estimated serious and organised crime involvement in identity crime to range from 20 percent (low), to 40 percent (medium), to 60 percent (high). Applying these proportions of serious and organised crime involvement in identity crime results in the estimates presented in Table 18.

Table 18: Estimated expenditure of individuals and businesses on preventing and responding to identity crime, 2020–21 ($m)

	Expenditure $m	SOC low 20% $m	SOC med 40% $m	SOC high 60% $m
Individuals	$207.1	$41.4	$82.8	$124.3
Businesses	$21.1	$4.2	$8.4	$12.7
Total	$228.2	$45.6	$91.3	$136.9

Insurance administration

Insurance Statistics Australia estimated that the industry cost of administering insurance theft claims across domestic and commercial property and private motor vehicles in Australia in 2011–12 amounted to $670m. This was based on a rate of four percent of the gross written premiums applicable to these sectors as used in the ACC's (2015b) previous report.

However, over the eight years to 2020, rates of unlawful entry with intent and motor vehicle theft have continued to decline (22.1% decline in rate of offenders per 100,000 population for unlawful entry, and 3.2% for motor vehicle theft; ABS 2020e) and this would be reflected in insurance claims made and associated premiums paid. Applying the mean rate of decline of 13 percent to the insurance industry estimate of $670m for 2011–12 results in an estimated cost of $582.9m. Inflating this to 2020–21 values (RBA 2021) gives an estimated cost of $685.2m. Applying the ACC's (2015b) estimation of the involvement of serious and organised crime in insurance administration losses of 10 percent (low), 20 percent (medium) and 25 percent (high) results in estimated losses of $68.5m (low), $137.0m (medium) and $171.3 (high) for 2020–21.

Household precautions

In addition to the other categories of security expenditure, some of which would be incurred by households and individuals, Mayhew (2003) costed the time spent by the average person on precautionary behaviours, such as the time taken each day to lock and unlock various locks, which she estimated to be approximately four minutes. Inflating the ACC's (2015) estimate for 2013–14 to current prices results in an estimated cost of $2,663m.

Not all this time is attributable to crime risks arising from serious and organised criminal activity. Applying the workshopped proportions for serious and organised crime involvement (ACC 2015b) gives an estimated range of $399.4m (low—15%), $532.6 (medium—20%) and $798.9 (high—30%).

Violent crime support services

Previous AIC research has identified a range of costs associated with the prevention of and response to crimes of violence (Mayhew 2003; Rollings 2008; Smith et al. 2014). The costs most relevant to serious and organised crime are those arising from violent crimes involving illicit drug markets, human trafficking and child sexual abuse, cybercrimes harming individuals and the cost of services for victims of kidnapping, abduction, blackmail and extortion. A number of these costs are included above in government budgets, while others form part of non-profit organisation budgets and the expenses incurred by other volunteer services. Considerable difficulties arise in disaggregating the cost of these services in terms of their relationship to serious and organised crime involvement, and it is likely that the estimates provided here will represent a general indication of expenses only.

Given that most crimes of violence canvassed in this report have increased in number since previous cost of crime reports (ACC 2015a; Smith 2018a)—particularly human trafficking and modern slavery, child sexual abuse and other crimes of sexual violence, especially those committed online—it is reasonable to assume that the cost of private sector support services has also increased. Accordingly, the current report has inflated the previous estimates of the cost of these services made by the ACC (2015a) using the RBA (2021) calculator to provide the following estimates for 2020–21 (Table 19).

Table 19: Estimated expenditure by private sector support services for victims of violent crimes perpetrated by serious and organised crime, 2020–21 ($m)

	Expenditure $m 2020–21	SOC low $m	SOC med $m	SOC high $m
Child protection	1,679.0	50.4	84.0	167.9
Sexual violence services	139.0	0.70	1.4	2.8
Voluntary support	85.0	0.4	0.9	1.7
Total	1,903.0	51.1	86.3	172.4

Note: The percentage involvement of serious and organised crime was estimated to be: child protection (3% low, 5% medium, 10% high); sexual violence (0.5% low, 1% medium, 2% high); voluntary support (0.5% low, 1% medium, 2% high)

