What lies behind the growth in fraud?
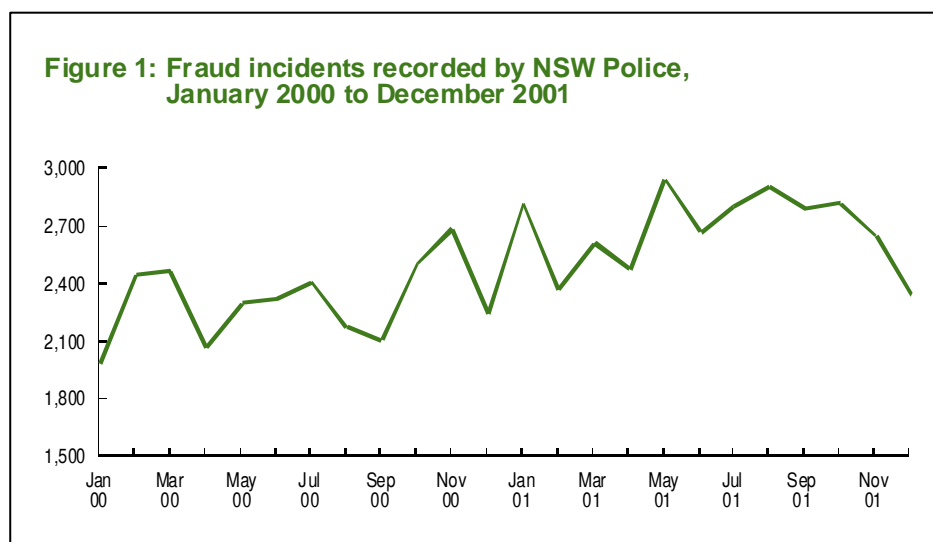
Marilyn Chilvers

Fraud is one of four major categories of reported crime in NSW that showed a statistically significant upward trend in the annual crime statistics report for 2001. While frauds are commonly assumed to be associated with the financial sector, closer examination of the data shows that less than one in seven fraud incidents recorded by police in 2001 occurred in financial institutions. The majority of recorded fraud incidents are associated with retail and wholesale premises. In particular, fraud in service station premises accounted for more than half of the increase in total fraud recorded in NSW between 2000 and 2001. The incidence of 'drive-offs', whereby offenders fraudulently obtain petrol, increased markedly in the Sydney metropolitan area in 2001. More than one-third of the total Statewide increase in service station fraud between 2000 and 2001 occurred in three Sydney regions: Canterbury – Bankstown, Central Western Sydney, and Blacktown. In 2001, about 20 fraud incidents per week were recorded in service stations within each of these three areas.

INTRODUCTION

The report *New South Wales Recorded Crime Statistics 2001* showed a significant upward trend in the incidence of fraud over the 24 months to December 2001.[1] Figure 1 graphs the monthly number of fraud incidents recorded by New South Wales (NSW) Police between January 2000 and December 2001. Overall, the annual number of incidents recorded rose by 16.3 per cent between 2000 and 2001, from an average 2,300 incidents per month in 2000, to almost 2,700 incidents per month in 2001. (The apparent decrease in recorded fraud incidents in the final months of 2001 is probably due to a lag in reporting rather than a genuine decrease in incidents.)

In this paper, we examine the increase in the incidence of fraud in NSW by detailing (1) the premise types associated with fraud incidents, (2) the nature of specific fraud crime types that contributed significantly to the increase,

Figure 1: Fraud incidents recorded by NSW Police, January 2000 to December 2001

and (3) the geographic location (NSW region) of fraud incidents.

