



**Australian Government**

**Australian Institute of Criminology**

# Statistical Bulletin 15

ISSN 2206-7302

December 2018

## Counting the costs of identity crime and misuse in Australia, 2015–16

Russell G Smith and Penny Jorna

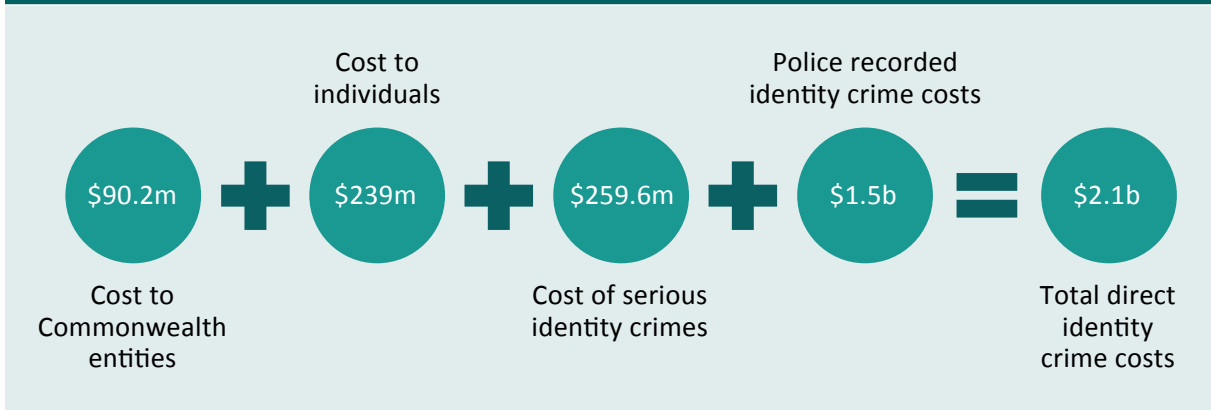
### Executive summary

This report assesses the cost and impact of identity crime and misuse in Australia for the 2015–16 financial year. It presents data and information from Commonwealth, state and territory agencies, as well as from the private sector and other non-government sources. The Australian Institute of Criminology (AIC), within the Home Affairs portfolio, is responsible for compiling and publishing this information as a key initiative of the National Identity Security Strategy.

### Cost of identity crime

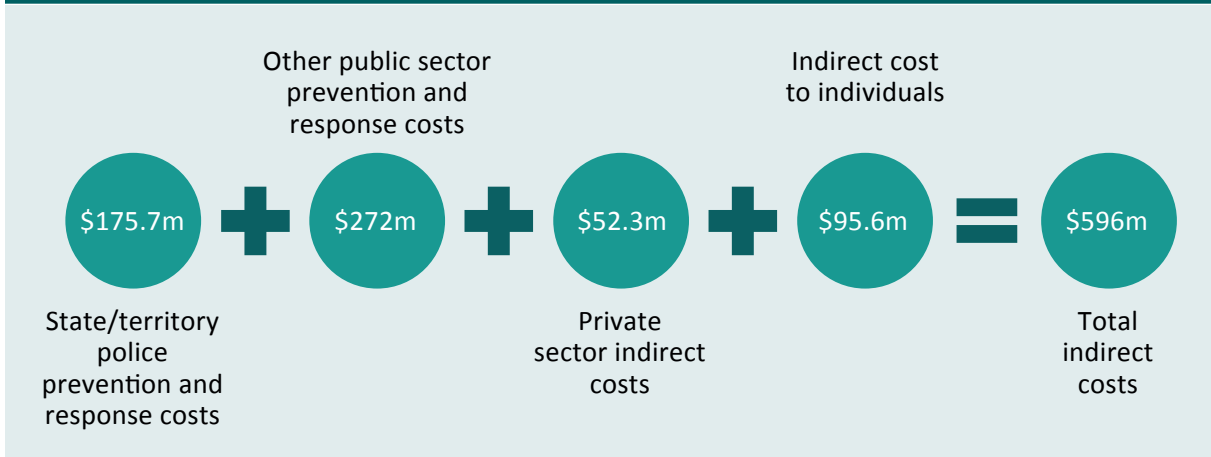
The estimated direct and indirect cost of identity crime in Australia in 2015–16 was \$2.65b. This includes losses suffered by government agencies, Australian businesses and individuals as indicated in Figure 1. Each year attempts have been made to improve the methodology used to estimate the cost of identity crime by including the most current data, adding newly available sources of data, and increasing the range of data examined. As such, the estimates in this report represent the best indication available of the national impact of identity crime in Australia. However, because of these changes to data sources and methodology, year-to-year comparisons cannot always be made.

**Figure 1: Estimated total direct cost of identity crime in Australia, 2015–16**



The indirect cost of identity crime in 2015–16 was estimated to add a further \$596m (as indicated in Figure 2), bringing the total economic impact of identity crime in Australia for 2015–16 to approximately \$2.65b.

**Figure 2: Estimated total indirect cost of identity crime in Australia, 2015–16**



## Introduction

This report describes the methodology used to estimate the cost and impact of identity crime and misuse to the Australian economy for 2015–16, and the resulting findings.

Identity crime is arguably one of the most prevalent criminal activities in Australia, affecting large numbers of individuals, businesses and government agencies. Each sector suffers extensive economic harm from identity crime. It is important to assess the financial and non-financial harms associated with this type of crime in order to target resources for prevention and response activities more effectively.

*Identity crime* is a generic term that describes a range of activities in which identity credentials and other personal information are fabricated, manipulated, stolen or assumed in order to commit crime. Identity crime is rarely an end in itself, but is an important element of a wide range of other criminal activities. These include credit card fraud; superannuation and other financial frauds against individuals; welfare, tax and other frauds against government agencies; money laundering; financing of terrorism; gaining unauthorised access to sensitive information or facilities for unlawful purposes; and concealing other activities such as drug trafficking or the production and distribution of child exploitation material. Misuse of identity has also been present in connection with the commission of terrorist acts.

Respondents to the AIC's surveys were given the following definition of identity crime and misuse to assist with the collection of data:

'Identity crime and misuse' involves someone using another person's personal information without their permission. 'Personal Information' includes: name, address, date of birth, place of birth, gender, driver's licence information, passport information, Medicare information, biometric information (e.g. fingerprint, voice, facial, iris recognition), signature, bank account information, credit or debit card information, password, personal identification number (PIN), tax file number (TFN), shareholder identification number (HIN), computer and/or other online usernames and passwords, student number, or other types of personal information.

'Identity crime and misuse' can also be perpetrated against government entities, corporations and businesses.

The misuse of personal information can have lasting consequences. Each year thousands of Australians lose money to criminals misusing their personal information. They may also face other consequences such as emotional or physical harm arising from loss of funds and damage to their financial and personal reputations. Individuals are not the only ones to be affected, as government agencies and businesses are also targets of identity criminals and can lose substantial amounts of money and incur expenses in responding to such incidents (Smith 2018). As such, it is important to quantify the nature and size of these economic and other harms experienced by the Australian community as a whole.