Summary indirect prevention and response costs

Considering the various indirect prevention and response costs of serious and organised crime incurred in 2020–21 by government entities, including law enforcement, other criminal justice agencies and those in justice portfolios, and the costs incurred by private sector businesses, non-profit bodies and individuals and households, it can be seen from Table 20 that additional costs range from $8,817.4m (low), to $12,209.6m (medium), to $16,443.7m (high). The quality of evidence used to undertake these estimations varies considerably: government entities generally have more robust data available, while private sector expenses are more difficult to estimate, partly due to commercial confidentiality policies but also because the relevant research needed to quantify expenditure has not yet been undertaken. Taking the high level of the estimated indirect costs of $16.4b, this represents 36 percent of the total direct costs estimated above of $45.3b. This is slightly lower than Mayhew's (2003) original 40 percent estimate of indirect costs as a percentage of all direct crime costs in 2003.

Table 20: Estimated indirect serious and organised crime costs, 2020–21 ($m)			
	Serious and organised crime involvement		
Public sector	**Low**	**Medium**	**High**
Commonwealth government entities	1,011.9	1,506.5	2,005.0
State government entities	4,724.4	6,350.3	8,519.7
Territory government entities	190.9	263.4	341.1
Total public sector	**5,927.40**	**8,120.30**	**10,866.40**
Private sector			
Financial services	70.2	140.4	210.7
Investigation and security services	370.1	462.6	693.9
Cybersecurity	1,885.1	2,639.1	3,393.2
Identity security	45.6	91.3	136.9
Insurance administration	68.5	137.0	171.3
Household precautions	399.4	532.6	798.9
Violent crime support services	51.1	86.3	172.4
Total private sector	**2,890.0**	**4,089.3**	**5,577.3**
Total indirect costs	**8,817.4**	**12,209.6**	**16,443.7**

Conclusion and summary

This report estimates the cost of serious and organised crime in Australia for the 2020–21 financial year. It was not possible to undertake new empirical research to provide accurate baseline data to support the estimated costs. Instead, the most recent reported statistics for individual crime types or public and private expenditure were used as baseline indicators of incidence. The corresponding unit cost estimates were uprated using the RBA (2021) inflation calculator. Where more recent unit cost estimates were available, these were used in preference to uprating to account for inflation.

Table 21 shows the final summary totals for each crime category examined, along with the lower, medium and upper estimated cost values corresponding to various levels of organised crime involvement in each criminal activity. In addition, the final totals of public and private sector prevention and response costs are indicated.

In column 2 of Table 21, an indication is given, based on these calculations, of the total proceeds of crime generated by each type of activity that could be available for laundering. As indicated above, it is estimated that 6.5 percent of the proceeds of crime actually laundered would be paid as commission to professional facilitators of laundering, representing a loss to the economy. In some cases, proceeds of crime are simply spent on lifestyle, enabling them to remain within the economy.

Each estimate for 2020–21 has a confidence rating to indicate the degree of certainty associated with the estimate, based on the availability, coverage and accuracy of the baseline data and unit cost estimates applied to each category. This is shown in column 6 in Table 21.

Table 21: Summary cost of serious and organised crime estimates for 2020–21 ($m)

Crime category	Total proceeds of crime[a]	Serious and organised crime involvement			Confidence rating	% change 2017–21[b]
		Low	Medium	High		
Direct serious and organised crimes (total)		**14,374.6**	**24,370.9**	**37,299.0**		
Illicit drugs	11,925.4	6,981.0	10,558.6	16,521.3	Medium	+72%
Organised financial crime (total)		2,804.7	5,827.4	9,412.8		
Tax and revenue crime	6,374.3	1,858.5	3,835.3	6,374.3	Low	+7%
Superannuation fraud	4,624.5	462.5	1,387.4	2,312.3	Low	+34%
Payment fraud	483.1	96.6	193.2	289.9	High	–21%
Other transaction fraud	774.2	387.1	411.5	436.3	Medium	–20%
Crimes against the person (total)		296.0	478.9	672.8		
Human trafficking	n.a.	55.5	78.0	111.5	Medium	+0%[c]
Child sexual abuse	n.a.	240.5	400.9	561.3	Medium	+ 885%
Illicit commodities (total)		1,446.1	3,171.4	4,907.0		
IP crime	12,974.0	648.7	1,946.1	3,243.5	Medium	+106%
Environmental crime	4,250.0	212.5	425.0	637.5	Low	+3%
Illicit tobacco	1,026.0	584.9	800.3	1,026.0	Medium	–46%
Pure cybercrime	3,878.3	1,939.8	2,714.9	3,490.1	Medium	+272%
Crime enablers (total)		907.0	1,619.7	2,295.0		
Identity crime	2,291.1	458.2	916.4	1,374.7	High	–6%
Laundering commission	n.a.	436.7	655.0	829.6	Low	+96%
Corruption	120.3	12.0	48.1	90.2	Low	n.a.[c]
Violence	n.a.	0.1	0.2	0.5	Low	–13%
Consequential costs of serious and organised crime	**5,019.6**	**1,640.9**	**3,273.5**	**6,378.3**	**Medium**	**–2%**
Prevention and response costs (total)		**8,817.4**	**12,209.6**	**16,443.7**		
Public sector	n.a.	5,927.4	8,120.3	10,866.4	Medium	+26%
Private sector	n.a.	2,890.0	4,089.3	5,577.3	Low	–23%
Total	**53,740.8**	**24,832.9**	**39,854.0**	**60,121.0**		