In order to determine the source of the growth in recorded fraud incidents between 2000 and 2001, the 'premise type' that is associated with each fraud incident was examined. When police

record a crime incident in the Computerised Operational Policing System (COPS), three descriptors of premise type may be entered, at varying levels of detail. For example, a fraud incident that occurred in a bank is recorded as occurring in the business/commercial sector (general premise

type classification), in a financial institution (more detailed premise type sub-classification), and in a bank (specific premise type). In this bulletin, we examine the growth in fraud incidents to the most detailed level of specific premise type.
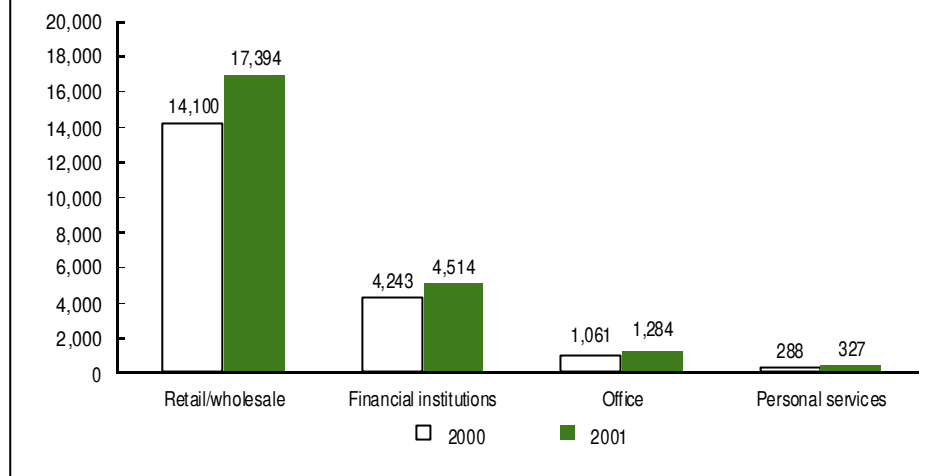
BUSINESS/COMMERCIAL PREMISES

Each year, the majority of fraud incidents occur in business/commercial premises. In 2001, almost three-quarters of all fraud incidents occurred in such settings (23,527 incidents out of a total 32,098 fraud incidents). Fraud incidents recorded in business/commercial premises also accounted for the majority of the total increase in fraud in NSW between 2000 and 2001. Overall, 84.2 per cent of the increase in fraud incidents in NSW is attributed to business/ commercial premises, accounting for 3,782 of the total 4,491 additional incidents. (Further details about the numbers of fraud incidents recorded in each premise type classification are shown in Table 3 in the Appendix.)

Figure 2 details the number of incidents recorded in each premise type within the business/commercial sector in 2000 and 2001. The data in Figure 2 show that the majority of such fraud incidents occur in retail/wholesale premises. Each year more than half of all fraud incidents recorded by NSW Police occur in retail/wholesale premises. Furthermore, almost three-quarters of the increase in fraud between 2000 and 2001 was due to an increase in the number of fraud incidents recorded in retail/wholesale premises (3,294 incidents of the additional 4,491 incidents recorded in 2001). The annual percentage increase in recorded fraud within the retail sector was also substantially higher than the average Statewide increase (23.4% compared with 16.3% overall).

The second highest number of business/ commercial fraud incidents each year occurs in financial institutions, accounting for 14 per cent of all NSW

Figure 2: Fraud incidents recorded in business/commercial premises, NSW, 2000-2001

frauds in 2001. The annual percentage increase between 2000 and 2001 for financial sector fraud, however, was below the State average, at 6.4 per cent, and accounted for just 6 per cent of the total increase in fraud incidents in NSW over the two-year period. Financial institutions (such as banks, building societies and credit unions) accounted for 271 additional fraud incidents in 2001, compared with more than 3,000 additional incidents that occurred in retail/wholesale premises. Further details about the numbers of fraud incidents recorded in the premise type sub-classifications shown in Figure 2 are given in Table 4 in the Appendix.

RETAIL/WHOLESALE FRAUD

The substantial contribution of the business/commercial premise classification, and of the retail/wholesale premise sub-classification, to the recent increase in recorded fraud incidents were noted above. In this section we examine the source of the increase in fraud incidents in specific retail/ wholesale premises.