This report estimates that over the 2015–16 financial year, the total economic impact of identity crime in Australia was approximately \$2.65b. This includes \$2.1b in direct costs and a further \$596m in indirect costs, including intangible harms and lost output as well as prevention and response costs to government, business and individuals.

## Methodology

The first comprehensive assessment of the cost of identity fraud in Australia was undertaken by the Securities Industry Research Centre for the Asia-Pacific (Cuganesan & Lacey 2003), based on data for the 2001–02 financial year. That study examined losses written off by organisations, and assessed intangible losses due to identity fraud that organisations may have experienced. Intangible losses included reputational damage, stress and emotional trauma. The study estimated that in 2001–02 the cost of identity fraud in Australia was \$1.1b.

Other assessments have included those commissioned by the Attorney-General's Department (AGD). These reports, which examined direct and indirect losses and costs to the criminal justice system and other government agencies, estimated the cost of identity crime to the Australian economy to be \$2b in 2015 (AGD 2015) and \$2.6b in 2016 (AGD 2016). The Australian Crime Commission (ACC 2015) also estimated the costs of serious and organised identity crime for the 2013–14 year to be \$1.2b, and the costs associated with organised fraud to be \$6.3b, although not all incidents of serious and organised fraud would have involved identity crime or misuse.

This study examined three components of the cost of identity crime and misuse in Australia: direct financial losses, indirect losses, and the costs of preventing and responding to identity crime borne by Commonwealth, state and territory governments, police, individuals and businesses.

Some businesses experience losses through compensating their customers who have experienced identity crimes. This may occur when a financial institution charges a retailer to recover the amount charged to an identity crime victim's account in a fraudulent transaction.

Baseline data came from prior research into the cost of crime in Australia generally (Smith et al. 2014), the cost of fraud against the Commonwealth (Jorna & Smith 2018a), the cost of personal fraud victimisation in Australia (ABS 2016b; Goldsmid, Gannoni & Smith 2018), the cost to Australian businesses of identity crime and misuse (Smith 2018) as well as officially recorded police fraud statistics and comparable international studies.

## Components of the cost of identity crime and misuse

Conventional cost of crime methodologies include both direct and indirect costs associated with any form of criminal conduct (Dubourg, Hamed & Thorns 2005; Harrell 2015; Mayhew 2003). In the case of identity crime and misuse, these relate to the following:

- Direct costs—losses actually incurred as a result of victimisation. The net losses after recovery of insurance, refunds or compensation are referred to as out-of-pocket costs and comprise:
  - *Amount obtained*—the monetary amount the offender obtained from misusing the victim’s account or personal information, including the estimated value of goods, services, credit, loans or cash obtained;
  - *Additional costs*—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;
  - *Less recoveries*—amounts recovered from offenders and any compensation and insurance payments made to victims;
- Indirect costs fall into four principal categories:
  - *Prevention costs*—sometimes known as defensive expenditure, these include costs associated with document security, computer security software, credit checks, awareness-raising and prevention campaigns, legislative and policy development by government and other security measures to guard against victimisation;
  - *Intangible impacts*—harm that cannot easily be measured in monetary terms such as psychological harm and reputational damage;
  - *Response costs*—expenses associated with 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 in their investigations; and
  - *Lost output*—the lost opportunity costs and business disruption costs due to the misuse of personal and business information.

The calculation of direct costs is based on previous methodologies developed by the AIC to quantify the cost of crime in Australia (Smith et al. 2014) and the cost of fraud against the Commonwealth (Jorna & Smith 2018b). Personal fraud victimisation data (ABS 2016b) as well as officially recorded police fraud statistics have also been relied upon, as well as information derived from comparable international studies.

The category of additional direct costs is based on 2014 data from the United States Bureau of Justice Statistics, updated and converted to Australian dollar values for 2016 using purchasing power parities constructed by the Organisation for Economic Co-operation and Development (OECD). Purchasing price parity is the exchange rate needed to equalise the purchasing power of two currencies in their respective countries (OECD 2018). Australia’s rate in 2014 was approximately A\$1.45, meaning one would need to spend A\$1.45 in Australia to buy the quantity of goods or services that would cost US\$1 in the United States. This exchange rate was applied to public sector, private sector, serious fraud and individual identity crime direct costs.

Indirect costs were calculated using Mayhew’s (2003) estimate that indirect costs—including preventive, intangible, response and lost output costs—are 40 percent of direct costs.

The total financial impact of identity crime in Australia comprises the direct and indirect costs relating to Commonwealth entities, state and territory agencies including police, individuals and businesses, as shown in Table 1. The total financial impact of identity crime in Australia in 2015–16 is estimated to amount to \$2.65b.

Category		Cost
Direct costs	Amount obtained	\$2,048,230,868
	Additional costs	\$10,679,444
Indirect costs	Public sector costs (including state and territory police)	\$447,685,656
	Private sector costs	\$52,322,146
	Costs incurred by individuals	\$95,627,474
Total estimated financial impact		\$2,654,545,588

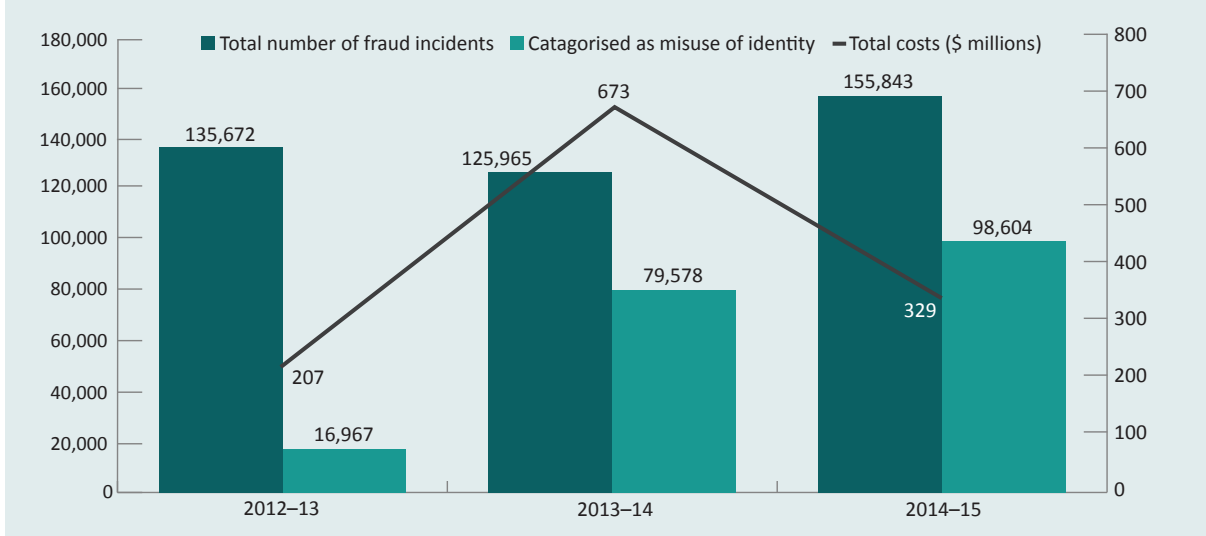
Note: Further information can be found in Jorna & Smith 2018c

## Direct costs

### *Costs to Commonwealth government entities*

For the purposes of the current report, data from the 2014–15 *Fraud against the Commonwealth* report (Jorna & Smith 2018b) were used to estimate direct identity crime losses experienced by Commonwealth entities (Figure 1). The AIC’s 2015–16 *Fraud Against the Commonwealth* questionnaire, unlike the 2014–15 census, counted finalised investigations rather than fraud incidents. In addition, the 2015–16 questionnaire did not capture ‘misuse of identity’ but asked about ‘misuse of personal information’ and ‘misuse of documents’. These changes meant fraud investigations involving identity crime numbered only 608 for 2015–16, whereas previous censuses recorded much higher numbers of fraud incidents. In 2014–15, for example, 98,604 incidents of identity crime were reported. The 608 investigations involving identity crime in 2015–16 represented just under 24 percent of all finalised investigations in which fraud was substantiated, in full or in part (Jorna & Smith 2018a).