a: Disposable proceeds of crime generated by high involvement of serious and organised crime

b: Percentage change in high serious and organised crime involvement estimate between 2016–17 and 2020–21

c: Previous reports had no estimation of the cost of corruption, and human trafficking costs were based on different baseline data

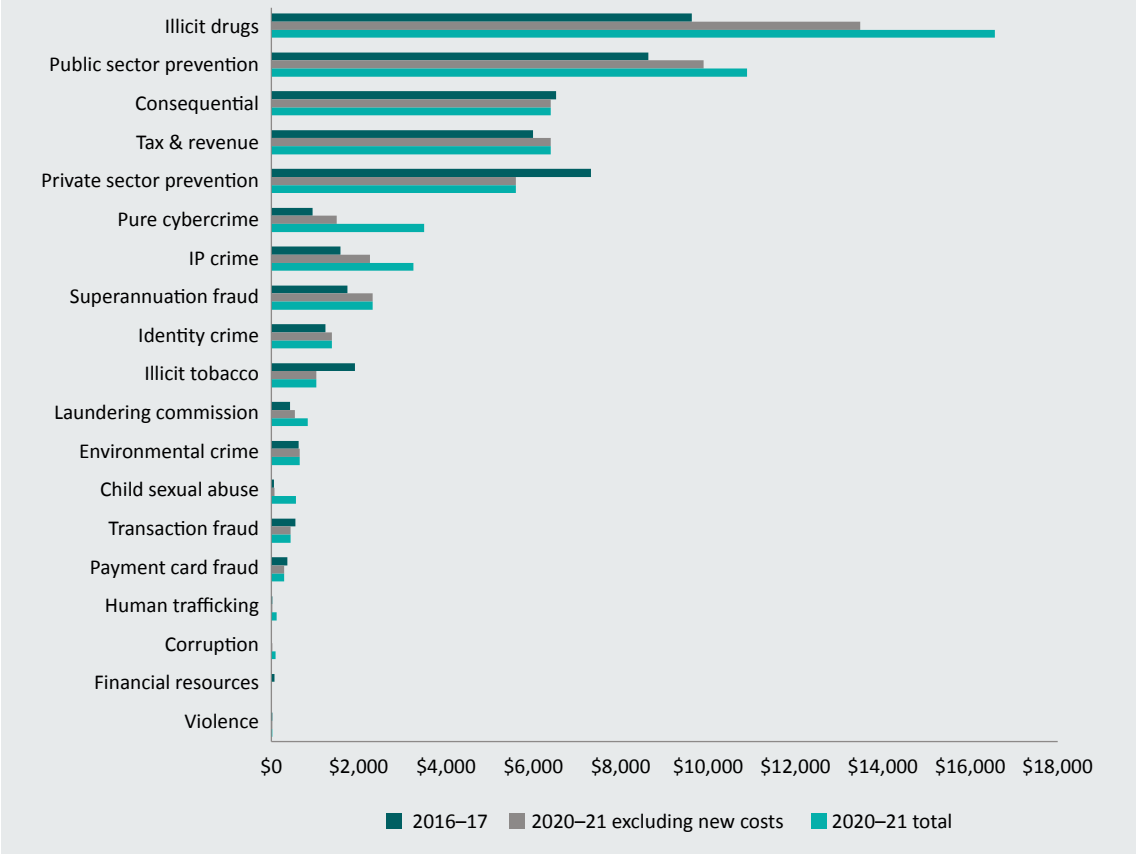
n.a.=not applicable or available

Taking into consideration the observations above concerning the problematic nature of making comparisons between cost estimates over time, and bearing in mind changes in the societal influences on crime, changing crime control measures that have been implemented and changes in statistics and estimation methodologies present in current and previous research, Figure 1 presents the total costs of the higher level of serious and organised crime involvement for each loss category in respect of the years 2016–17 and 2020–21.

