

Household Payment Patterns in Australia

A study of the use of payment methods

Reserve Bank of Australia

November 2007

This paper was prepared for the Payments System Review Conference organised by the Reserve Bank of Australia and the Centre for Business and Public Policy at the Melbourne Business School, to be held in Sydney on 29 November 2007. It was prepared by a team consisting of David Emery, Darren Massey and Tim West of the Reserve Bank's Payments Policy Department. The paper serves as input into the Reserve Bank's 2007/08 review of the payments system reforms. The Reserve Bank thanks all the financial institutions, businesses and individuals who participated in the study and welcomes comments on the findings of the paper. Comments should be sent to pysubmissions@rba.gov.au or to emeryd@rba.gov.au.

Household Payment Patterns in Australia

CONTENTS

1	Introduction
2	The Aggregate Data
4	The Data Used in this Study
5	The Diary Results
9	Cash Payments
14	Card Payments
20	Bill Payment Methods
27	Conclusions
28	Box A: Round Payment Amounts
29	Appendix A: Survey of Individuals
31	Appendix B: Survey of Small Business
34	References

HOUSEHOLD PAYMENT PATTERNS IN AUSTRALIA

1. Introduction

This paper reports the results of a study on payment patterns in Australia undertaken by the Reserve Bank of Australia as part of its 2007/08 review of the payments system reforms.

The study aims to provide a comprehensive picture of how individuals in Australia make payments for goods and services. While, historically, reasonably good data have been available on the aggregate use of electronic and cheque payments, there have been comparatively little disaggregated data available and little information about the use of cash for payments. This study fills these gaps.

Understanding how individuals pay for goods and services is a key input into the Reserve Bank's review. It is important for making assessments about the potential for substitution between various payment methods and, combined with data on the cost of running individual payment systems, can help provide an indication of the aggregate costs of the payments system. This study should also assist those in the payments industry to better understand how, and where, various payment instruments are used.

The study draws on three main sources. The first is a survey commissioned by the Reserve Bank in which individuals were asked to record all their day-to-day payments over a two-week period. The second is detailed payments data provided by financial institutions and large merchants. And the third is a survey of small merchants on the use of different methods of payment by their customers.

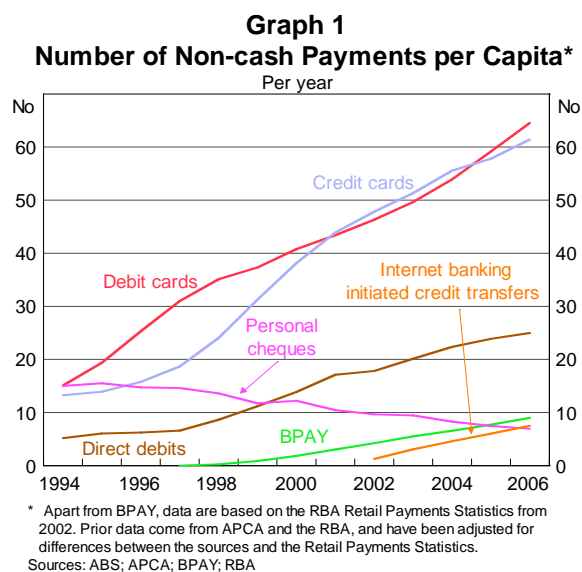
The main conclusions of this study are as follows.

- Cash is by far the most widely used payment instrument in Australia, accounting for around 70 per cent of everyday transactions. On average, cash transactions tend to be for relatively small amounts, so that cash's share of the value of payments is considerably lower at around 38 per cent.
- Cards are the dominant payment method for transactions between \$50 and \$500. Both debit and credit cards are used extensively for these mid-sized payments, although there is a tendency for the share of spending on credit cards to increase as the payment value rises. Above \$500, credit card payments outnumber debit card payments by a ratio of 4 to 1.
- Cheques are infrequently used for point-of-sale payments, although they are still used reasonably frequently for bill payments and for high-value transactions. The use of electronic bill payment methods has increased significantly over recent years. Since 2002, the number of BPAY payments has doubled, while the number of direct debits has increased by almost 50 per cent.
- Payment patterns vary considerably across businesses. Cash tends to be used most in situations where average payment values are low and where quick tender times are preferred (e.g. take-away stores and newsagents). Conversely, cheques and BPAY are used more frequently for bill payments where payments are larger. Card payment methods are used across a wide range of merchant types. Debit cards, in particular, are used frequently at supermarkets and petrol stations, while credit and charge cards are used widely for holiday travel and accommodation, and on insurance and health/medical spending.
- Age appears to play a role in influencing payment patterns. Generally, older individuals tend to use cash and cheques more frequently than younger people, who use debit cards more often. The use of credit cards is highest for those aged between 30 and 50.
- ATMs are the most common channel for withdrawing cash, with ATM withdrawals accounting for around two-thirds of total cash withdrawn from bank accounts. Larger value withdrawals tend to take place over-the-counter at a bank branch, a method more frequently used by older Australians.