Table 1 details fraud incidents in specific premise types within the retail/wholesale premise sub-classification. The premise types are ranked in decreasing order of

magnitude according to the total number of incidents recorded in 2001. Table 1 shows, for each premise type, the number of fraud incidents recorded in 2000 and 2001, the absolute and percentage change in incidents over the two-year period, and the contribution to the total change in fraud incidents in NSW. Note that only those premise types that recorded at least one per cent of total NSW fraud incidents in 2001 are listed in the table.

Table 1 shows that almost half of all retail/wholesale fraud incidents recorded in 2001 occurred in service stations or service station supermarkets (6,366 and 1,837 incidents respectively, from a total 17,394 retail incidents). Furthermore, these two categories combined (i.e. all service station incidents) accounted for more than half of the total increase in fraud incidents in NSW between 2000 and 2001. Of the 4,491 additional incidents recorded in NSW that brought about the 16.3 per cent Statewide increase in fraud, 2,313 were attributed to service station premises. Both service station related premise types recorded an annual percentage increase in fraud that was significantly above the State average — an increase of 37.7 per cent for service stations generally, and 45.1 per cent in service station supermarkets. In total,

Table 1: Fraud incidents recorded in retail / wholesale premises, NSW, 2000-2001

Premise type	Recorded incidents	Recorded incidents	Change in recorded incidents	Percentage change (%)	Proportion contribution to total NSW increase (%)
	2000	2001	2000-2001	2000-2001	2000-2001
Service station	4,624	6,366	1,742	37.7	38.8
Service station supermarket	1,266	1,837	571	45.1	12.7
Department store	1,114	1,175	61	5.5	1.4
Supermarket	964	1,134	170	17.6	3.8
Electronic/sales	704	774	70	9.9	1.6
Chemist	414	433	19	4.6	0.4
Clothing shop	439	408	-31	-7.1	
Restaurant/cafe	186	400	214	115.1	4.8
Shopping complex	255	366	111	43.5	2.5
Other retail/commercial*	(4,134)	(4,501)			
Total retail/wholesale premises	**14,100**	**17,394**	**3,294**	**23.4**	**73.3**
Total business/commercial premises	**19,745**	**23,527**	**3,782**	**19.2**	**84.2**
Total NSW fraud	**27,607**	**32,098**	**4,491**	**16.3**	**100.0**

* Comprised of 40 individual premise types in which less than 1% of total NSW fraud incidents were recorded in 2001.

these two premise types combined (service stations and service station supermarkets) recorded a 39.3 per cent increase in fraud incidents between 2000 and 2001. These two premise types will be combined for the purposes of further analysis in this paper.

THE NATURE OF SERVICE STATION FRAUD

Having noted the significant influence on NSW fraud crime statistics in 2001 of one specific type of fraud — that which occurs in service station premises — it is useful to examine the nature of these incidents.

Most fraud incidents that occur in service station premises are classified as 'deception offences'. In 2001, about 95 per cent of all service station frauds were classified either as 'deception offences' or as 'other fraud'.[2] A small number of incidents (less than 2% in each case) were classified as 'make/use false instrument' and 'counterfeit

currency'. Typical offences in service station premises, which incur the charge of 'obtain property by deception' (s. 178BA of the *NSW Crimes Act 1900*), were described recently in the *Police Service Weekly*.[3] Such offences include instances where:

1) A person fills up a car with petrol with no intention to pay for it, and then drives away ('drive-offs').

2) A person fills their tank with petrol and then attends the counter of the service station, but has no means to pay (that is, no cash or credit cards). The person leaves their details, but does not return to pay.