The changes should not, however, be interpreted as necessarily reflecting a change in the net amounts of each cost category as the costing methodologies used have developed over time, and some new crime types have been included and different techniques of estimation applied based on new sources of information becoming available.

To indicate how the totals changed between 2016–17 and 2020–21 because of changes in methodologies of measurement, an estimate was made of the higher-level costs presented in Table 21 that related to the counting of new forms of serious and organised crime, not previously counted, and new ways in which costs were calculated. From Figure 1, it is apparent that changes in costing methodologies increased the estimated costs of only some categories of crime. In the case of other crime types, the increase was predominantly due to changes in net actual costs.

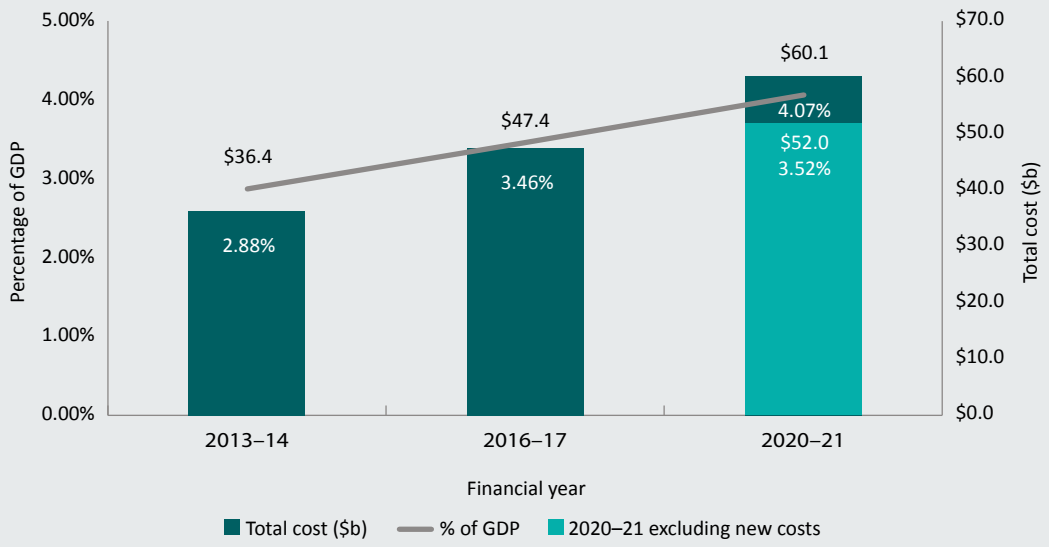
Figure 1: Changes in estimated cost of serious and organised crime by cost category, 2016–17 and 2020–21 (excluding new costs) and 2020–21 (total costs) ($m)



The additional costs due to changes in methodology and cost categories totalled $8,072m since the 2016–17 estimation was published. The difference between this and the total in Table 21 is $52,049m, which is 9.7 percent more than the total higher-level costs for 2016–17. This is graphically shown in column 3 of Figure 2 along with comparable totals for 2013–14. These are presented as both the total estimated cost as well as the total cost as a percentage of Australia's gross domestic product (GDP; ABS 2022: Table 36, col H).

From Figure 2, the total estimated cost of serious and organised crime has increased by 65 percent since 2013–14, while this cost as a percentage of GDP has increased by 41 percent (or 1.2 percentage points). Between 2016–17 and 2020–21, this increase as a percentage of GDP was only 17.6 percent (or 0.6 percentage points). Nonetheless, the final global estimates indicate the increasing, substantial economic impact of this form of criminality on the Australian economy over time.

Figure 2: Total estimated cost of serious and organised crime, 2013–14, 2016–17 and 2020–21



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