**Figure 3: Fraud incidents reported by Commonwealth entities and incidents involving misuse of identity, 2012–13 to 2014–15**



Source: Jorna & Smith 2018b

In 2014–15, Commonwealth entities reported 155,843 incidents of fraud worth \$328,959,277 (Jorna & Smith 2018b). This equates to approximately \$2,111 per fraud incident. A multiplier of 1.15 was applied (Smith et al. 2014) to account for the frauds that were undetected or were not included in the annual census. This inflated the totals to 179,219 incidents of fraud with an estimated value of \$378,331,309.

Of the amounts lost to fraud in 2014–15, entities recovered \$24,465,519 in reparations or repayments, although not all of the monies recovered related to losses incurred in the same year. Deducting this amount from the total leaves a net total loss of \$353,865,790. It was not possible to determine if these amounts recovered included any incidents of identity fraud.

There were 98,604 incidents of fraud in 2014–15 involving misuse of identity. This was substantially higher than the 17,001 misuse of identity incidents recorded by Commonwealth entities in 2012–13. This change was due to one entity changing the way it recorded and categorised external fraud. This entity accounted for 79,438 of the identity related incidents. If data from this entity are excluded, there were 19,166 misuse of identity incidents recorded, which represents 25.1 percent of all fraud incidents.

If it assumed that identity crime represents 25.1 percent of all incidents of fraud experienced by Commonwealth entities, identity crime would cost approximately \$88,820,313 in direct losses.

Because the number of Commonwealth fraud incidents was not available for 2015–16, the total direct costs from 2014–15 were inflated to 2015–16 values using the Reserve Bank of Australia’s inflation calculator (RBA 2018), leading to a total of \$90,046,711 (Table 2).

<b>Index</b>	<b>Direct costs</b>
Incidents	155,843
Multiplier	1.15
Incidents × multiplier	179,219
Unit cost	\$2,111
Subtotal	\$378,331,309
Recovered amounts	\$24,465,519
Total (out-of-pocket)	\$353,865,790
% related to identity crime	25.1%
2014–15 identity crime costs for Commonwealth entities	\$88,820,313
Inflated to 2016 values using RBA inflation calculator	\$1,226,398
Total direct costs of identity crime to Commonwealth entities in 2015–16	\$90,046,711

Source: Jorna & Smith 2018b; RBA 2018

### *Costs to individuals*

The cost of identity crime to individuals is best estimated using the findings of crime victimisation surveys, as these avoid the need to inflate the number of offences recorded by police to account for unreported crimes. In the case of identity crime, the proportion of offences not reported is difficult to determine with precision. The most authoritative national survey was conducted by the Australian Bureau of Statistics (ABS 2016b) for the year 2014–15.

The 2014–15 ABS survey found 8.5 percent of people aged 15 years and over had experienced at least one incident of personal fraud (that is, credit card fraud, scams or identity theft) in the previous 12 months. Although the latest AIC survey (Goldsmid, Gannoni & Smith 2018) found 13.1 percent of respondents had experienced identity crime in the 12 months prior to completing the survey, this survey was not nationally representative and, accordingly, the ABS survey findings were used in the present estimation.

At 30 June 2016, Australia’s estimated resident population was 24,127,159, and 18.8 percent were aged under 15 years (ABS 2016a). Applying the victimisation rate of 8.5 percent to the 19,587,847 aged 15 and over means an estimated 1,664,967 individuals were victims of personal fraud in 2016. Data on identity crime victimisation of persons aged under 15 years are not available. Although it is possible that some of them may have been victimised, for the purposes of the present costing they have not been included.



The 2014–15 ABS survey found that over three-quarters of victims (78%) of personal fraud, or 1.3m people, had lost money as a result of the fraud, prior to reimbursement. After reimbursement, the proportion of victims who experienced an out-of-pocket financial loss was 11 percent for identity theft and 8.4 percent for card fraud (ABS 2016b). The average amount victims of personal fraud lost was \$2,700, with a median loss of \$400 per victim (ABS 2016b). As the loss amounts varied widely, with some extreme losses experienced, the median is the better measure of the direct cost of personal fraud. Accordingly, the total direct cost of personal fraud to individuals in Australia in 2014–15 was \$257,605,990. Not all personal fraud involves misuse of personal information and so only 90 percent was estimated to involve identity crime (\$231,755,391). This figure was inflated to 2016 values using the RBA (2018) inflation calculator. Therefore, the total direct cost of identity crime to individuals in 2015–16 was estimated to be \$234,955,384 (Table 3).

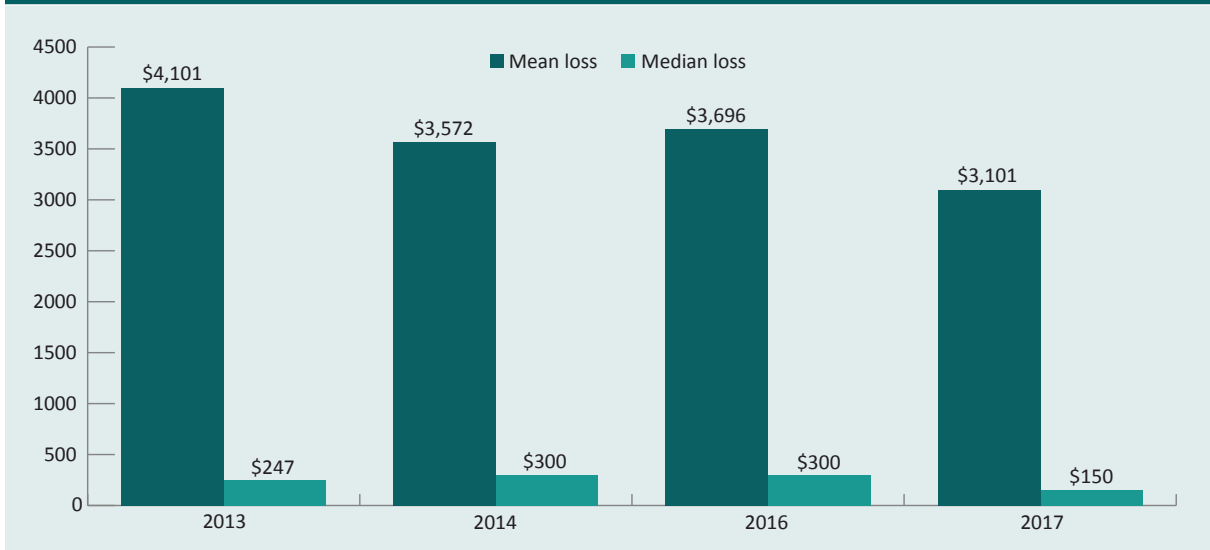
Index	Direct costs
Victims in 2014–15	1,664,967
Multiplier	1.0
Victims × multiplier	1,664,967
Victims with losses (78%)	1,298,674
Unit costs	\$400
Subtotal	\$519,469,600
Recovered monies	\$261,963,610
Total (out-of-pocket) 2014–15	\$257,505,990
90% related to identity crime	\$231,755,391
Inflated to 2016 values using RBA inflation calculator	\$3,199,993
Total direct costs of identity crime to individuals in 2015–16	\$234,955,384

