

# Understanding fraud: The nature of fraud offences recorded by NSW Police

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**Aim:** 1) To provide an understanding of the nature of fraud incidents recorded by NSW Police. 2) To find out which fraud types are contributing to the increase in recorded fraud.

**Method:** This study involved the review of 1,000 narrative descriptions of fraud incidents reported to or detected by NSW Police. Where possible we gathered information about the type of fraudulent behaviour, modus operandi, cost and whether a suspect was apprehended. Half the fraud events sampled occurred in the 12 months to September 2009 and half in the 12 months to September 2013.

**Results:** The most common types of fraud reported to police were card fraud (35% of incidents), fuel drive-offs (30%), identity theft (5%), embezzlement (4%) and cheque fraud (3%). Increases in card fraud and fuel drive offs appear to account for the bulk of the increase in fraud over the past five years. Incident costs recorded by police suggest that in 2013 incidents of fraud recorded by police cost more than \$200 million. The average cost of fraud by incident type ranged from just \$62 per incident for fuel drive-offs to more than \$35,000 per incident for embezzlement.

**Conclusion:** Fraud is a growing problem and will likely continue to rise with new technologies and payment options. This study found that the fraud types with the highest recorded prevalence are quite different to those which have the greatest overall cost implication.

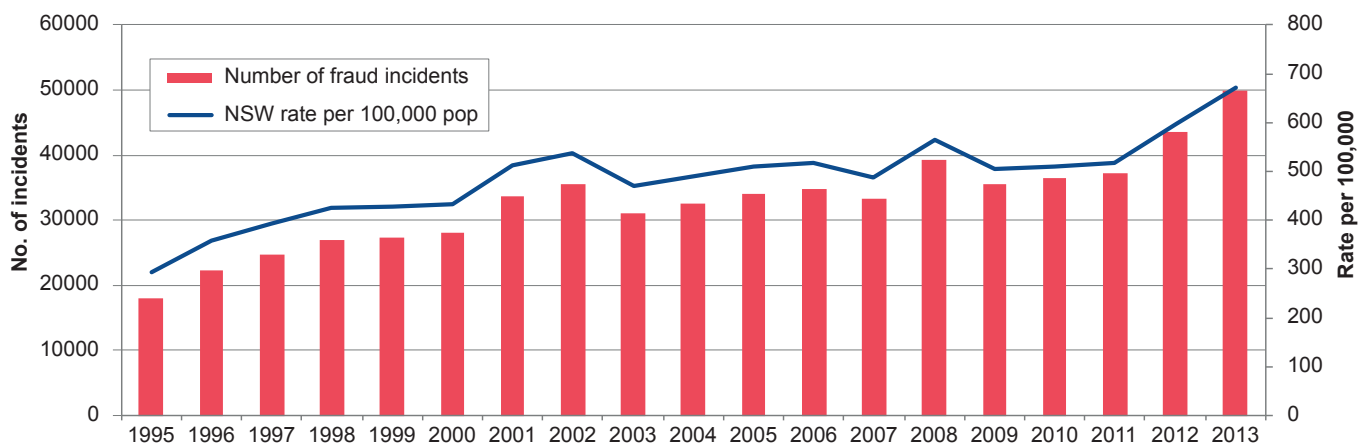
**Keywords:** Fraud, white collar crime, identity theft, credit card, cost of crime

## INTRODUCTION

Over the last decade or more, residents of New South Wales (NSW) have seen large scale decreases in the recorded incidence of many property crimes (see Goh & Holmes, 2014). The falls are such that the risks of being burgled or having one's

motor vehicle stolen are currently considerably lower than 25 years ago. One crime which has bucked this trend, however, is fraud<sup>1</sup>. Incidents of fraud reported to and detected by police have steadily increased since comparable records began in 1995 (see Figure 1).

Figure 1. Number and rate of fraud incidents recorded by NSW Police, 1995 to 2013



Police figures for NSW suggest that the increase in reported fraud is starting to accelerate. In the five years to December 2013, incidents of fraud grew on average 8.5 per cent per year. In the 24 months to December 2013, however, the increase was 13.2 per cent. This paper will focus on comparing recorded fraud between 2008 and 2013.

The types of frauds that become known to police are unlikely to represent the entire spectrum of fraud types equally. Other sources show increases in certain fraud types (consistent with police data) but not others.

An Australian Bureau of Statistics survey (ABS, 2012) found an increase in personal fraud victimisation among Australians aged over 15 years from 5.0 per cent in 2007 to 6.7 per cent in 2010/11. In this survey the increase was driven by a rise in credit card fraud victimisation and the take up of scams; identity theft fell slightly over the period. The Australian Payments Clearing Association (2014) has also found an increase in fraudulent card transactions. As a proportion of total card use fraudulent transactions have increased nearly 50 per cent in the past five years from 32.7 cents per \$1000 transacted in 2008 to 48.7cents in 2013.

KPMG's biennial fraud survey of selected private and public sector agencies in Australia and New Zealand (KPMG 2012, 2010) showed that in 2010 53 per cent of respondents experienced a fraud compared with 43 per cent in 2012. However, due to sampling concerns<sup>2</sup> it would be improper to suggest that this provides evidence for a decline in corporate fraud and financial misappropriation over the period.

Surveys by the Australian Institute of Criminology (Lindley, Jorna & Smith, 2012) suggest that fraud victimisation among federal government agencies is stable (39% in 2008/09 versus 40% in 2009/10).

These resources suggest that fraud is not increasing uniformly across types. The present study proposes to use police data to measure changes in the type of reported frauds. Compared with the survey studies described above, police records hold information on a huge number of frauds (nearly 50,000 in NSW in 2013). A constraint with this data source, however, is that it is limited to offences reported to police and many victims, such as those from a corporate environment, may be systematically disinclined to report fraud to police.

**Table 1. Recorded incidents of fraud by police incident category, October 2008 – September 2013**

Recorded incidents of fraud by police incident categories	Oct 2008 -Sep 2009	Oct 2009 -Sep 2010	Oct 2010 -Sep 2011	Oct 2011 -Sep 2012	Oct 2012 -Sep 2013	Difference over 5 years	% change over 5 years	% of tot. change over 5 yrs	% of tot. incidents in yr to Sept 13
Deception Offence	14147	14365	14126	14840	18453	4306	30.4	31.2	37.3
Fail To Pay	10381	10272	10886	12888	13390	3009	29.0	21.8	27.1
Other Fraud	3771	4641	4989	6215	10077	6306	167.2	45.7	20.4
Make/Use False Instrument	3912	3501	2924	3037	3092	-820	-21.0	-5.9	6.3
Fraudulent Misappropriation	869	951	911	1350	1549	680	78.3	4.9	3.1
Larceny Clerk/Servant/Bailee	923	1180	915	1002	902	-21	-2.3	-0.2	1.8
Counterfeit Currency	387	889	708	373	810	423	109.3	3.1	1.6
Embezzlement	202	293	234	245	348	146	72.3	1.1	0.7
Computer Crime	411	340	310	195	265	-146	-35.5	-1.1	0.5
Possess False Instrument	189	182	166	157	144	-45	-23.8	-0.3	0.3
Misappropriate Cheque/Funds	155	139	135	95	107	-48	-31.0	-0.3	0.2
Publish False Misleading Statement	144	139	103	120	106	-38	-26.4	-0.3	0.2
Corrupt Payment (Receive Or Pay)	32	40	38	56	89	57	178.1	0.4	0.2
Company Corporate Offence	64	107	107	60	78	14	21.9	0.1	0.2
Receiving (Fraud Related)	15	18	14	6	25	10	66.7	0.1	0.1
Copyright/Intellectual Property/Trademark	50	31	33	9	12	-38	-76.0	-0.3	0.0
Miscellaneous - Corrupt Commission/Practices	12	13	14	5	10	-2	-16.7	0.0	0.0
<b>Total</b>	<b>35664</b>	<b>37101</b>	<b>36613</b>	<b>40653</b>	<b>49457</b>	<b>13793</b>	<b>38.7</b>	<b>100.0</b>	<b>100.0</b>

It is also worth considering that the number of crimes recorded by police is influenced by both the rate of reporting and the incidence of the offence. It is not possible to isolate the influence of these two features so we cannot be sure that any increases are not just increased reporting.