The paper is structured as follows. Section 2 briefly summarises the available aggregate data on payment patterns in Australia, while Section 3 discusses the new data sources used in this study. Section 4 then summarises the data from the survey of individuals, while Sections 5 through 7 provide more detailed information about the use of cash, cards and other payment instruments. Finally, Section 8 concludes.

2. The Aggregate Data

The existing aggregate data on payment patterns in Australia have been discussed extensively by the Reserve Bank over recent years, including in the Payments System Board's Annual Reports. These data include details of the number and value of the main electronic forms of payments as well as cheques. They show that the use of the various non-cash payment methods has changed substantially over the past decade or so (Graph 1). In particular, the use of electronic and card-based payment methods has grown very strongly, while the use of cheques has declined. Since 1994, the number of personal cheques written per person has more than halved, while the number of card-based payments per person has increased fourfold. There has also been substantial growth in the use of direct debits, BPAY and internet payments.



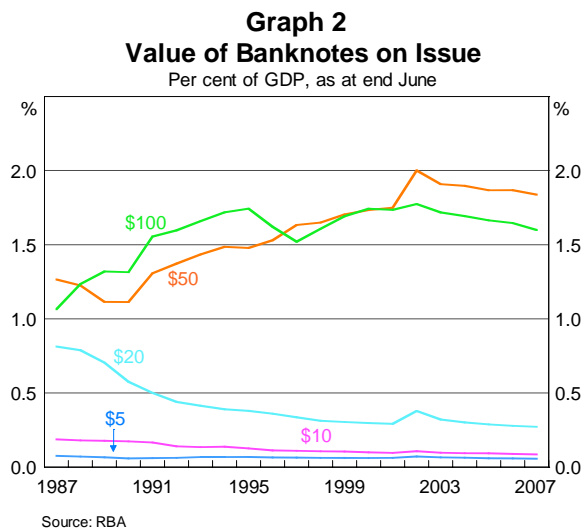
The aggregate data also suggest that over the year to June 2007, Australians made an average of around 14 million non-cash payments per day, with debit and credit card payments accounting for around half of these (Table 1). Most of the value of non-cash payments is, however, accounted for by cheques and the direct entry system (direct debits and direct credits), reflecting the large average value of these payments. For example, the average value of a direct credit is almost \$5 000, in contrast to the average value of a debit card payment of \$68. Although the number of credit card payments is roughly the same as the number of debit card payments, credit card payments account for around twice the value of debit card payments, given their higher average value.

Table 1: Non-Cash Payments in Australia
Year to June 2007

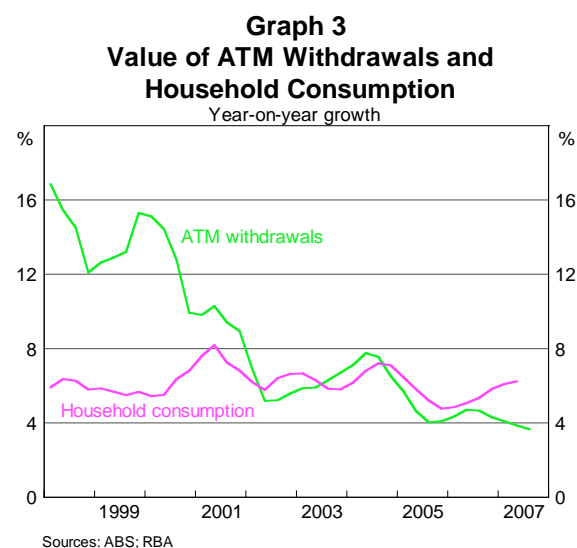
	Number (million)	Value (\$billion)	Number per day (million)	Average value (\$)
Debit cards ^(a)	1 393	95	3.8	68
Credit cards	1 296	179	3.6	138
Direct credits	1 184	5 880	3.2	4 966
Direct debits	531	4 284	1.5	8 068
Cheques	432	1 743	1.2	4 035
BPAY	198	133	0.5	672
Total	5 035	12 314	13.8	2 446