Source: ABS 2016b; RBA 2018

This estimate of the direct costs of identity crime to individuals, based on ABS (2016b) data, can be compared with the findings of surveys conducted by the AIC (Goldsmid, Gannoni & Smith 2018) and IDCARE (2018). These latter studies are, however, based on smaller sample sizes derived from populations that do not reflect the total Australian population.

The AIC's 2017 survey of identity crime and misuse found that victims experienced out-of-pocket losses ranging between \$1 and \$341,541, with total out-of-pocket losses of \$2.9m (substantially higher than those experienced in 2016: \$1.8m). The average amount lost declined slightly and the median amount lost was half that of 2016. However, almost double the number of victims experienced out-of-pocket losses in 2017 than did so in 2016.

**Figure 4: Mean and median out-of-pocket losses suffered by victims of identity crime and misuse (\$)**



Note: 2013 and 2014 data weighted by location and 2016 and 2017 data weighted by age/gender

Source: Smith & Hutchings 2014; Smith, Brown & Harris-Hogan 2015; Smith & Jorna 2018; Goldsmid, Gannoni & Smith 2018

Estimates of the mean losses suffered by victims can vary greatly depending on the methodology used to collect the relevant data. The median amounts are more consistent (see Table 4) and are much lower than the mean amounts, which is not surprising given the wide range of losses. Losses recorded by IDCARE were much higher, probably because IDCARE deals with victims who require assistance and support due to the large losses they have experienced.

**Table 4: Mean and median losses suffered by victims of identity crime and misuse (\$)**

Source	Mean	Median
IDCARE 2018	\$17,083	Unknown
AIC survey 2017	\$3,101	\$150
AIC survey 2016	\$3,696	\$300
ABS Personal Fraud Survey 2014–15	\$2,700	\$400

Note: IDCARE deals specifically with victims who require assistance and support, often involving large losses, whereas ABS and AIC surveys canvass the general population. The ABS Personal Fraud Survey includes card fraud, identity theft and scams. AIC survey data weighted by age/gender

Source: IDCARE 2018; Smith & Jorna 2018; Goldsmid, Gannoni & Smith 2018; ABS 2016b

### *Serious identity fraud*

Serious and organised fraud is costly and of increasing concern to the community. ‘Seriousness’ is defined based on the level of financial loss, the sophistication of the planning and execution of the offence, and whether the fraud offences were committed by professionals (such as solicitors, accountants, financial planners or mortgage brokers) who breach clients’ trust (Smith et al. 2014). For the 2013–14 financial year, the cost associated with serious and organised fraud was \$6.3b (ACC 2015). Because not all serious and organised fraud involves identity crime, and the proportion that relates to identity crime is not known, a different method of calculation is required to determine the cost of identity crime involving serious fraud.

In 2012, KPMG surveyed 281 organisations in Australia and New Zealand and found that the participating organisations had experienced 194,454 incidents of fraud in the two years prior to the survey, worth \$372.7m (KPMG 2013). It was not possible to identify the number of Australian incidents, as opposed to the number in New Zealand, as the data were presented in aggregate numbers. Accordingly, incidents for both Australia and New Zealand were included. Serious fraud was defined as an incident resulting in a loss of more than A\$1m, which occurred in 20 cases (KPMG 2013). KPMG found only 46 percent of these major incidents of fraud were reported to police.

For present purposes, to account for the fact the KPMG survey involved just 281 organisations, it was assumed that 300 fraud incidents involved losses of \$1.5m each, totalling \$450m in respect of serious fraud incidents reported to police (Smith et al. 2014). As KPMG (2013) found that not all serious frauds were reported to the police, a multiplier of 2.17 (Smith et al. 2014) was used to account for the 54 percent of frauds not reported. Using this multiplier, it is estimated that 651 serious incidents of fraud would have occurred, worth \$976,500,000.

As previously noted, not all serious fraud involves identity crime. Assuming that similar proportions of serious fraud and fraud against the Commonwealth involve identity crime (25.1%), it is estimated the direct costs of serious fraud involving identity crime would be \$245,101,500 (25.1% of \$977m). Inflating this sum to 2015–16 figures using the Reserve Bank of Australia’s inflation calculator (RBA 2018) results in an estimated cost of \$259,603,838 for 2015–16 (Table 5).

**Table 5: Direct costs of identity crime involving serious fraud, 2015–16**

Index	Direct costs
Incidents	300
Multiplier	2.17
Incidents × multiplier	651
Unit cost	\$1,500,000
Subtotal	\$976,500,000
Recovered monies	Unknown
Total	\$976,500,000
% related to identity crime	25.1%
Total (out-of-pocket) cost of serious fraud in 2013	\$245,101,500
Inflated to 2016 values using RBA inflation calculator	\$14,502,338
Total direct cost of identity crime involving serious fraud in 2015–16	\$259,603,838

Source: KPMG 2013; RBA 2018; Smith et al. 2014

### *Police-recorded identity fraud*

In 2015–16, there were 130,474 fraud and dishonesty offences recorded by police throughout Australia, based on data obtained from individual police jurisdictions, crime statistics agencies and police annual reports. Added to this number are the 20 referrals from Commonwealth entities accepted by the Australian Federal Police in 2015–16, bringing the total to 130,494 fraud offences.

To avoid double-counting, the following have been deducted from the total of 130,494 recorded fraud offences:

- 78 incidents of fraud against the Commonwealth that were referred to state and territory police by Commonwealth entities;
- 651 serious fraud offences that were counted in the *Serious fraud* section above; and
- 54,142 incidents of personal fraud in the ABS Personal Fraud Survey 2014–15 that people reported to police (3.4% of all incidents; ABS 2016b).

This brings the total estimated number of officially recorded fraud incidents to 75,623.

Mayhew (2003) estimated that only 25 percent of all fraud incidents are reported. Accordingly, the estimated number of recorded offences (75,623) needs to be multiplied by 4.0 to determine the total number of frauds, recorded and unrecorded. This results in an estimate of 302,492 recorded and unrecorded fraud offences.

In estimating the unit cost of fraud offences, both Mayhew (2003) and Rollings (2008) adopted different values for recorded and unrecorded fraud on the assumption that a person or organisation was more likely to report a higher value fraud than a lower value incident. For recorded fraud, Mayhew applied a unit cost of \$9,900 in 2001 and Rollings increased this to \$21,500 for 2005. For unreported fraud, Mayhew estimated a unit cost of \$1,590 for 2001, while Rollings inflated this to \$3,390 for 2005 (Smith et al. 2014).