Unfortunately, understanding the nature of fraud recorded by police and the reason it has increased is not straightforward. At its most basic, fraud can be conceived of as a deception intended to achieve financial or personal gain. In practice, however, this description can take the form of a wide range of criminal behaviours including: counterfeiting currency, forgery, identity theft, credit card fraud, corporate misappropriation and, in NSW, the theft of petrol. On available information it is difficult to know what types of fraudulent behaviours constitute a typical fraud incident recorded by the Police in NSW.

Victimisation surveys such as those mentioned above and others by PWC (2014) and EY (2012) tend to focus on a particular fraud concern. By targeting variously corporate respondents, public sector agencies or the public alone they do not give a relative understanding of the different fraud types.

NSW Police record incidents of fraud reported to and detected by police on their Computerised Operational Policing System (COPS). While we are only counting incidents which have been accepted and verified by NSW Police, it should be understood that these incidents do not necessarily proceed to court. Indeed, in most cases an offender is never identified.

A key constraint in interpreting police fraud statistics is that it is unclear what behaviours are represented in the data. The subordinate fraud categories currently available on COPS are ambiguous and not particularly meaningful. Table 1 shows the police fraud categories and the number of incidents recorded against each incident type. Each year the generic, catch-all categories of *deception offences* and *other fraud* account for about half of the recorded fraud incidents. Table 1 also shows that these offences have increased considerably in the past 5 years (*deception offences* up 30.4% and *other fraud* up 167.2%). As a result, it is difficult to know what type of fraudulent activity is occurring in NSW, and, therefore, what is driving the increase in recorded incidents.

This study aims to provide an understanding of the nature of fraud incidents recorded by NSW police. We also aim to consider how fraud has changed over the past five years.

## METHOD

In this study we investigated the nature of recorded fraud incidents by manually reviewing narrative crime descriptions of frauds recorded by the NSW Police.

The narrative is a description of the criminal event written by police and recorded on the police database COPS. It usually contains information about the individuals involved, a description

of relevant events leading up to, during and following the incident and any action taken by police. Police narratives are generally detailed and reasonably complete accounts of the crime from the police perspective. The limitations with relying on police narratives include: that they sometimes do not contain the answer to specific research questions, they vary in quality, length and language as each is prepared by a different person and they only include information available to police. As there is no systematic way to extract information from these narratives other than by manual review, the Bureau does not use them to compile our routine crime statistics.

This study involved a detailed review of a random sample of narratives of fraud incidents. The review sample comprised 1000 fraud events<sup>3</sup>, 500 of which occurred between October 2012 and September 2013 and another 500 of which occurred between October 2008 and September 2009. These time periods were chosen as they represent a period of large change (see Figure 1). Other than where specifically mentioned, results include the discussion of the two time periods together. The annual sample of 500 represents slightly more than one per cent of the fraud incidents recorded in the most recent 12 month period. Due to the considerable time taken to read and code each narrative it was not feasible to consider a larger sample than 1000. The narrative review and coding was undertaken by a single officer to ensure consistency of interpretation. The events subject to review were randomly chosen by BOCSAR from all recorded police events involving a fraud incident; the relevant narratives were then requested and supplied to us by the NSW Police. Where available, information was collected from the event narratives. When information could not be determined from the narratives, other standard information recorded on COPS was used where available. This particularly applied to determining the cost of fraud events. Police can record the cost of a crime as a specific variable in COPS or, as is more common, in the narrative text. Occasionally there were records with both and sometimes these conflicted. In creating our cost estimates, the cost recorded in the narrative was given precedence where it was available. The crime cost recorded by police is the value of the crime estimated by the victim and is generally limited to the value of the stolen item/s (excluding any out of pocket costs)<sup>4</sup>.

Information sought in the review included the:

- Description of the type of fraudulent behaviour(s).
- Number of fraud incidents involved in each fraud event
- Modus operandi of the suspect
- Cost of the incident (including attempted incidents)
- Alleged persons of interest (POI's) involved in each event

In the results we discuss in detail the five most prevalent types of fraud.

The Australian and New Zealand Standard Offence Classification (ANZSOC; ABS 2011) was used as a basis for classifying the

police narrative data into meaningful offence types. ANZSOC fraud sub-categories were used as they cover a range of distinct fraud types in plain language. Some adjustments were made to these categories where necessary. Each fraud incident was classified into one of 30 categories (see Table 2). Where a crime fitted two fraud categories, the incident was assigned into what we judged as the 'dominant' fraud method involved. For instance, purchases made on a new credit card which had been stolen from a mail box was considered to be card fraud because the 'identity' component (passing off the stolen card as the thief's own) was not sophisticated and considered to be incidental to the main offence. On the other hand, where an offender tried to establish a new credit card account from scratch in another person's name, that was considered to be identity theft.

Each of the 1000 fraud narratives reviewed is considered to be a criminal event. Within one event, however, there can be multiple criminal incidents. Incidents within the one event are linked by the people involved, the location and/or the timing. For example, if a member of the public reports that they have been a victim of fraud, it is recorded as an event. Each separate act of fraud, such as each individual fraudulent credit card transaction, can be recorded as an incident within that event. The 1000 fraud events reviewed contained 1,308 incidents of fraud.

## RESULTS

Broadly the analysis of the fraud events showed:

- The value of the 1000 fraud events in the sample totalled \$5.5 million at an average of \$5,496 per event and \$4,201 per incident. This suggests that the annual cost of fraud recorded by police in NSW is over \$200 million.
- The cost of the fraud events reviewed ranged from \$0 for non-financial fraud and unsuccessful efforts, to \$395,600. One attempted fraud of \$1 million was identified and halted whilst another event of \$633,000 was eventually determined to be of a civil nature.
- 10% of events had a \$0 value attributed, 50% had a value of between \$1 and \$200, and almost 7% of events were valued at \$10,000 or more.
- More than 90% of events reported a single incident; 5% involved three or more incidents.
- The largest number of fraud incidents reported to police in a single event was 55 card frauds.
- A person of interest was recorded in 14% of events but criminal proceedings were commenced in only 9% of fraud events reviewed.

It can be seen that two types of fraud dominate the sample; these being the fraudulent use of cards issued by financial institutions (35% of incidents) and the theft of petrol from service stations otherwise referred to as fuel drive-offs (30% of incidents). These two offence types account for almost two-thirds of the fraud incidents in our sample. The next three most

prevalent fraud types account for an additional 12 per cent of all frauds reviewed. The ten most common forms of fraud represent more than 90 per cent of all fraudulent incidents reviewed. Beyond the top ten there are 20 additional fraud types which have a very low incidence.

Table 2 also shows the average cost per incident of the various types of frauds. Frauds with a recorded value of \$0 were included in the average calculations. The average cost estimates shown are expected to be more accurate for high volume fraud types due to the number of incidents contributing to the average calculation.

The figures show that the highest volume fraud types were relatively low cost (\$940 per incident for card fraud and \$62 per incident for fuel drive-offs). When they did occur, the less frequent fraud offences, such as embezzlement and cheque fraud, generally had a greater financial impact (\$36,588 and \$12,413 on average respectively).

Using the average cost per incident, we estimated the total annual cost of each fraud type to NSW (column 6 of Table 2). The total cost estimates confirm that infrequent high-cost frauds have a greater overall cost than common, low-value frauds. For instance, card fraud accounts for roughly a third of fraud incidents but less than 10 percent of the total cost of fraud. Similarly, fuel drive-offs account for about 30 percent of fraud incidents and less than one percent of the total cost of fraud. By contrast, embezzlement accounts for less than five per cent of fraud incidents but roughly a third of the total cost.