(a) Excludes cash-out.
Sources: RBA, BPAY

In comparison, little information is available regarding the use of cash as a payment method. The main available data relate to the value of notes and coins outstanding. These data show that the value of currency on issue has grown broadly in line with GDP over recent years, with the ratio of currency to GDP averaging 3.9 per cent over the year to June 2007, very close to its average of the past 30 years. There has been very strong growth in the value of \$50 notes outstanding, and a corresponding decline in the value of \$20 notes outstanding (Graph 2).



Another source of data on cash is the value of cash withdrawals through ATMs. These withdrawals grew very strongly during the 1990s, as ATMs increasingly replaced branches as the main means by which individuals obtained cash. More recently, however, the value of ATM withdrawals has been growing at a rate slightly lower than that of final private consumption, providing some evidence of a slowdown in the growth of cash for transaction purposes (Graph 3).



There are only limited data on the use of cash for payments in Australia. The main source has been information occasionally provided by large retailers, which suggests that cash is used widely.¹ However, to the Reserve Bank's knowledge, there has, to date, been no systematic collection of comprehensive transaction-level data on the use of cash in Australia.

¹ See also the survey conducted for DCITA (2006) which asked participants what they considered to be their most frequently used payment method for transaction values of \$10, \$30 and \$100. The stated preferences were quite similar to the diary survey results (see Section 4).

3. The Data Used in this Study

This study uses three new sources of data to provide a more comprehensive picture of payment patterns than can be obtained from the aggregate data summarised in the previous section. The first is a survey of individuals commissioned by the Reserve Bank and conducted by Roy Morgan Research. The second is data from a range of financial institutions and merchants. And the third is data provided directly by small business, in response to a survey conducted by the Reserve Bank.

3.1 Survey of Individuals

The main source of data for the paper is a survey of individuals undertaken for the Reserve Bank by Roy Morgan Research. Individuals participating in the survey were asked to record the details of every purchase they made over a two-week period in June 2007 in a specially designed pocket-sized diary. Roy Morgan Research recruited 1 000 participants, who were asked to enter information on the payment method used, the size of the transaction, the merchant category and the channel (for example, point of sale, internet, telephone or mail). Participants were also asked to provide details on the frequency, size and methods of cash withdrawal over the survey period. Automated payments, such as periodic payments by direct debit, were captured via a separate questionnaire, filled in upon completion of the diary.² In total, 662 individuals filled out the diary, generating a sample of almost 17 000 payments for a total value of around \$850 000. In addition, around 1 800 cash withdrawals were recorded for a value of around \$320 000. Further details of the survey are provided in Appendix A.

The main results of the survey are presented in Section 4. The survey is, however, also used to provide context to the discussion of individual payment instruments in other sections of the paper.

3.2 Data from Financial Institutions and Merchants

To supplement the data provided in the survey, the Reserve Bank also collected information from financial institutions and merchants on the number and value of transactions for various payment instruments. Financial institutions provided anonymous data on all payments made by debit and credit cards, cheque, BPAY and internet banking for the month of March 2007. The full database contains over 166 million transactions.

For EFTPOS, scheme debit and credit card transactions the data include information related to transaction value, any cash-out component (if applicable), transaction date, and an indicator identifying the merchant industry. Transactions made on business credit cards and internationally issued cards have not been included in the analysis. Cheque, BPAY and pay-anyone data contained basic transaction information, including the date and transaction amount.

To simplify the analysis, all unit level data were aggregated into transaction ranges of \$5, up to \$5 000, with transactions larger than \$5 000 aggregated into one group. These ranges were then used to generate payment distributions for each method. Given the very large sample sizes involved, these data provide a more complete description of the use of certain payment instruments than is available from the survey.

Data on the number and value of payments received during March 2007 were also obtained from eleven retailers, including supermarkets, department stores, hardware and electrical stores, and a number of smaller businesses. Some of these merchants were also able to provide data on the distribution of payments by value. The data provided amounted to a total transaction value of more than \$6 billion.