The Reserve Bank of Australia’s inflation calculator (RBA 2018) was used to calculate the unit cost of the 75,623 frauds recorded in 2016. (That year was the most recent available with the inflation calculator and was the latest year all police agencies could provide complete data for.) The inflated unit costs were estimated to be \$28,257 for recorded fraud and \$4,455 for unrecorded fraud (226,869 incidents). This gave a total cost of \$3,147,580,506 for all fraud offences.

However, not all fraud offences involve identity crime. Recent research in the United Kingdom estimated that between 40 and 53 percent of all recorded fraud offences involved some element of identity crime (Cifas 2017, 2016). Accordingly, an average of 46.5 percent was used. The resulting cost of identity crime as a proportion of police-recorded and unrecorded fraud is estimated to be \$1,463,624,935 (Table 6).

Index	Direct costs
Incidents	75,623
Multiplier	4.0
Incidents × multiplier	302,492
(75,623 recorded and 226,869 unrecorded fraud)	\$1,500,000
Unit cost	\$28,257 (recorded) and \$4,455 (unrecorded)
Subtotal	\$3,147,580,506
Recovered monies	Unknown
Total (out-of-pocket) cost in 2015–16	\$3,147,580,506
% involving identity crime	46.5%
Total direct costs of police-recorded identity crime in 2015–16	\$1,463,624,935
Total direct cost of identity crime involving serious fraud in 2015–16	\$259,603,838

Source: State and territory police data (see Jorna & Smith 2018c, Appendix D)

### Additional direct costs

In addition to direct out-of-pocket losses, victims of identity crime and misuse can incur various other costs such as legal fees, bank fees on dishonoured cheques or funds transfers and miscellaneous expenses such as postage, phone calls and court costs (Harrell 2015).

In the absence of relevant Australian research on these costs, this study has relied on the results of Bureau of Justice Statistics surveys carried out in the United States (Harrell 2015: 6, Table 6). Harrell found that, in 2014, 6.1 percent of victims of identity theft reported incurring additional costs during the preceding 12 months as a result of the theft. These victims reported mean additional costs of US\$503 (A\$730 in 2014 dollars, calculated using the OCED’s (2018) purchasing power parity, inflated to A\$750 in 2016 dollars using the RBA’s (2018) calculator). The US survey also found a median cost of US\$30 (A\$44 in 2014 dollars, calculated using the OCED’s (2018) purchasing power parity, inflated to A\$45 in 2016 dollars using the RBA (2018) calculator).

For each of the four categories of fraud examined in this report, either the median or mean was used to determine the amount of these additional costs (Table 7). The median was used to calculate the additional costs attributable to the identity crime components of fraud against the Commonwealth and personal fraud, as the losses from these fraud types varied substantially and median losses were not affected by extreme values. The mean was used to calculate serious fraud and police-recorded fraud, as the losses associated with these types of fraud were generally higher and less likely to be affected by extreme values.

Fraud category	Incidents (after multiplier applied)	Incidents incurring additional costs	Unit cost	Loss amount subtotal	% involving identity crime	Total additional costs in 2015–16
Commonwealth fraud	179,219	10,932	\$45	\$491,940	25.1	\$123,477
Individual fraud	1,664,967	101,563	\$45	\$4,570,335	90.0	\$4,113,302
Serious fraud	651	40	\$750	\$30,000	25.1	\$7,530
Police-recorded fraud	302,492	18,452	\$750	\$13,839,000	46.5	\$6,435,135
<b>Total</b>						<b>\$10,679,444</b>

Note: Unit costs calculated using OECD purchasing power parity rate for Australia (against US) in 2014: 1.452. Number of incidents incurring additional costs calculated as 6.1% of incidents (Harrell 2015)

Source: ABS 2016b; Cifas 2017; Harrell 2015; Jorna & Smith 2018b; KPMG 2013; OECD 2018; RBA 2018

## Summary of direct costs

Table 8 shows how the direct costs of identity crime and misuse in Australia were calculated based on the number of fraud or identity crime incidents and the multipliers used to account for unrecorded crime. It should be noted these figures are estimates only, based on the number of recorded frauds and the percentage of those incidents that, based on expert advice, involve identity crime.

Index	Amount obtained	Additional costs <sup>a</sup>	Total
<b>Fraud against Commonwealth entities</b>			
Incidents	155,843		
Multiplier	1.15		
Incidents × multiplier	179,219	179,219	
% additional costs		6.1%	
Incidents × % additional costs		10,932	
Unit cost	\$2,111	\$45	
Subtotal	\$378,331,309	\$491,940	
Recovered	\$24,465,519	–	
Total (out-of-pocket)	\$353,865,790	\$491,940	\$354,357,730
% identity related	25.1%	25.1%	
Total cost 2014–15	\$88,820,313	\$123,477	\$88,943,790
Inflated to 2016 values (RBA 2018)	\$1,226,398		
<b>Total costs 2015–16</b>	<b>\$90,046,711</b>	<b>\$123,477</b>	<b>\$90,170,188</b>

**Table 8: Direct costs of identity crime and misuse in Australia, 2015–16**

Index	Amount obtained	Additional costs <sup>a</sup>	Total
<b>Personal fraud</b>			
Victims	1,664,967		
Multiplier	1.0		
Victims × multiplier	1,664,967	1,664,967	
% additional costs		6.1%	
Victims × % additional costs		101,563	
Victims with losses (78%)	1,298,674		
Unit cost	\$400	\$45	
Subtotal	\$519,469,600	\$4,570,335	
Recovered	\$261,963,610		
Total (out-of-pocket)	\$257,505,990	\$4,570,335	\$262,076,325
% identity related	90%	90%	
Total cost 2014–15	\$231,755,391	\$4,113,302	\$235,868,693
Inflated to 2015–16 values (RBA 2018)	\$3,199,993		
Total cost personal fraud 2015–16	\$234,955,384	\$4,113,302	\$239,068,686
<b>Serious fraud</b>			
Incidents	300		
Multiplier	2.17		
Incidents × multiplier	651	651	
% additional costs		6.1%	
Incidents × % additional costs		40	
Unit cost	\$1,500,000	\$750	
Subtotal	\$976,500,000	\$30,000	
Recovered	Unknown	Unknown	
Total (out-of-pocket) 2012–13	\$976,500,000	\$30,000	\$976,530,000
% identity related	25.1%	25.1%	25.1%
Identity crime cost 2012–13	\$245,101,500	\$7,530	\$245,109,030
Inflated to 2015–16 values (RBA 2018)	\$14,502,338		
Total identity crime costs for serious fraud 2015–16	\$259,603,838	\$7,530	\$259,611,368