Using the average cost per incident, we can estimate that the total cost of frauds reported to NSW Police in the 12 months ending 30 September 2013 was almost \$208 million. This estimate takes into account the proportion of incidents of different types as found in this review.

Below we will discuss in more details the five most common fraud types.

### CARD FRAUD

Frauds involving the unauthorised use of cards from financial institutions represented 35 per cent of all fraud incidents reviewed. The cards involved were not limited to the traditional MasterCard and VISA issued by Australian banks. Many other card types issued by financial institutions were observed, regardless of whether they could be used to access the cardholder's own funds (debit cards) or borrowed funds from an approved credit limit (credit cards). This suggests that offenders do not discriminate between the various card types as the methods used to obtain cards and their subsequent fraudulent use are similar, regardless of the card type.

The average card fraud costs \$940 per recorded incident or \$1,872 per event.<sup>6</sup> The total cost of card fraud for incidents reported to NSW Police for the year to 30 September 2013 is

Table 2. Number and average cost of fraud incidents summarised

Fraud Description	2008-2009	2012-2013	Total	Average cost (\$) per incident <sup>1</sup>	Estimated total cost (\$) for year to Sep 2013 <sup>5</sup>
Card fraud	219	237	456	940	16,207,377
Fuel drive-offs	186	210	396	62	928,340
Identity theft	31	32	63	8,317	19,811,952
Embezzlement / Theft by a person of trust	28	21	49	36,588	67,788,305
Cheque Fraud	21	23	44	12,413	20,651,398
<i>Total for five most common offences</i>	<i>485</i>	<i>523</i>	<i>1008</i>	<i>3,290</i>	<i>125,387,372</i>
False representation	22	21	43	16,194	26,329,500
Forgery	30	12	42	15,556	24,703,998
Bank Account Fraud	19	21	40	9,745	14,738,791
Fare evasion	12	12	24	52	47,188
Phishing	12	11	23	5,993	5,211,853
Make false/misleading statement with intent to obtain a benefit	12	11	23	2,240	1,948,031
Prescription drug fraud	12	10	22	14	11,646
Theft by avoiding payment	12	9	21	1,226	973,486
Offences involving the passing or possession of counterfeited coins or notes	6	12	18	91	61,935
Computer hacking involving fraud	7	8	15	2,103	1,192,753
Charge for goods or services that are not provided	6	0	6	14,006	3,177,499
Creation of a fictitious identity	3	0	3	10,000	1,134,335
Computer hacking involving fraudulent creation of a false/illegal instrument	2	1	3	0	0
Unlicensed/unregistered person practicing a trade or profession	1	2	3	2,232	253,184
Supply false documentation to get, keep or upgrade a vehicle licence/permit	1	1	2	30	2,269
Breach of the Trade Practices Act that constitutes a fraud offence	2	0	2	2,450	185,275
Impersonation of a professional or justice official	1	1	2	24,550	1,856,528
Demand money with menaces not involving any aggravated circumstances	0	1	1	3,700	139,901
Leave a restaurant without paying	1	0	1	18	681
Theft from a retail premises that only involves the taking of tools, equipment, furnishings or other items not for sale	0	1	1	1,600	60,498
Receive or handle proceeds of crime	0	1	1	0	0
State a false name	1	0	1	0	0
Income taxation fraud	0	1	1	0	0
Fraudulent trade or commercial practices	1	0	1	1,000	37,811
Wind back speedometers on used cars	0	1	1	8,800	332,738
<i>Other offences (excluding top 5)</i>	<i>163</i>	<i>137</i>	<i>300</i>	<i>7,264</i>	<i>82,399,899</i>
<b>ALL OFFENCES</b>	<b>648</b>	<b>660</b>	<b>1308</b>	<b>4,201</b>	<b>207,787,271</b>

1. The Average cost calculations consider all the incidents recorded in samples from both years

estimated to be about \$16 million based on the calculations noted above.

The narrative recorded by police frequently offers a rich understanding of these types of offences. It provides an insight into how the card details are obtained by offenders, where and how cards are used and for what. Offender details are also sometimes recorded.

**HOW ARE CARD DETAILS OBTAINED?**

The two main modus operandi in card fraud involve either stealing the physical card or stealing the card information, which can then be used for online payment fraud. Card information can be skimmed off the card using a card reader, accessed through online payments or from databases held by card issuers, banks or merchants. Our review found examples of the first two methods.

Table 3 shows how alleged offenders in our review gained access to card details in order to commit (or attempt) the card fraud. In almost half (45.4%) of the card fraud events reviewed, the victim’s physical card was lost or stolen. In a quarter of events the physical card was stolen from the cardholder (25.3%), in 12 per cent the victim lost their card (11.8%) and in eight per cent the cards were likely to have been stolen from the mail prior to being activated (8.3%). In 28 per cent of card frauds, however, the fraud occurred while the victim was still in possession of the card. This suggests that the card details in these cases had been

compromised by one of the many methods used by offenders including;

- Card skimming at point-of-sale locations including ATM’s and stores
- Card skimming from a portable skimming device operated near to victims
- Victims disclosing details through internet sites including in response to phishing emails
- Victims disclosing details through internet sites setup to imitate well known organisational websites
- Large-scale data breaches such where card data is stolen from legitimate suppliers, usually by computer hacking, or where data are inadvertently lost or disclosed publicly.

Card skimming could only be confirmed on a single event from this study when police were able to link a card fraud offence with a device identified at a retail outlet where the victim had previously used a credit card. A further three events were linked to locations under suspicion of holding a skimming device. The other incidents offered no information as to how card details were stolen.

Unfortunately, in about a quarter of events (24.1%) we were unable to determine how the victim’s card details were accessed due to insufficient detail in the narrative. This includes eight per cent of card fraud events identified by retail staff when the offender attempted to use a fraudulent card at their outlet.

**Table 3. Methods used to obtain card details**

How card details were obtained	Events	% Events	Incidents	% Incidents
<b>Physical card obtained by offender</b>				
<i>Card Stolen (total)</i>	58	25.3	102	22.4
from victim’s person	23	10.0	38	8.3
from victim’s residence	17	7.4	31	6.8
from victim’s vehicle	10	4.4	22	4.8
from victim, not further described	8	3.5	11	2.4
Card lost by victim	27	11.8	47	10.3
Likely mail theft	19	8.3	131	28.7
<b>Card information obtained by offender</b>				
Phishing	3	1.3	3	0.7
Retained by skimming device	1	0.4	1	0.2
Unknown as victim still in possession of card	63	27.5	92	20.2
Family member	3	1.3	3	0.7
<b>Unknown</b>				
Unknown insufficient detail in narrative	37	16.2	55	12.1
Unknown as reported by retail outlets targeted by an offender	18	7.9	22	4.8
<b>Total</b>	<b>229</b>	<b>100.0</b>	<b>456</b>	<b>100.0</b>

**WHERE WERE CARDS FRAUDULENTLY USED?**

Table 4 shows the location where fraudulent cards were used. Almost half of the offences were committed at a point-of-sale location, such as a supermarket, convenience store, taxi or other retail outlet (49.3%). This suggests that offenders were using cards to shop in person at retail outlets. In half of these offences, offenders used the card at more than one location. A further 23 per cent of card frauds were committed at ATM's, while 18 per cent were committed online.

Due to the nature of point-of-sale and ATM transactions, it is likely that a card (either original or duplicate) would be present when committing these offences. While it is possible to manually enter card details using point-of-sale terminals (and an offender in one card fraud event reviewed did attempt this), offenders making a transaction as a customer would generally be unlikely to do this due to the additional time required and the likelihood of drawing attention to him or herself.<sup>7</sup>

Contactless payment options, now offered at many point-of-sale locations, such as PayPass and Tap & Go, might have also contributed to making transactions with stolen cards easier. While transactions made under these contactless systems are typically restricted to \$100 each, they offer the potential to make multiple transactions quickly. Additionally, the transactions are made by presenting the card near to the point-of-sale terminal by the purchaser, with the retail console operator no longer needing to handle the card. Neither a PIN nor signature is required for these small value transactions. While this is convenient for

legitimate purchasers, it can be advantageous for fraudulent transactions as there is no longer a human eye to verify that the cardholder details may fit the person attempting the transaction.