3) A person fills up with petrol and then attempts to pay with a credit card or a cheque, the account for which does not have any funds.
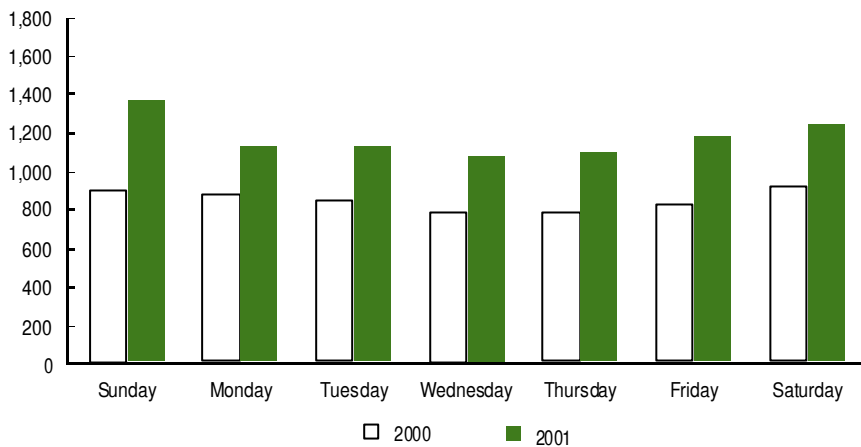
The *Police Service Weekly* states further that 'no charge is preferred' in the absence of evidence capable of proving beyond reasonable doubt 'the person's intention not to pay' (in example 2) or 'that the person did not believe that they

had the means to pay for the petrol' (in example 3). In addition, police will not commence criminal proceedings in cases where 'a person with the intention of paying, fills their tank but drives off, honestly forgetting to pay', as there is no criminal intent.

It should be noted that police also record other types of crime incidents that occur in service station premises each year. Most notably, substantial numbers of theft offences such as break and enter, steal from retail store and steal from motor vehicle offences occur in service stations and service station supermarkets. Offences other than fraud, however, are not considered in this bulletin.

Figures 3 and 4 show the day of week and time of day that fraud offences in service station premises occurred in NSW in 2000 and 2001. Figure 3 shows that the distribution of fraud incidents in service stations was fairly uniform across the week in 2000. In 2001, the distribution is less uniform with a higher proportion of incidents occurring on

Figure 3: Fraud incidents recorded in service stations, by day of week, NSW, 2000-2001

Figure 4: Fraud incidents recorded in service stations, by time of day, NSW, 2000-2001

weekends. Service station fraud incidents reported on Sundays accounted for 16.6 per cent of all such incidents in 2001, followed by Saturdays (with 15.2% of incidents), and Fridays (14.3%).

There was a large increase in the number of fraud incidents recorded on Sundays in 2001, compared with 2000. In 2001, there were 1,360 fraud incidents recorded in service station premises on Sundays, compared with just 889 incidents in 2000, representing

an increase of 53.0 per cent (compared with a 39.3% increase overall).

The distribution of service station fraud incidents within three-hourly intervals on all days of the week combined is shown in Figure 4. The most prevalent time period for such incidents across the week is between 6pm and 9pm (accounting for 20.0% of all incidents in 2001), followed by the 9pm to midnight time period (17.4% of incidents). The time periods that recorded the highest percentage increases in incidents
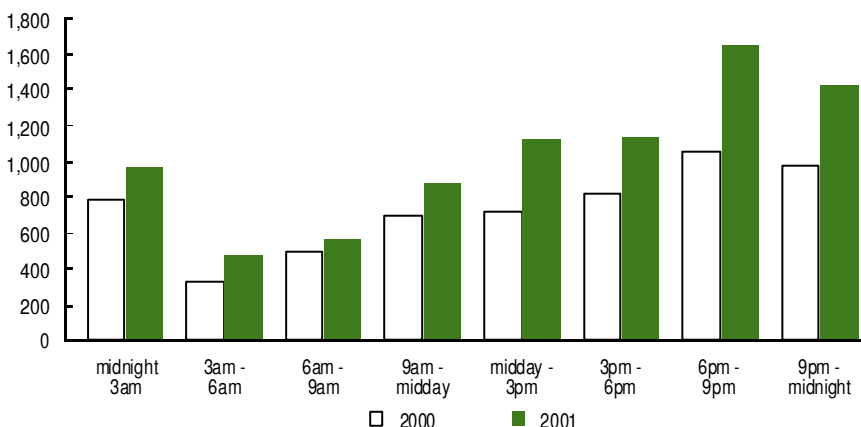
between 2000 and 2001 were the midday to 3pm interval (up by 56.3%), and the time periods noted above as the most prevalent — namely the 6pm to 9pm (up by 55.6%) and the 9pm to midnight time periods (up by 46.5%).