**Table 8: Direct costs of identity crime and misuse in Australia, 2015–16**

Index	Amount obtained	Additional costs <sup>a</sup>	Total
<b>Police-recorded fraud</b>			
Incidents recorded	75,623		
Multiplier	4.0		
Incidents × multiplier	\$302,492 (recorded and unrecorded)	\$302,492	
% additional costs		6.1%	
Incidents × % additional costs		\$18,452	
Unit cost	\$28,257 (recorded) \$4,455 (unrecorded)	\$750	
Subtotal	\$3,147,580,506	\$13,839,000	\$3,161,421,506
Recovered	Unknown	–	–
Total (out-of-pocket)	\$3,147,580,506	\$13,839,000	\$3,161,421,506
% identity related	46.5%	46.5%	46.5%
Total cost of police-recorded fraud in 2015–16	\$1,463,624,935	\$6,435,135	\$1,470,060,070
<b>Total</b>	<b>\$2,048,230,868</b>	<b>\$10,679,444</b>	<b>\$2,058,910,312</b>

a: Additional costs included legal fees, bank fees on dishonoured cheques or funds transfers and other miscellaneous expenses such as postage, phone calls and court costs (Harrell 2015)

Note: Additional costs based on US\$ converted to A\$ using the OECD purchasing power parity rate of A\$1.452 to US\$1 in 2014 (OECD 2018)

Source: Derived from Smith et al. 2014

## Indirect costs

The above calculations show the direct costs of identity crime incurred by Commonwealth entities and individuals and involving serious fraud and police-recorded fraud. There are, however, additional indirect costs borne by agencies and individuals. These include prevention costs, intangible costs, response costs and the cost of lost output.

Public sector indirect costs were estimated as the proportion of government spending in 2015–16 that related to preventing and responding to identity crime. At present, the intangible and lost output costs incurred in the public sector cannot be estimated.

Private sector and individuals' indirect costs have been based on Mayhew's (2003) estimate that indirect costs of crime are 40 percent of the direct costs. Only four percent of this was estimated by an expert panel to be reasonable prevention and response costs in connection with identity crime (see Smith 2018).

Table 9 shows the total indirect cost estimates in each category and the overall total indirect cost of \$596m for 2015–16.



**Table 9: Estimated indirect costs of identity crime, 2015–16**

Category	Cost
Public sector prevention and response costs (excluding state and territory police)	\$271,985,656
State and territory police prevention and response costs	\$175,700,000
Indirect costs to private sector <sup>a</sup>	\$52,322,146
Indirect costs to individuals	\$95,627,474
Total indirect costs	\$595,635,276

a: See Smith 2018 for calculations of private sector prevention and response costs, adjusted for 2015–16

### *Public sector prevention and response costs*

In addition to the estimated losses borne by Commonwealth agencies and others detailed above, there are costs associated with the prevention, detection and investigation of identity crime and misuse by Commonwealth, state and territory agencies. These include the costs associated with implementing new policies aimed at reducing identity crime, running awareness programs, purchasing biometric software and investigating identity crime.

Table 10 presents information from the 2015–16 Portfolio Budget Statements of Commonwealth, state and territory agencies that have functions and programs that relate to crime and its control, including policies on the prevention and remediation of identity crime. This table includes the agencies' appropriations and the estimated percentage related to identity crime.

**Table 10: Identity crime prevention and response costs of Commonwealth, state and territory agencies, 2015–16**

Agency/budget item	Appropriation	Percentage relating to identity crime	Estimated identity crime-related costs
<b>Commonwealth entities</b>			
Attorney-General's Department			
National Security and Criminal Justice	\$165,228,000	5	\$8,261,400
Community Legal Services Program	\$4,334,000	5	\$216,700
Australian Criminal Intelligence Commission			
Appropriation	\$90,822,000	10	\$9,082,200
Australian Federal Police			
Appropriation	\$1,049,810,000	5	\$52,490,500
Australian Taxation Office			
Appropriation	\$3,258,560,000	1	\$32,585,600
Department of Human Services			
Appropriation	\$4,595,600,000	1	\$45,956,000
Department of Immigration and Border Protection			
Appropriation	\$2,952,000,000	2	\$59,040,000

**Table 10: Identity crime prevention and response costs of Commonwealth, state and territory agencies, 2015–16**

Agency/budget item	Appropriation	Percentage relating to identity crime	Estimated identity crime-related costs
Commonwealth Director of Public Prosecutions			
Appropriation	\$77,941,000	1	\$779,410
Australian Transaction Reports and Analysis Centre (AUSTRAC)			
Appropriation	\$59,051,000	2	\$1,181,020
Office of the Australian Information Commissioner			
Appropriation	\$8,537,000	5	\$426,850
Australian Competition and Consumer Commission			
Appropriation	\$164,815,000	10	\$16,481,500
<b>New South Wales</b>			
Legal Aid	\$268,000,000	2	5,360,000
Justice services (legal policy and regulatory services; crime prevention and community services; registry of births, deaths and marriages)	\$275,500,000	2	\$5,510,000
Information and Privacy Commission	\$5,400,000	15	\$810,000
Office of the Director of Public Prosecutions	\$127,200,000	1	\$1,272,000
<b>Victoria</b>			
Public prosecutions and legal assistance	\$215,800,000	2	\$4,316,000
Victims and community support services	\$89,300,000	10	\$8,960,000
Protection of Personal Identity and Individual Community Risks	\$51,800,000	50	\$25,900,000
<b>Queensland</b>			
Justice services (includes victims of crime support)	\$287,646,000	2	\$5,752,920
Legal aid	\$131,063,000	2	\$2,621,260
<b>Western Australia</b>			
Legal Aid	\$39,210,000	2	\$784,200
Advocacy Guardianship—administration services	\$7,427,000	1	\$74,270
Births, Deaths and Marriages	\$7,894,000	10	\$789,400
<b>South Australia</b>			
Legal and Justice Services (includes Legal Services Commission)	\$60,438,000	2	\$1,208,760
State Records (includes Births, Deaths and Marriages)	\$6,440,000	10	\$644,000

**Table 10: Identity crime prevention and response costs of Commonwealth, state and territory agencies, 2015–16**

Agency/budget item	Appropriation	Percentage relating to identity crime	Estimated identity crime-related costs
<b>Tasmania</b>			
Support and compensation for victims of crime	\$5,048,000	2	\$100,960
Legal Aid	\$6,163,000	2	\$123,260
Births, Deaths and Marriages	\$997,000	10	\$99,700
<b>Australian Capital Territory</b>			
Policy advice and justice programs	\$20,083,000	1	\$200,830
Legal Aid	\$12,380,000	2	\$247,600
Access Canberra (includes Births, Deaths and Marriages, licensing, etc)	\$74,753,000	0.5 <sup>a</sup>	\$373,756
<b>Northern Territory</b>			
Crime Victims Services Unit	\$5,474,000	2	\$109,480
Legal policy (includes Legal Aid)	\$10,772,000	10	\$1,077,200
Community safety and crime prevention	\$111,769,000	2	\$2,235,380
Registrar-General—Births, Deaths and Marriages	\$2,235,000	10	\$223,500
<b>Total</b>			<b>\$271,985,656</b>

a: Percentage of the budget relating to identity crime estimated at 0.5% as the majority of the budget in 2015–16 was allocated to establishing Access Canberra

Source: Treasury 2015; NSW Treasury 2015; Victorian Government 2016; Queensland Treasury 2015; Western Australian Government 2015; South Australian Government 2015; Tasmanian Government 2015; Australian Capital Territory Government 2015; Northern Territory Government 2015

### *State and territory police prevention and response costs*

According to the *Report on government services* for 2015–16, real recurrent expenditure on police services for 2015–16 (including user cost of capital, less revenue from own sources and payroll tax) was \$10,982m (Steering Committee for the Review of Government Service Provision 2017). This relates to state and territory policing only and excludes the cost of the Australian Federal Police and other federal law enforcement agencies, which are included in Table 10 above. However, not all police time is spent on crime, and the amount of police time spent on identity crime would be even further reduced. Based on the estimate used in Smith et al. 2014 that 80 percent of police time is spent policing crime, the total cost of policing crime in Australia in 2015–16 was \$8,785.6m. Assuming that two percent of police time is spent investigating identity crime matters, the total cost of policing identity crime matters in Australia in 2015–16 was \$175.7m.