The narratives showed card fraud often involved the purchase of lower value consumer and convenience items, such as fast food, grocery items, cigarettes and alcohol. To a lesser extent, clothing and designer wear were also purchased using fraudulent cards. Gift cards were another common purchase, allowing transfer of value from a fraudulently obtained card to a gift card, which could then be used in place of cash for purchases.

While a physical card is likely to be present for point-of-sale transactions, purchases made online can be initiated with just the card details. Limited information is available from the narratives about the goods and services purchased online, however there were multiple instances of funds being used to purchase electrical goods, pay household bills or pre-paid mobile phone credit.

**WHO DETECTED CARD FRAUD OFFENCES?**

While the fraud victim is usually the one to detect and report the offence, sometimes someone other than the victim identifies the crime. Table 5 shows that, of the 229 card fraud events, the victim identified the fraud on 57 per cent of occasions. Over one quarter of offences were detected by the victim's bank or financial institution, which then subsequently alerted the victim (26.6%). The high level of identification by banks or financial institutions is likely a result of increased monitoring of customer's transactions. Ongoing monitoring of transactions allows for unusual and potentially fraudulent transactions to be discussed with customers with the aim of reducing further fraud.

On three occasions, during the course of other unrelated police activity, police located items on a person of interest and deemed them to have been either obtained or used fraudulently. On ten occasions, a person employed within a retail outlet identified a potentially fraudulent offence when an offender attempted to purchase goods using a fraudulently obtained or fake card.

**WHAT IS THE COST OF CARD FRAUD?**

The cost of card fraud could be identified in 92 per cent (210 out of 229) of the card fraud narratives sampled. The cost averages shown below include 22 events of \$0 value. Table 6 shows the range in the value of these events. The total cost was \$428,747 with an average cost of

**Table 4. Where were cards used?**

How cards were used	Number of events	% of events
Point-of-sale	113	49.3%
ATM's	53*	23.1%
Online	41	17.9%
Other	7	3.1%
Unable to determine	15	6.6%
<b>Total</b>	<b>229</b>	<b>100%</b>

\*Four of these were confirmed as being used at overseas ATM's.

**Table 5. Party which identified fraudulent offence**

Party detecting fraud	Number of events	% of events
Victim	131	57.2%
Victim's Bank or Financial institution	61	26.6%
Other / unknown	18	7.9%
Attempted retail target	10	4.4%
Employee of corporate victim	6	2.6%
Police	3	1.3%
<b>Total</b>	<b>229</b>	<b>100%</b>

Table 6: Cost of card fraud offences

Offence Value	Number of events	Total \$ ('000)	Average cost per event	Number of incidents	Average cost per incident
\$0	22	\$0	\$0	23	\$0
\$1 to \$200	27	\$2,930	\$109	39	\$75
\$201 to \$400	26	\$7,767	\$299	34	\$228
\$401 to \$600	16	\$8,254	\$516	25	\$330
\$601 to \$800	13	\$8,676	\$667	18	\$482
\$801 to \$1000	24	\$21,140	\$881	52	\$407
\$1001 to \$2000	35	\$50,520	\$1,443	60	\$842
\$2001 to \$3000	27	\$62,893	\$2,329	58	\$1,084
\$3001 to \$4000	8	\$28,375	\$3,547	10	\$2,838
\$4001 to \$5000	4	\$16,910	\$4,228	15	\$1,127
\$5001 to \$10,000	21	\$143,659	\$6,841	54	\$2,660
>\$10,000	6	\$77,623	\$12,937	68	\$1,142
	<b>229</b>	<b>\$428,747</b>	<b>\$1,872</b>	<b>456</b>	<b>\$940</b>

\$1,872 per event and \$940 per incident. Our estimate is that reported card fraud cost NSW approximately \$16.2 million in the year ended September 2013.

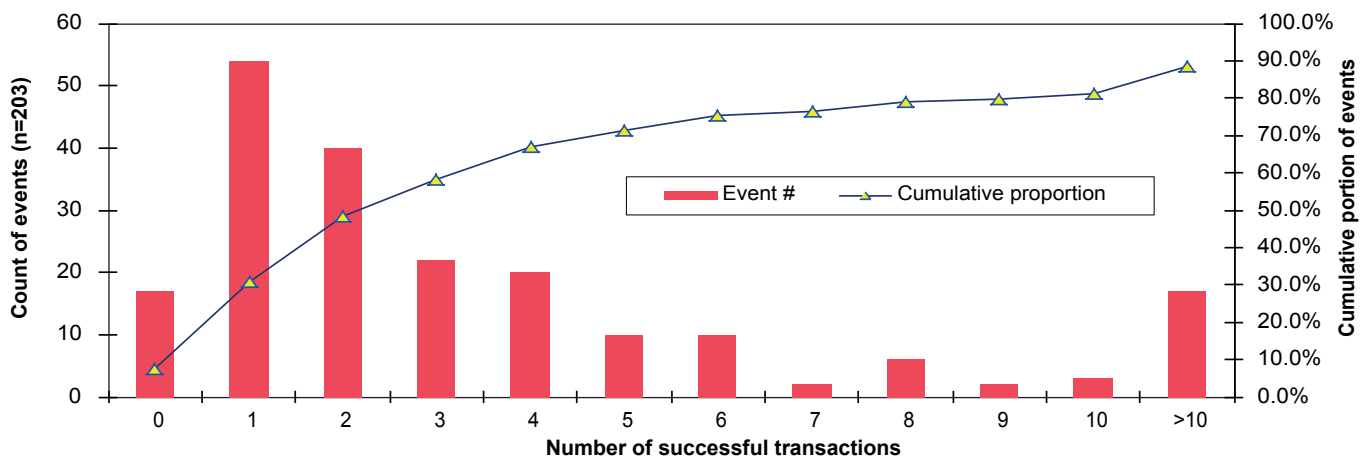
**MULTIPLE USES OF CARDS**

The narratives show that a card fraud event frequently involves many individual card transactions<sup>8</sup>. Figure 2 shows the number of successful card transactions made per card fraud event (where a purchase was completed). A small proportion of events had no successful card transactions (7%). Twenty four percent involved a single fraudulent transaction and 58 percent of events involved two or more transactions. The average number

of card transaction attempts per event was 4.7, increasing to 4.8 transactions per event for those events where access was successful. The maximum number of successful transactions within a single event was 56, at a total value of \$3,996, averaging \$71 per transaction.

In our sample only 16 per cent of card fraud events had POI information recorded. Two-thirds of suspects were males aged between 15 and 50 years (64.9%). Criminal proceedings were rare, with only seven per cent of the 229 card fraud events reviewed resulting in legal action<sup>9</sup> being commenced against an accused offender.