FRAUD INCIDENTS BY REGION

In this section, we examine the geographic location of the increase in (1) total fraud incidents and (2) service station fraud incidents in NSW between 2000 and 2001. Table 2 shows the number of recorded incidents, and the annual absolute and percentage change in incidents of fraud, for each Sydney Statistical Subdivision (SSD) and each NSW Statistical Division (SD) between 2000 and 2001. The location of both total fraud incidents, and fraud incidents recorded in service station premises (including service station supermarkets) are detailed in the table. Regions which recorded a statistically significant upward monthly trend in the total incidence of fraud over the 24 months January 2000 to December 2001 are noted.[4]

The first five columns of Table 2 show details about all fraud incidents recorded in regions of NSW in 2000 and 2001. The regions are listed in decreasing order of magnitude, according to the annual percentage change in recorded fraud incidents between 2000 and 2001. The St. George — Sutherland SSD recorded the largest percentage increase in the overall incidence of fraud between 2000 and 2001 (an increase of 55.3%), followed by Canterbury — Bankstown (up by 43.2%) and Central Western Sydney (up by 40.3%). All of the areas which recorded an above average percentage increase in the rate of fraud (compared with the NSW increase of 16.3%) are Sydney regions. Each of these 12 regions showed a statistically significant upward monthly trend in the recorded incidence of fraud over the two-year time period. Most Sydney regions recorded high rates of fraud in 2001, as shown in the fourth column in

Table 2: Fraud incidents in NSW Statistical Divisions and Sydney Statistical Subdivisions, 2000-2001

NSW region	*All fraud*					*Service station fraud*		
	Recorded incidents	Recorded incidents	Change in recorded incidents	Percentage change (%)	Rate	Recorded incidents	Recorded incidents	Change in recorded incidents
	2000	*2001*	*2000-2001*	*2000-2001*	*2001*	*2000*	*2001*	*2000-2001*
St George − Sutherland	1,204	1,870	666*	55.3	429.3	147	392	245*
Canterbury − Bankstown	1,606	2,300	694*	43.2	732.0	549	1,009	460*
Central Western Sydney	1,675	2,350	675*	40.3	789.3	503	798	295*
Lower Northern Sydney	1,139	1,579	440*	38.6	533.1	109	153	44*
Northern Beaches	649	869	220*	33.9	375.4	43	81	38*
Inner Western Sydney	830	1,101	271*	32.7	669.8	218	293	75*
Blacktown	1,456	1,873	417*	28.6	716.9	761	1,005	244*
Central Northern Sydney	688	848	160*	23.3	209.4	108	166	58*
Inner Sydney	3,668	4,508	840*	22.9	1,529.0	220	279	59
Eastern Suburbs	1,039	1,247	208*	20.0	504.0	60	128	68*
Fairfield − Liverpool	1,879	2,252	373*	19.9	648.6	985	1,095	110*
Outer Western Sydney	1,219	1,459	240*	19.7	461.8	385	570	185*
Outer South Western Sydney	893	986	93	10.4	425.1	422	531	109*
Gosford − Wyong	897	969	72	8.0	325.6	110	164	54
Illawarra	1,145	1,230	85	7.4	312.8	103	233	130*
North Western	369	382	13	3.5	328.1	61	81	20
Murrumbidgee	721	741	20	2.8	498.0	102	139	37
Richmond − Tweed	711	731	20	2.8	343.5	65	105	40*
South Eastern	700	709	9	1.3	384.4	134	168	34
Far West	53	50	-3	-5.7	215.5	6	10	4
Central West	668	582	-86	-12.9	335.9	111	130	19
Hunter	2,110	1,808	-302	-14.3	310.7	292	330	38
Murray	457	342	-115	-25.2	310.6	132	68	-64
Mid-North Coast	1,244	903	-341	-27.4	328.3	210	213	3
Northern	580	401	-179	-30.9	232.8	54	62	8
New South Wales	**27,607**	**32,098**	**4,491***	**16.3**	**491.4**	**5,890**	**8,203**	**2,313***