### *Indirect costs to the private sector*

It is difficult to determine the cost to business of preventing and responding to identity crime. Businesses incur a variety of costs in preventing and responding to identity crime and misuse. Prevention costs include those relating to physical security, computer security, document security and shredding, identity verification, and staff and customer identity checks. The response costs include those associated with reversing fraudulent transactions, reinstating systems following identity crimes, replacing staff, investigating incidents and liaising with criminal justice personnel. Businesses also face reputation costs, and lost opportunity costs of foregone profit associated with responding to identity crime and misuse.

With respect to indirect costs, the AIC's costs of crime report for 2012–13 (Smith et al. 2014) included an estimate of \$3,400m for security industry costs and \$670m for insurance administration, only a few elements of which are relevant to the prevention of and response to identity crime by private sector enterprises. A number of costs such as document verification and shredding are unable to be quantified at present, although these have greater relevance to identity crime.

For the year 2001–02, Cuganesan and Lacey (2003) estimated prevention and response costs for identity fraud at 38 percent of the total cost of identity crime—namely \$420m of the \$1.1b total. For specific industry sectors, Cuganesan and Lacey (2003: 74) found 'the proportion of resource spend to dollar value lost for financial services was \$1.35, for General and Health Insurance \$1.17 and for Communications and Infrastructure \$0.21'. Within sectors, organisational size was found to be an important differentiator in terms of resource spend and losses incurred.

Mayhew (2003), in her analysis of the cost of crime in Australia, estimated that 40 percent of direct losses should be added to account for indirect costs, including prevention and response costs, lost output and intangible losses.

Smith (2019) analysed the elements of the present costing of identity crime in Australia that relate solely to businesses. This entailed estimating the percentage of the direct cost of fraud attributable to Australian businesses, and then adding 40 percent to account for prevention and response costs, lost output and intangible losses (as defined by Mayhew 2003). Finally, it was estimated by an expert panel (see Smith 2018) that only four percent of these indirect costs would be incurred by business as a result of identity crime. The calculations are set out in Smith (2018).

The total indirect identity crime costs to business for the 2015–16 year were, accordingly, \$52m (Table 11). These calculations do not include prevention and response costs incurred by private sector organisations other than businesses, such as not-for-profit organisations.

**Table 11: Indirect costs of identity crime to business, 2015–16**

Category	Direct cost (\$)	% business <sup>a</sup>	Business cost(\$)
Commonwealth entities	354,357,730	2(2)	7,087,155
Individuals	262,076,325	5(2)	13,103,816
Serious fraud	976,530,000	90(3)	878,877,000
Police-recorded	3,161,421,506	75(1)	2,371,066,130
Total direct amounts obtained and additional costs	4,754,385,561		3,270,134,101
Indirect business costs (40% of all direct costs)			1,308,053,640
Indirect business costs involving identity crime (4%)			52,322,146

a: Numbers in parentheses indicate confidence in each estimate (3=high, 2=medium, 1=low) based on ratings from an expert panel

Source: Jorna & Smith 2018b; Smith 2018

### *Indirect costs to individuals*

Individual victims of personal fraud also incur costs associated with preventing and responding to crimes of this nature.

As stated above, Mayhew (2003) estimated that 40 percent of direct losses should be added to account for prevention and response costs, lost output and intangible losses. Table 12 shows this estimate applied to the direct and additional costs of identity crime experienced by individuals. The cost was inflated to 2015–16 values using the RBA calculator, resulting in a total of \$95.6m.

**Table 12: Indirect costs of identity crime to individual victims, 2015–16**

Prevention and response category	Direct costs (\$)	Additional costs (\$)	Total (\$)
Total direct costs to individuals	257,505,990	4,570,335	262,076,325
90% identity related <sup>a</sup>	231,755,391	4,113,302	235,868,693
40% indirect prevention and response costs	92,702,156	1,645,321	94,347,477
Inflated to 2015–16 values (RBA 2018)	1,279,997		1,279,997 <sup>b</sup>
Individual indirect prevention and response costs	93,982,153	1,645,321	95,627,474

a: Data come from the ABS Personal Fraud Survey, which records victimisation experiences of card fraud, scams and identity theft; therefore, not all victims experienced misuse of identity

b: Inflation was based on \$92,702,156 (94,347,477 – 1,645,321) as the additional costs had already been inflated to 2015–16 values

Source: ABS 2016b; Mayhew 2003; RBA 2018

## Conclusion

Identity crime and misuse of personal information remains an ongoing concern for the Australian community. The goal of this report was to assess the economic cost and impact of identity crime in Australia by presenting a range of quantitative and qualitative information. A large number of Commonwealth, state and territory government agencies provided data for inclusion in the report, and it was only with the assistance of these agencies and private sector organisations that the cost of identity crime could be understood. Further research is, however, needed to understand the full extent of the problem, particularly through improvements to official statistical holdings and private sector data collection, and further surveys of members of the public.

Despite advances in verification of credentials and improvements in online authentication procedures, victimisation continues to increase. Financial losses also continue to rise, along with the equally harmful non-financial consequences including damage to credit ratings, being wrongly accused of crime, and a range of psychological and emotional harm. Continued monitoring of these trends is valuable to identifying changes in identity crime methodologies and assessing the benefits derived from and risks associated with crime prevention initiatives.