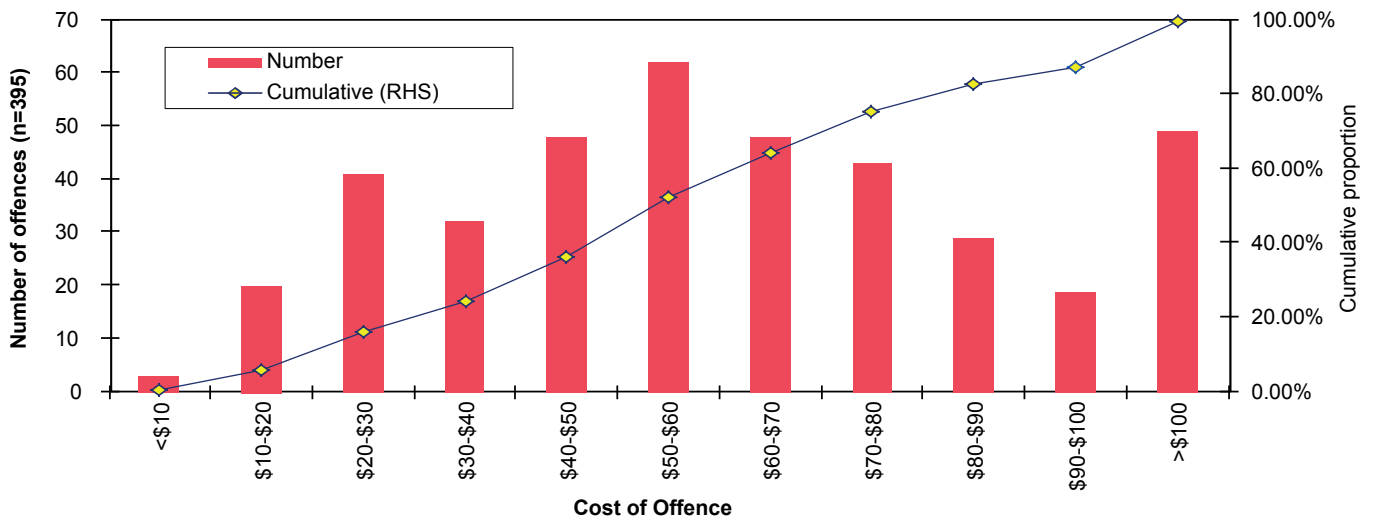
Figure 2. Frequency of transactions per offence \*



\* Twenty six events (11%) did not contain sufficient information to determine the number of successful transactions.



Figure 3. Number and frequency of fuel drive-off costs



### FUEL DRIVE-OFFS

Fuel drive-offs have previously been reported as a significant form of fraudulent activity in NSW (eg. Moffatt & Fitzgerald 2006). This review confirms that fuel drive-offs remain a significant problem, accounting for 30 per cent of the total fraud incidents reviewed. Typically in these incidents a person fills a car with petrol with no intention of paying and then drives away. In some incidents however, a customer attends the cashier to make an in-store purchase and ‘conveniently’ fails to mention that they also need to pay for petrol. Unlike other forms of fraud ‘fuel drive-offs’ are actually reasonably well recorded in the raw police data as this offence is captured in its own unique offence category (fail to pay). Thus, we can consistently monitor this offence. Even here, however, examination of police narratives reveals valuable information.

Interestingly, 13 per cent of incidents resulted in restitution being made by an offender. These recoveries were made possible by identifying the vehicle number plate. In many cases there was insufficient evidence to determine that the driver had deliberately neglected to pay for their petrol to lay charges. Many of the individuals offering restitution simply reimbursed the petrol station when requested by police.

### Number plates on vehicles

Affixing stolen number plates to a vehicle is a well-known tactic to avoid identification when stealing petrol. In our sample, 20 per cent of fuel drive-offs were known to involve some form of vehicle registration misrepresentation. These 80 incidents included 34 vehicles with stolen plates, 31 vehicles with plates that did not belong to the make and model of vehicle of interest and six vehicles with cancelled plates from another vehicle. Five vehicles had different stolen plates on the front and rear of the vehicle and four of the vehicles themselves were stolen.

The narrative review also highlighted a number of problems for police in gathering the information about these types of offences. In many cases, CCTV records were unreliable because the apparatus did not work, recordings were unclear or offending vehicles were not in a position to be captured by the CCTV. Service station attendants were also often unable to identify or recall the make and model of vehicles or provide physical descriptions of offenders. As a result, the frequency of vehicle and registration misrepresentation is likely to be higher than the recorded 20 per cent.

### What is the cost of petrol theft?

The value of petrol theft incidents is well recorded and our review contained only one event for which a value could not be established. The average cost of petrol theft was \$62.10 (including thefts ranging from \$5 to \$447). When scaled up, the estimated cost of petrol theft in NSW in the 12 months to September 2013 was nearly a million dollars (\$928,340).

As noted earlier, petrol theft is common but generally low in average value. Fuel drive-offs most commonly range from \$40 to \$70 in value; only 12 per cent cost more than \$100. Almost all of the fuel drive-offs valued at more than \$150 involved commercial vehicles that have larger fuel tank capacities. As can be seen in Figure 3, more than half (52%) of the fuel drive-offs were for less than \$60.

The largest value offence occurred after the driver of a truck, who had already paid for \$250 worth of diesel, returned to his vehicle and obtained a further \$447 of fuel. Due to a disagreement with the console operator over the use of a fuel card, and because the offender was unable to use any alternative payment options, he left without making payment. In this example, no person of interest is recorded for the event, nor is there any indication that he returned later to make restitution.

A person of interest was recorded in only five per cent of fuel drive-off incidents (n=19). Even where people return to pay for unpaid fuel or are identified from registration records at a later date, police often do not record details on the police records. Of the 51 events where restitution was made, police records show a person of interest was recorded in only 11 events. Legal actions were only commenced in two per cent of events (n=9).

**Minimising fuel-drive offs**

While there are ways of reducing fuel thefts, such as pre-payment, any option also needs to be attractive to fuel sellers if it is to be adopted. Loss prevention strategies cannot put the operator at a commercial disadvantage, personal risk or cost more than the potential savings through reduced theft. The Australian Convenience and Petroleum Marketers Association, while concerned about petrol theft, do not endorse fuel pre-payment as a desirable response (ACAPMA, 2012).

A consistent problem is that the placement and quality of CCTV equipment at petrol stations limits its ability to accurately identify offenders. While there is room to improve the effectiveness of CCTV this will not impact fuel drive-offs where false or obscured number plates are used.

**Table 8. Party responsible for recognising identity fraud events**

Party detecting the fraud	Number of events	% of events
Victim	26	50.0%
Attempted target	14	26.9%
Victims Bank or Financial institution	5	9.6%
Police	6	11.6%
Other / unknown	1	1.9%
<b>Total</b>	<b>52</b>	<b>100.0%</b>

**Table 9. Aggregate cost and distribution of identity fraud**

All identity fraud events			
Offence Value	Number of events	Number of Incidents	Total \$ ('000)
Non-monetary	16	16	Not applicable
Nil value	7	12	\$0
<\$1,000	6	6	\$2,696
\$1,000 to \$5,000	7	8	\$22,210
\$5,000 to \$10,000	5	5	\$36,840
\$10,000 to \$50,000	9	14	\$212,225
>\$50,000	2	2	\$250,000
	<b>52</b>	<b>63</b>	<b>\$523,971</b>

Unfortunately the monitoring of fuel drive-offs into the future will be affected by recent changes to the way service stations report the offence to police. These changes have resulted in a dramatic reduction in reported incidents<sup>10</sup>.

**IDENTITY FRAUD**

The misuse of personal information ranks as the third most common form of fraud identified with five per cent of the fraud narratives falling into this category<sup>11</sup>. The incidents reviewed represented almost 10 per cent of the overall cost of fraud in the sample. Identity fraud was reported to police in 52 separate events within the sample, representing 63 separate recorded incidents. Sixty-nine per cent (n=36) of the sample of identity fraud events involved actual or attempted financial misappropriation as a result of the identity fraud. The most common scenario involved an offender establishing a new credit card or loan account in the name of the victim, thereby giving the offender access to funds. The remaining 16 events did not involve direct financial deception matters. For instance, the offender used another person’s identity for identification purposes or establishing non-financial accounts in a false name, such as tax or business registrations.

Unfortunately, it was generally not known (or not recorded) how offenders obtained the identity information from their victims. In three instances, police became aware of an offender in the course of an unrelated police investigation, finding that the person was holding quantities of false or stolen identity documents.