* Indicates statistically significant upward monthly trend between January 2000 and December 2001.

Table 2. (The rate in each region is calculated as the number of recorded fraud incidents per 100,000 resident population.) No region outside Sydney has a rate of fraud substantially above the State rate in 2001.

The last three columns of Table 2 show the number of frauds recorded in service station premises for each region, and the absolute change in service station fraud incidents between 2000 and 2001. Particularly large absolute increases in service station fraud incidents occurred in four areas of Sydney. Canterbury − Bankstown SSD, Central Western Sydney, St. George − Sutherland and Blacktown SSD each recorded more than 200 additional fraud incidents in service stations in 2001, compared with 2000. In total, these four regions account for more than half of the total Statewide increase in frauds recorded in service station premises. (Note that these same four regions were the only regions in NSW to record a significant upward trend in robbery with a firearm over the same 24-month period.[5]) In these four regions, service station fraud incidents comprised a significant proportion of all fraud incidents recorded

within each region in 2001. In particular, more than half of all frauds recorded in Blacktown SSD occurred in service stations.

In contrast, some Sydney areas that have high rates of fraud, record only a small proportion of these frauds in service station premises. In particular, less than 10 per cent of all frauds occurred in service stations in the areas of Lower Northern Sydney, the Northern Beaches and Inner Sydney. In the Inner Sydney region, a large proportion of frauds are attributed to financial institutions (1,045 of all 4,508 frauds recorded in 2001). This may be due to the centralised fraud reporting systems of the major banks. In Lower Northern Sydney and in the Northern Beaches SSD, financial institutions and retail premises other than service stations (such as department stores, electronic stores and general supermarkets) account for a substantial proportion of total frauds recorded within each area.

SUMMARY AND DISCUSSION

This bulletin examines the significant increase in fraud incidents recorded by NSW Police between 2000 and 2001. It is important to bear in mind that an unknown, but significant, number of frauds are not reported to police and hence cannot be included in the analyses in this paper.

Firstly, examining the premise types associated with all recorded fraud incidents, we found that:

• more than half of all reported fraud incidents occur in retail/wholesale premises,

• less than one in seven reported frauds occur in financial institutions,

• three-quarters of the *increase* in frauds reported in NSW occurred in retail/wholesale premises,

• fraud in service stations accounted for almost half of all retail/wholesale fraud recorded in 2001, and

• fraud in service stations accounted for more than half of the total *increase* in recorded fraud in NSW between 2000 and 2001.

Because of the high incidence of fraud in service station premises, we examined these offences more closely. Most frauds in service stations are incidents of deception, whereby petrol (and other goods) are obtained by persons who either fail to pay, or who deceive the service station attendant regarding their capacity to pay. Although service stations have security cameras that record the licence plates of drive-away vehicles, police often have difficulty gathering sufficient evidence to prosecute alleged offenders. The difficulty in obtaining evidence occurs either because (a) further investigation reveals that the car was a stolen vehicle, and hence the driver at the time cannot be identified, or (b) persons who are followed up claim that they merely forgot to pay.[6]

The increased incidence of recorded service station fraud may have contributed to the recent decrease in the proportion of fraud crimes that have been satisfactorily cleared by investigation by NSW Police.[7] Fraud is the second most frequently cleared property offence in NSW, after steal from retail store offences, for which almost two-thirds of all reported offences are eventually cleared. (Note, however, that it is possible that fraud crimes, and steal from retail store offences, are under-reported. Such crimes may be more frequently reported to police when the likelihood of apprehending an offender is high.)