## References

*URLs correct as at September 2018*

Attorney-General's Department (AGD) 2016. *Identity crime and misuse in Australia 2016*. Canberra: AGD. Available from the Department of Home Affairs: <https://www.homeaffairs.gov.au/about-us/our-portfolios/criminal-justice/cybercrime-identity-security/identity-crime>

Attorney-General's Department 2015. *Identity crime and misuse in Australia 2013–14*. Canberra: AGD

Australian Bureau of Statistics (ABS) 2017a. *Crime victimisation, Australia, 2015–16*. ABS cat. no. 4530.0. Canberra: ABS. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4530.0>

Australian Bureau of Statistics 2017b. *Average weekly earnings, Australia, May 2017*. ABS cat. no. 6302.0. Canberra: ABS. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/6302.0>

Australian Bureau of Statistics 2016a. *Australian demographic statistics, Jun 2016*. ABS cat. no. 3101.0. Canberra: ABS. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3101.0>

Australian Bureau of Statistics 2016b. *Personal fraud, 2014–15*. ABS cat. no. 4528.0. Canberra: ABS. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4528.0/>

Australian Capital Territory Government 2015. *Australian Capital Territory budget 2015–16: Budget statements*. Justice and Community Safety Directorate and Chief Minister, Treasury and Economic Development Directorate. <https://apps.treasury.act.gov.au/budget/budget-2015-2016/budget-statements>

Australian Crime Commission (ACC) 2015. *The costs of serious and organised crime in Australia 2013–14*. Canberra: ACC. <https://www.acic.gov.au/publications/intelligence-products/costs-serious-and-organised-crime-australia>

- Cifas 2017. *Fraudscape 2017: External and internal fraud threats: Essential reading for fraud and financial crime strategists*. <https://www.cifas.org.uk/insight/reports-trends/fraudscape-report-2017>
- Cifas 2016. *Fraudscape 2016*. <https://www.cifas.org.uk/insight/reports-trends>
- Cuganesan S & Lacey D 2003. *Identity fraud in Australia: An evaluation of its nature, cost and extent*. Sydney: Securities Industry Research Centre of Asia-Pacific
- Dubourg R, Hamed J & Thorns J 2005. *The economic and social costs of crime against individuals and households 2003/04*. Home Office online report 30/05. London: Home Office
- Goldsmid S, Gannoni A & Smith RG 2018. *Identity crime and misuse in Australia: Results of the 2017 online survey*. Statistical Report no. 11. Canberra: Australian Institute of Criminology
- Harrell E 2015. *Victims of identity theft, 2014*. Bureau of Justice Statistics bulletin. NCJ 248991. Washington, DC: US Department of Justice. <https://www.bjs.gov/content/pub/pdf/vit14.pdf>
- IDCARE 2018. Identity & cyber security community aftermath report 2018
- Jorna P & Smith RG 2018a. *Commonwealth fraud investigations 2015–16*. Statistical Report no. 7. Canberra: Australian Institute of Criminology. <https://aic.gov.au/publications/sr/sr7-0>
- Jorna P & Smith RG 2018b. *Fraud against the Commonwealth: Report to Government 2014–15*. Statistical Report no. 3. Canberra: Australian Institute of Criminology. <https://aic.gov.au/publications/sr/sr3>
- Jorna P & Smith RG 2018c. *Identity crime and misuse in Australia 2017*. Statistical Report no. 10. Canberra: Australian Institute of Criminology
- KPMG 2013. *A survey of fraud, bribery and corruption in Australia and New Zealand 2012*. Melbourne: KPMG
- Mayhew P 2003. *Counting the costs of crime in Australia: Technical report*. Technical and background paper no 4. Canberra: Australian Institute of Criminology. <https://aic.gov.au/publications/tbp/tbp004>
- New South Wales Treasury 2015. *Budget estimates 2015–16: Budget paper no. 3*. <https://www.treasury.nsw.gov.au/documents-resources/documents-library>
- Northern Territory Government 2015. *Budget 2015–16: Budget paper No. 3: Agency budget statements*. <https://treasury.nt.gov.au/dtf/financial-management-group/territory-budget/previous-budget-papers>
- Organisation for Economic Co-operation and Development (OECD) 2018. Purchasing power parities (PPP). Accessed 15 June 2018: <https://data.oecd.org/conversion/purchasing-power-parities-ppp.htm>
- Queensland Treasury 2015. *State budget 2015–16: Service delivery statements: Budget paper 5: Department of Justice and Attorney-General*. <https://www.treasury.qld.gov.au/resource/state-budget-2015-16/>
- Reserve Bank of Australia (RBA) 2018. Inflation calculator. <http://www.rba.gov.au/calculator/>
- Rollings K 2008. *Counting the costs of crime in Australia: A 2005 update*. Research and public policy series no. 91. Canberra: Australian Institute of Criminology. <https://aic.gov.au/publications/rpp/rpp91>



- Smith RG 2018. *Estimating the cost to Australian businesses of identity crime and misuse*. Research Report no. 15. Canberra: Australian Institute of Criminology
- Smith RG, Brown R & Harris-Hogan S 2015. *Identity crime and misuse in Australia: Results of the 2014 online survey*. Research and public policy series no. 130. Canberra: Australian Institute of Criminology. <https://aic.gov.au/publications/rpp/rpp130>
- Smith RG & Hutchings A 2014. *Identity crime and misuse in Australia: Results of the 2013 online survey*. Research and public policy series no. 128. Canberra: Australian Institute of Criminology. <https://aic.gov.au/publications/rpp/rpp128>
- Smith RG & Jorna P 2018. *Identity crime and misuse in Australia: Results of the 2016 online survey*. Statistical Report no. 6. Canberra: Australian Institute of Criminology. <https://aic.gov.au/publications/sr/sr6>
- Smith RG, Jorna P, Fuller G & Sweeney J 2014. *Counting the costs of crime in Australia: A 2011 estimate*. Research and public policy series no. 129. Canberra: Australian Institute of Criminology. <https://aic.gov.au/publications/rpp/rpp129>
- South Australian Government 2015. *2015–16 State budget: Agency statements volume 1: 2015–16 Budget Paper 4*. <https://www.treasury.sa.gov.au/budget/current-budget/previous-budgets/budget-2015-16>
- Steering Committee for the Review of Government Service Provision 2017. *Report on government services 2017, volume C, chapter 6: Police services*. Melbourne: Productivity Commission. <https://www.pc.gov.au/research/ongoing/report-on-government-services/2017>
- Tasmanian Government 2015. *2015–16 Tasmanian budget: Budget paper No. 2, volume 5: Department of Justice*. <https://www.treasury.tas.gov.au/budget-and-financial-management/2018-19-tasmanian-budget/budget-papers-archive/2015-16-tasmanian-budget/2015-16-tasmanian-budget-html>
- Treasury 2015. *Portfolio budget statements 2015–16: Budget related paper no. 1.16: Treasury portfolio*. <https://treasury.gov.au/publication/portfolio-budget-statements-2015-16/>
- Victorian Government 2016. *Budget paper no. 3: Service delivery*. <https://www.dtf.vic.gov.au/previous-budgets/2016-17-state-budget>
- Western Australian Government 2015. *2015–16 Budget paper no. 2, volume 2*. <https://www.ourstatebudget.wa.gov.au/2015-16/index.html>



## Acknowledgements

This research was undertaken with the support and assistance of officers from the Department of Home Affairs.

**Dr Russell G Smith is Principal Criminologist at the Australian Institute of Criminology and a Professor in the College of Business, Government and Law at Flinders University.**

**Penny Jorna is a Research Analyst at the Australian Institute of Criminology.**

General editor, *Statistical Bulletin series*: Dr Rick Brown, Deputy Director, Australian Institute of Criminology.  
For a complete list and the full text of the papers in the *Statistical Bulletin series*, visit the AIC website at: [aic.gov.au](http://aic.gov.au)

ISSN 2206-7302

©Australian Institute of Criminology 2018

GPO Box 1936  
Canberra ACT 2601, Australia  
Tel: 02 6268 7166

*Disclaimer: This research paper does not necessarily reflect the policy position of the Australian Government*