Identity theft incidents were frequently associated with other offences. For instance, after the victim’s identity is used to create credit accounts in a false name, offenders can then go on to commit other offences such as card frauds (as discussed earlier). The overlap between identity theft and other fraud shows the difficulty in classifying fraud incidents. Another type of identity fraud relates to false identification documents being used to disguise the offender’s true identity. Examples noted from this research include under-age people using another person’s identity to gain access to a age-restricted events and drivers using false identification to avoid traffic infringements.

One quarter (n=13 out of 52) of identity fraud events have a person of interest recorded. Police commenced legal action in 20 per cent of incidents. In each case a single offender was involved in the police action.

**Who detected the identity fraud offences?**

Table 8 shows that half of the events involving identity fraud were identified by the victim. The intended target of an identity fraud, such as a retailer, identified a further 27 per cent of fraudulent activity. Additionally, police in the course of normal duties identified six offences through licence checks or other similar interactions. Of the six events identified by police, four offenders were holding multiple forms of identification not belonging to the offender.

**What is the cost of identity fraud?**

As stated earlier, in our sample we found the average value of an identity theft incident was \$8,317. However, this average includes incidents that were not financially motivated and which consequently had no value. Table 9 shows the value of identity fraud events and incidents. It shows that 31 per cent of identity fraud events (n=16) were non-monetary in nature. If we consider the average cost of identity fraud only for those events that are financially motivated (n=36), the average cost would be \$14,555 per event or \$11,148 per incident. This includes seven events where the value was determined to be \$0, as fraud was attempted but unsuccessful<sup>12</sup>. The cost of reported identity theft to the community is estimated to have been almost \$20 million over the 12 month period to September 2013.

While this study suggests that the frequency of identity fraud is relatively low (in relation to card fraud and petrol theft), the financial implications of the offences are potentially very high. Offenders who fraudulently use another person’s personal information to create loan accounts have the ability to access large amounts of money quickly. The cost of identity fraud offences in the current sample ranged from \$0 where offences were identified and halted, to \$160,000. Forty-four per cent of the identity fraud events in this research that were financially motivated (n=16) cost more than \$5,000, while more than 30 per cent (n=11) cost more than \$10,000.

The \$160,000 event came to attention after a bank representative identified five separate car loan accounts which were in default because no repayments were being made. It transpired the accounts had all been established using false identities over an eight-month period. Despite investigations by the bank and police, no offender was ever identified. Another example involved fraud against 23 separate victims for a total

value of \$33,529. These frauds were committed by a group of five finance company employees who created loan accounts using identity documents that had previously been used legitimately by customers of the same organisation.

**EMBEZZLEMENT**

Embezzlement accounted for four per cent of fraud incidents reviewed. The classification includes theft by employees from their employer<sup>13</sup> and theft by a person in a position of trust, such as an accountant, business partner or employee.

Embezzlement offences are somewhat different to those discussed above. This category includes a number of very high cost crimes which are considerably larger in scale than most of the other frauds reviewed. It is evident that the larger value offences in this category are calculated crimes, committed by people with intimate knowledge of corporate procedures and oversight. For example, one of the largest single events reviewed involved the theft of an estimated \$200,000 from a local government by three staff members. Each incident in this event was relatively small in value, but the accumulated losses over four years were substantial.

**What is the cost of Embezzlement?**

All of the incidents of embezzlement reviewed had a recorded value. The cost of these offences ranged from \$80 to \$300,000. The offences with values less than \$10,000 (39%) generally involved employees keeping cash from retail sales, removing cash from the business takings or stealing goods from an employer. The crimes over \$10,000 (61%) were more likely to involve misappropriated cheques, redirection of incoming business receipts to personal bank accounts, bank transfers from employer to employee and unauthorised bank withdrawals.

**Table 10. Estimating the incidence of card theft and fuel drive-offs**

	Deception Offence		Fail to pay		Other fraud		Total (all incident types)		Diff.	% change	% of tot. change
	Oct 08 - Sep 09	Oct 12 - Sep 13	Oct 08 - Sep 09	Oct 12 - Sep 13	Oct 08 - Sep 09	Oct 12 - Sep 13	Oct 08 - Sep 09	Oct 12 - Sep 13			
No. of incidents of this type included in sample	197	231	186	209	72	120	648	660			
% of sample that was card fraud	45.2	63.6	0.0	0.0	50.0	56.7	23.2	35.3			
% of sample that were fuel drive-offs	6.1	5.6	92.5	93.8	2.8	0.8	16.3	20.7			
Total number of fraud incidents recorded by police	14,147	18,453	10,381	13,390	3,771	10,077	35,664	49,457	13,793	38.7	100.0
Estimated no. incidents of Credit/Eftpos card fraud	6,391	11,743	0	0	1,886	5,710	8,277	17,453	9,176	110.9	66.5
Estimated no. incidents of fuel drive-offs	862	1,038	9,600	12,557	105	84	5,815	10,251	4,435	76.3	32.2

The highest value offences of \$200,000 or more (12.1%) were committed against large organisations and involved systematic fraudulent offences over periods of up to four years. In each of the offences, insufficient controls were in place to identify offending behaviours.

The average cost of each of the 33 events was \$54,327 and \$36,588 per incident. Despite its low frequency, this category of fraud represents almost one third of the total value of offences in the study. Six of the ten most costly fraud offences, valued at \$120,000 or greater, were from this category of fraud. This offence is estimated to have cost more than \$67 million in the year to 30 September 2013.

### Who detected the embezzlement offences?

Almost all of the embezzlement offences were detected by a staff member inside the victim organisation (90%). As the smaller value offences largely involved the theft of cash, these were usually identified from discrepancies between recorded sales and business takings. These smaller offences were more likely to be identified and reported promptly to police. Higher value offences were often identified by a staff member who was working in the role of their offending co-worker during an absence such as annual leave, or upon the offender leaving their employment.

Police records note a person of interest in almost 50 per cent (n=16) of embezzlement events representing 45 per cent of embezzlement incidents. Proceedings were commenced in 36 per cent of embezzlement events - a higher rate than other types of fraud. As would be expected, almost all of the persons of interest for these offences had their employment terminated. Two persons of interest resigned before the offences were identified and two resigned as a result of their crimes being detected.

### CHEQUE FRAUD

The fifth most common form of fraud based on police records is cheque fraud.<sup>14</sup> The frequency of cheque fraud is low (only three per cent of our sample) but represents a relatively high cost per incident. A total of 21 fraudulent events were identified over the two year periods reviewed, consisting of 44 separate incidents of cheque fraud.<sup>15</sup>

The cheques in the sample were mostly stolen and used by the offender to purchase goods, deposited into other bank accounts or converted into cash for immediate use. Cheques were generally stolen from the victim's business premises, house or mail. Once in the hands of offenders, blank cheques were either forged, or existing cheques were altered. In the fraud events where cheques were altered, the offender usually amended the payee only, leaving the value of the cheque unchanged.

Police action was taken in a third of cheque fraud events reviewed (n=7) including in the most costly offence in this category.

### WHAT IS THE COST OF CHEQUE FRAUD?

The mean cost of cheque fraud was high at \$26,008 per event, or \$12,413 per incident. The cost of cheque fraud per event ranged from \$400 to \$395,600. Most cheque frauds (n=17) were single incident events with cheques averaging \$6,662 each. Single incident frauds ranged in value from \$400 to \$58,305. This cost of this infrequent, but high value type of offence is estimated to be over \$20 million for the year ending September 2013. The \$1 million attempted fraud noted earlier also falls into this category. The offender attempted to change a cheque made out for \$80 into a \$1 million cheque before depositing it to a bank account through an ATM. The verification process within the receiving bank ensured that the discrepancy was identified before the offender was able to access any funds.

Two events, including the largest value event of almost \$400,000, involved the use of ten or more cheques. The largest value offence related to a number of deposits made using valueless cheques that were subsequently dishonoured. The event with the highest number of incidents in this category occurred when an offender used valueless cheques to purchase goods from a large hardware chain. The purchases totalling \$8,000 were made at the same location over a period of approximately four weeks. A person of interest was identified and police located most of the acquired goods at his residence. He was subsequently charged with the fraudulent offences.