In 2001 only 23.3 per cent of fraud incidents reported to police were cleared within 90 days, compared with 29.8 per cent in 2000 and 36.5 per cent in 1999.[8] The substantial contribution of fraud in service stations to the recent increase in fraud may have exacerbated the difficulties in mounting a case for successful prosecution, and hence clearing, these offences.

Finally, in this bulletin we examined the geographical location of all frauds and

of service station frauds in NSW in 2000 and 2001. In summary, we found that:

• an upward trend in fraud crime was detected in 12 of the total 14 Sydney geographical regions,

• no country region showed an upward trend in fraud in 2000-2001,

• most Sydney regions which recorded an upward trend in total fraud crime also recorded an upward trend in service station fraud, and

• more than half of the total Statewide increase in service station fraud incidents came from an increase in four Sydney regions, namely the Canterbury − Bankstown, Central Western Sydney, St. George − Sutherland and Blacktown SSDs.

The question remains whether the significant increase in fraud, particularly in fraud associated with service stations, can be stemmed. Police suggest that the latter can only be done in partnership with service station proprietors and oil companies willing to pursue proactive prevention measures. Trials of schemes in metropolitan service stations to reduce fraud have recently been undertaken by NSW Police.[9] Characteristics of the schemes may include:

• the formation of a consultative group of all local service station proprietors and representative police to formulate a strategy to address the problem;

• the introduction of a voluntary system requiring pre-payment for petrol, or attendance by the customer at the counter prior to turning on the pump for petrol provision; this system varies between implementation during 'at-risk' times (eg 11pm to 4am), during hours of darkness (6pm to 6am), or full implementation over 24 hours;

• formal sponsorship of the fuel pre-payment program by police, including media promotion and generation of public support;

- the appointment of a police liaison officer within the Local Area Command (LAC) to take reports of incidents and to keep participants informed of results;

- the design and provision of a faxable form for reporting service station incidents to police, improving the timeliness of reporting, and reducing police time spent taking reports; and

- police undertaking follow-up surveys of service station proprietors to elicit feedback about the scheme.

The problem of 'drive-offs' and fraud activities associated with service stations is not unique to NSW. Fuel pre-payment schemes have been promoted by police and trialed in South Australia, Victoria, Queensland and Western Australia. The interstate models varied from 24-hour pre-pay, to late-night pre-pay only, and from systems on all bowsers to those limited to only remote bowsers (located furthest from the payment counter) within a service station.[10]

The uptake of a general metropolitan fuel pre-payment scheme in NSW by service station owner-operators and by the major oil companies has been slow. The main concerns expressed are the potential reduction in associated shop sales, the loss of market share where the scheme is not implemented by neighbouring outlets, and the cost and difficulty of implementing new technology to support pre-payment. The experience in South Australia, however, where implementation of the scheme is most advanced, and where some evaluation has been undertaken, is that initial concerns about the impact on customer numbers and shop sales were mostly unfounded. Furthermore, a significant reduction in service station losses due to drive-offs and inability to pay was detected.[11]

Fraud incidents in retail/wholesale premises other than service stations also involve the offence of obtaining

benefit (goods or services) by deception. Police have noted the use of stolen credit card *information* to order goods for delivery by telephone. Offenders have obtained credit card details from dockets that have not been secured by retailers and/or customers (possibly thrown away at the point of sale). Increased attention to securing credit card information on dockets, as well as the credit cards themselves, is recommended by the Police.[12]

NOTES

1 Allen J., Chilvers M., Doak P., Goh D., Painting T. & Ramsay M. 2002, *New South Wales Recorded Crime Statistics 2001.* NSW Bureau of Crime Statistics and Research, Sydney.