### HOW FRAUD HAS CHANGED

The NSW Police categorise all recorded fraud into a number of subcategories, which, unfortunately, do not generally meaningfully describe the offences contained. Using the results of our manual review of fraud incidents, however, we now have a general picture of the offences contained within the police categories. Table 1 above showed the fraud categories available to NSW Police and the number of recorded fraud incidents assigned to each category over the five years to September 2013. (As we saw in Figure 1 above, the incidence of fraud recorded by police increased considerably in the five years to September 2013.)

As we saw in Table 1 in the 12 months to September 2013, 85 per cent of fraud incidents were classified as either *deception offences* (37.3%), *fail to pay* (27.1%) or *other fraud* (20.4%). Furthermore the growth in these three fraud incident types accounted for 99 per cent of the total increase in fraud over the five years to September 2013. Consequently, we can focus on understanding changes in these three incident categories to explain the overall volume of the increase in fraud.

Table 10 shows a breakdown of the proportion of police incidents of *deception offences*, *fail to pay* and *other fraud* that were recorded as either card fraud or fuel drive-offs in our sample. By applying these proportions to the total number of incidents of each type we can estimate the number of card frauds and fuel

drive-off incidents in the 12 months to September 2009 and the 12 months to September 2013.

For instance, in our sample we recorded 197 *deception offences* from the 12 months to September 2009. Of these, 45 per cent were found to be card fraud. For the same time period, police recorded a total of 14,147 *deception offences*. By applying the proportion related to card fraud to the total number of *deception offences* for the year to September 2009, we estimate that approximately 6,391 involved card fraud. In addition to an increase in the proportion of *deception offences* that are card fraud related, over the five years the overall incidence of *deception offences* increased by 30 per cent to 18,453. Thus, we estimate that in the 12 months to September 2013, there were 11,743 card fraud incidents recorded under *deception offences*. That gives an additional 9,176 card frauds, a 111% increase.

Table 10 shows the further analysis for the other police incident categories of interest (*fail to pay* and *other fraud*). These data show that in the past five years, approximately two thirds of the total increase in fraud is attributable to card fraud and a third is due to fuel drive-offs.

There also are likely to have been changes in the occurrence of lower volume fraud offences such as identity theft and embezzlement, but these are not discussed in detail for several reasons. Firstly these offences are infrequent enough that any changes will have only a modest impact on the large-scale general increase in fraud offences. Given that card fraud and fuel drive-offs on their own can account for the total increase, any increases in the low volume fraud offences must have been offset by decreases in another. Secondly, since our estimates are based just on a sample of incidents, they are likely to be less precise for low volume offences.

## DISCUSSION

In recent years in NSW, fraud has shown the highest growth among police recorded incidents for any of any of the major 17 offence categories; it is at present the only property crime increasing in NSW. The current research estimates that fraud incidents reported to NSW Police in 2013 cost victims and institutions over \$200 million. The problem is obviously significant, for some fraud types at least, and appears to be worsening.

While our findings are based on a small sample of fraud incidents reported to police, other sources also point to a rise in fraud. The ABS Personal Fraud Survey (2012) estimates that in 2010/11 6.7 per cent of Australians aged 15 years or over were a victim of personal fraud up from 5.0 per cent in 2007.

Figures released by the Australian Payments Clearing Association (2014) show that fraudulent card transactions as a proportion of total card use increased nearly 50 per cent in the past five years from 32.7 cents per \$1000 transacted in 2008 to 48.7 cents in 2013.

It is apparent from our research that most fraud reported to police is of low value. The fraud types with the highest prevalence were card fraud (35% of incidents with an average cost of \$940) and fuel drive offs (30% of incidents with an average cost of \$62). For both of these offences, the chance of recovering the value of the offence is limited, due to the low likelihood of offenders being identified and infrequent legal actions (legal actions were commenced in only 7% of card fraud events and 2% of fuel drive offs). Further, our findings suggest that these two high-volume, low-cost fraud types account for the overwhelming bulk of the increase in police recorded fraud over the past five years (two-thirds of the increase being due to card fraud and the remainder due to fuel drive-offs).

Other fraud types such as identity theft, embezzlement and cheque fraud are much less frequent but have a considerably greater financial impact when they do occur. In our sample, the average cost of these frauds per incident were \$8,317 for identity theft, \$36,588 for embezzlement and \$12,413 for cheque fraud. These high-value fraud types are also more likely to result in criminal proceedings (legal actions were commenced in 20% of identity fraud events, 36% of embezzlement events and 33% of cheque fraud events).

The total cost of fraud (as opposed to the cost per incident) is disproportionately affected by low-frequency, high-cost frauds. Collectively, card fraud and fuel drive off incidents account for approximately two-thirds of reported frauds but less than 10 percent of the total cost of reported fraud. In contrast identity theft, embezzlement and cheque fraud account for only 12 percent of reported fraud incidents but half the total cost of reported fraud. The high cost of these fraud types probably accounts for the considerable focus on these offences by researchers (for instance Smith and Hutchings' comprehensive investigation into identity fraud and misuse (2014), Prenzler on welfare fraud (2011), Warfield on employee fraud (2013) and Cross, Smith & Richards on online fraud (2014)).

## STRATEGIES TO AVOID PERSONAL VICTIMISATION

A consistent theme for prevention of fraud is increased awareness and subsequent protection of personal information. Some suggested strategies for individuals to avoid victimisation from fraud include:

- Locking mailboxes to reduce theft of personal information and cards,
- Ensuring that online transactions are undertaken on secure Internet sites,
- Covering your hand when entering your PIN at ATM's or EFTPOS terminals,
- Regularly changing PINs and passwords,
- Securing personal belongings inside the house or workplace to avoid theft,
- Shredding personal documents

- When using a computer, tablet or mobile device to access personal data on the Internet ensuring that Internet security is installed and regularly updated
- Checking credit ratings regularly on [www.veda.com.au](http://www.veda.com.au)
- Not allowing others to tap-and-go on your behalf
- Never letting your card out of your sight at retail outlets with point-of sale terminals,
- Close monitoring of financial accounts to detect suspect transactions, and
- Using business internal controls to prevent embezzlement in organisations.

People who have experienced identity fraud can arrange monitoring of their personal credit files. For a fee victims can be alerted to any attempt to access their credit file if an offender attempts to create a financial obligation in their name.

Victims should also be encouraged to report any financial thefts to their institutions and police to assist with ongoing monitoring of offences. Victims of cybercrime can also report to the Australian Cybercrime Online Reporting Network (ACORN) through [www.acorn.gov.au](http://www.acorn.gov.au). Victims should also be aware that financial institutions can reimburse the losses of victims, where genuine fraud is evident.

## CONCLUSION

While individuals can take measures to reduce their risk of fraud victimisation, we should not underestimate the role that businesses and financial institutions have to play in fraud mitigation. With the immense changes we currently see in technology and consumer behaviour, the nature of fraudulent activities are quite dynamic and thus require dynamic responses. For instance, as of the end of 2014 Australian credit card payment systems have removed the ability for consumers to sign for purchases with card providers moving to PIN or contactless payment options. The effect of these changes should be monitored as they could reduce fraud or simply shift offenders towards another method of the offence.

## ACKNOWLEDGEMENTS

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## NOTES

- 1 Here we are referring to incidents categorised as 'fraud' by NSW Police.
- 2 The KPMG survey dissemination method is unstated. The 2010 survey reports a response rate of 10%. The response rate is unstated in 2012 but the report does say that the 'number' of responses rose 30% from 214 in 2010 to 281 in 2012. We feel that the low response rate, small sample size and survey method which is likely reliant on the enthusiasm of respondents to participate in a fraud survey mean it would be imprudent to assume that the samples from different years can reliably estimate fraud victimisation.
- 3 In recording a crime NSW Police start by creating a criminal event which is a way of bundling up the general criminal episode. A single 'event' can contain numerous criminal 'incidents' or individual offences. The incidents included in the event are usually linked because they occurred at the same time, at the same place and involved the same people. For instance, a single criminal event might include an assault and an incident of resist arrest. In this study we selected criminal events including at least one fraud incident. Some events contain more than one fraud incident. In the course of the research it also became clear that some fraud incidents contain more than one fraud. The narrative is attached to the criminal event and describes all the constituent incidents.
- 4 It is quite possible that in a number of cases the cost does not reflect the long term loss experienced by the victim. In some cases financial institutions might reimburse credit card fraud victims, crime proceeds might be recovered by police and returned to victims or insurance might cover the cost. Also, the value recorded by police would best reflect the value of the stolen item and would not include any associated out of pocket expenses.
- 5 The estimated annual cost has been calculated by assuming that the proportion of frauds of each type that we found in the sample, occur in the same proportions in all recorded frauds year October 2012 and September 2013. We also apply the average costs found from the sample to these incidents.
- 6 The cost of fraud, as determined from the narratives, differs greatly from the values recorded in the police reporting in COPS. In 172 events police records show the value of crime as \$0 but in almost 90 per cent of events, we have been able to determine a value from the event narratives.
- 7 This would not necessarily apply to staff with access to the point-of-sale device that uses that access to perpetuate a fraud. Such individuals could process transactions without the card being present without being conspicuous.
- 8 NSW Police have the option to create a new criminal incident for each fraudulent card transaction within a card fraud event. If there are many offences this could be administratively quite burdensome. Perhaps for those reasons it appears that the general practice is not to create a separate incident each time the card is used but to describe the incidents in the narrative. Only 25% of card fraud events had two or more incidents recorded compared

with at least 58% as indicated by the contents of the narrative.

- 9 Legal action in this context includes criminal proceedings to court and proceedings by other methods such as caution, youth justice conference or infringement notice.
- 10 Since 1 September 2013 police require that fuel drive offs all be reported by faxing back a form which victims can download from the internet. Previously these offences could be reported in the same way as any other offence by phone or in person at the police station. Since the introduction of this form there has been a dramatic decline in the number of 'fail to pay' incidents recorded by police (see Appendix 1). This change in reporting will mask the actual incidence of the offence in the future.
- 11 If the offence was characterised by 'simple' credit card misuse it was classified as card fraud for the purposes of the current study. This applied when a credit card was stolen directly from the victim, from the mail or where card information was otherwise obtained, and purchases were made on the card. For the present study, 'identity theft' required the alleged offender to attempt to assume the identity of the victim in an organised way such as by opening an account with a financial institution or by misrepresenting themselves as the victim in another context.
- 12 The precise cost of one event could not be determined however, the detail from the narrative indicates it to be in the vicinity of \$90,000 or more
- 13 Includes embezzlement by employees and the similar offence of larceny by a clerk or servant
- 14 ANZSOC classifications group cheque fraud with card frauds, but we have separated them for individual attention due to their distinctly different characteristics.
- 15 Note that where employees use cheques from their workplaces without authorisation, the fraud type is considered to be embezzlement and consequently would be discussed in that section.

Australian Bureau of Statistics (ABS). (2011). Australian and New Zealand Standard Offence Classification (ANZSOC) 2011 (ABS Cat. No. 1234.0). ABS, Canberra. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/1234.0>

Australian Bureau of Statistics (ABS). (2012). Personal Fraud 2010-11 (ABS cat. no. 4528.0), ABS, Canberra. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/65767D57E11FC149CA2579E40012057F?opendocument>

Cross, C., Smith, R. & Richards, K. (2014). Challenges of responding to online fraud victimisation in Australia (Trends and issues in crime and justice no. 474), Australian Institute of Criminology, Canberra. Retrieved from <http://aic.gov.au/publications/current%20series/tandi/461-480/tandi474.html>

EY (2012) Growing Beyond: a place for integrity. 12<sup>th</sup> Global Fraud Survey. EY. Retrieved from [http://www.ey.com/Publication/vwLUAssets/Global-Fraud-Survey-a-place-for-integrity-12th-Global-Fraud-Survey/\\$FILE/EY-12th-GLOBAL-FRAUD-SURVEY.pdf](http://www.ey.com/Publication/vwLUAssets/Global-Fraud-Survey-a-place-for-integrity-12th-Global-Fraud-Survey/$FILE/EY-12th-GLOBAL-FRAUD-SURVEY.pdf)

Goh, D. & Holmes, J. (2014). An update of long-term trends in property and violent crime in New South Wales: 1990-2013 (Bureau Brief 93). NSW Bureau of Crime Statistics and Research, Sydney. <http://www.bocsar.nsw.gov.au/agdbasev7wr/assets/bocsar/m71685414/bb93.pdf>

KPMG (2010) Fraud and Misconduct Survey 2010: Australia and New Zealand. KPMG Retrieved from <http://www.kpmg.com/AU/en/IssuesAndInsights/ArticlesPublications/Fraud-Survey/Documents/Fraud-and-Misconduct-Survey-2010.pdf>

KPMG (2012) A Survey of fraud, bribery and corruption in Australia and New Zealand 2012. KPMG Retrieved from <https://www.kpmg.com/AU/en/IssuesAndInsights/ArticlesPublications/Fraud-Survey/Documents/fraud-bribery-corruption-survey-2012v2.pdf>

Lindley, J., Jorna, P. & Smith, R. G. (2012) Fraud against the Commonwealth 2009–10 annual report to government (Monitoring Report No. 18), Australian Institute of Criminology, Canberra, Retrieved from <http://aic.gov.au/publications/current%20series/mr/1-20/18.html>

Moffatt, S. & Fitzgerald, J. (2006). The Relationship between petrol theft and petrol prices (Crime and Justice Bulletin No. 101), NSW Bureau of Crime Statistics and Research, Sydney. Retrieved from <http://www.bocsar.nsw.gov.au/agdbasev7wr/bocsar/documents/pdf/cjb101.pdf>

Prenzler, T. (2011). Welfare fraud in Australia: Dimensions and issues (Trends & Issues in Crime and Criminal Justice no. 421), Australian Institute of Criminology, Canberra. Retrieved at <http://www.aic.gov.au/publications/current%20series/tandi/421-440/tandi421.html>

## REFERENCES

Australian Convenience and Petroleum Marketers Association (ACAPMA). (2012). Media release: Service station owners unite to stop drive off crime, 18/9/2012. Retrieved from [http://www.acapma.com.au/images/Media\\_release\\_NationalDriveoffRegister\\_final.pdf](http://www.acapma.com.au/images/Media_release_NationalDriveoffRegister_final.pdf)

Australian Payments Clearing Association (APCA). (2014). Australian Payments Fraud Details and Data 2014. APCA, Sydney. Retrieved from: <http://apca.com.au/docs/fraud-statistics/Australian-payments-fraud-details-and-data-2014.pdf>

PWC (2014) Global Economic Crime Survey, PWC. Retrieved from <http://www.pwc.com/gx/en/economic-crime-survey/key-findings.jhtml>

Smith, R. G. & Hutchings, (2014) Identity crime and misuse in Australia: Results of the 2013 online survey, (Research and Public Policy Series 128), Australian Institute of Criminology: Canberra. Retrieved from [http://aic.gov.au/media\\_library/publications/rpp/128/rpp128.pdf](http://aic.gov.au/media_library/publications/rpp/128/rpp128.pdf)

Warfield, B. (2013) Employee Fraud in Australian Financial Institutions. Sydney Warfield & associates. Retrieved from [http://www.warfield.com.au/Warfield\\_Employee\\_Fraud\\_in\\_Australian\\_Financial\\_Institutions.pdf](http://www.warfield.com.au/Warfield_Employee_Fraud_in_Australian_Financial_Institutions.pdf)

## APPENDIX 1

**Figure 4. Incidents of the fraud category Fail to Pay recorded by NSW Police, April 2012 to March 2014**