2 Note that almost half of all fraud offences that occur in service station premises are classified as 'other fraud' on COPS. No further information about the offence is readily available for analysis.

3 NSW Police Service 2002, *Police Service Weekly*, Vol. 14 no.4, p.10. NSW Police Service, Sydney.

4 The statistical test used is Kendall's rank order correlation test for trend; see, for example, Conover, W.J. 1980, *Practical Non-Parametric Statistics*, 2nd edn, John Wiley and Sons, pp.256-260.

5 Allen, J. 2002 *NSW Recorded Crime Statistics 2001: Regional Analysis of Crime Trends*, unpublished working paper. NSW Bureau of Crime Statistics and Research, Sydney.

6 From discussions with Commander, Parramatta LAC.

7 A cleared criminal incident is one that, in the view of police, has been satisfactorily cleared by charge or otherwise. An incident is cleared by charge when the police have laid a charge or an information against at least one person. For further details see Allen J., Chilvers M., Doak P., Goh D., Painting T. and Ramsay M. 2002, *New South Wales Recorded Crime Statistics 2001*, NSW Bureau of Crime Statistics and Research, Sydney, p.vii.

8 Note that the calculation in 2001 is based on only 9 months of data, from January to September, while in 1999 and 2000, the whole 12 months of data are used. This does not affect the comparability of the percentage of incidents cleared within 3 months over the three years.

9 The list of initiatives were derived from discussions with Crime Managers at Campbelltown and Green Valley LACs where fuel pre-payment trials were held in 2001.

10 Information obtained from Crime Reduction Section, South Australia Police; excerpts supplied from Motor Trade Association of South Australia (MTA (SA)) Service Station Magazine, early 2002 issue.

11 Information from MTA (SA) from 69 participating service stations in South Australia. The trial was conducted from August to October 2001. Total losses reported in the four months from July to October were: July - $15,089, August - $5,647, September - $8,345, and October - $9,251.

12 From discussions with Crime Manager, Campbelltown LAC.

APPENDIX

Table 3: Fraud incidents recorded by premise type classification, NSW, 2000-2001

Classification	Recorded incidents 2000	Recorded incidents 2001	Change in recorded incidents 2000-2001	Percentage change (%) 2000-2001	Proportion contribution to total NSW increase (%) 2000-2001
Business/commercial	19,745	23,527	3,782	19.2	84.2
Residential	2,841	3,189	348	12.2	7.7
Outdoor/public place	1,385	1,540	155	11.2	3.5
Licensed premises	1,648	1,468	-180	-10.9	
Carpark	420	491	71	16.9	1.6
Other*	(1,568)	(1,883)			
Total NSW fraud	**27,607**	**32,098**	**4,491**	**16.3**	**100.0**

* Includes 'unknown' and 12 other premise types in which less than 1% of total NSW fraud incidents were recorded in 2001.

Table 4: Fraud incidents recorded in business / commercial premises, NSW, 2000-2001

Sub-classification	Recorded incidents 2000	Recorded incidents 2001	Increase in recorded incidents 2000-2001	Percentage change (%) 2000-2001	Proportion contribution to total NSW increase (%) 2000-2001
Retail/wholesale	14,100	17,394	3,294	23.4	73.3
Financial institution	4,243	4,514	271	6.4	6.0
Office	1,061	1,284	223	21.0	5.0
Personal services	288	327	39	13.5	0.9
Not further classified	(53)	(8)			
Total business / commercial premises	**19,745**	**23,527**	**3,782**	**19.2**	**84.2**
Total NSW fraud	**27,607**	**32,098**	**4,491**	**16.3**	**100.0**