A range of merchants and organisations issuing bills on a regular basis also provided data on the total number and value of payments received by various payment methods. In most cases, the data were for March 2007, although where organisations advised that data for March were either not available or not representative of their regular patterns, data were provided for an alternative time period. Data were provided by six merchants from the telecommunications, insurance and energy industries, and by the major third-party billing agency, Australia Post. In total, the value of payments reported was over \$2 billion.

² This questionnaire also captured information on surcharging, the results of which are briefly noted in Appendix A.

3.3 Survey of Small Business

The third source of data is a survey of small business, conducted by the Reserve Bank, of their acceptance of different payment methods and on the use of these methods by their customers. This survey was conducted online with the assistance of the Office of Small Business, the National Small Business Roundtable, and a number of industry associations, namely the Australian Newsagents' Federation, the Australian Retailers Association, the Council of Small Business Organisations of Australia, CPA Australia, the Motor Trades Association of Australia, the National Institute of Accountants, the Pharmacy Guild of Australia, and Restaurant and Catering Australia. Responses were received from 263 businesses. The survey methodology is set out in Appendix B.

In general, respondents to the survey were genuinely small or 'micro' businesses – the average respondent had six employees and an annual turnover of around \$1 million – but there was a large range of businesses amongst the sample.

The results of this survey are more limited in scope than for the survey of individuals and the data from financial institutions and large merchants. In addition, while some respondents were able to supply information on the value of electronic payments received, they were not always in a position to indicate the number of payments received. Furthermore, most were unable to estimate the number and value of cash payments received. Nevertheless, the survey provides some robust information on the methods of payment accepted by this sample of small merchants and demonstrates some clear differences in payment patterns between particular merchant types.

4. The Diary Results

The use of various payment methods as reported in the diary is summarised in Table 2. Cash accounted for around 70 per cent of all payments made, and around 38 per cent of the value of all payments. Card-based payments accounted for the bulk of the remainder of payments, and around 40 per cent of the value of payments. BPAY and cheques both accounted for much smaller shares of the number of payments, but around 9 per cent of the value.^{3,4}

Table 2: Payment Methods
Per cent of number and value^(a)

	Share of number	Share of value
Cash	70	38
EFTPOS	11	14
MasterCard/Visa debit card	4	6
MasterCard/Visa credit card	9	17
American Express/Diners Club card	1	2
Petrol/Store card	*	*
Cheque	1	9
BPAY	2	9
Other ^(b)	1	3

(a) Amounts less than 0.5 per cent are marked with an asterisk.

(b) 'Other' payment methods include instruments such as money orders and Cabcharge payments.

Source: Roy Morgan Research

In contrast to the aggregate data reported in Section 2 – which show a roughly equal number of credit and debit card transactions – more debit card transactions than credit card transactions were recorded in the survey. In part, this is explained by the tendency for businesses – which were not included in the survey – to use credit cards more frequently than debit cards.

3 These figures do not take into account payments made through automated debits from deposit and credit accounts. These data are discussed in Section 7.5.

4 As a matter of terminology, 'EFTPOS' in this document refers to debit card transactions made using a PIN; sometimes also referred to as 'proprietary debit'. In addition, with the exception of Table 1, 'cheque' refers to personal cheques only.

Over the two-week survey period, 1.8 payments per day were recorded, on average, by each participant. This figure is, however, likely to slightly underestimate the number of payments actually made, given some evidence that a number of participants suffered from ‘survey fatigue’. Adjusting for this fatigue leads to a slightly higher estimate of 1.9 payments per person, on average, per day.⁵ This implies that adult Australians each make around 700 payments each year, including around 490 cash payments. Extrapolating this to the wider population and combining it with existing data suggests that there are around 11 billion payments made by individuals each year, of which around 8 billion are cash payments by individuals.⁶

4.1 Typical Payment Sizes

The average size of all payments recorded in the survey is \$51, although the average differs significantly across payment instruments (Table 3). Cash payments have the lowest average size – at \$28 – and cheques, the highest – at \$387. Consistent with the aggregate data, the average size of a (MasterCard/Visa) credit card transaction (\$96) is larger than the average size of an EFTPOS transaction (\$65). The average for credit cards is, however, lower than in the aggregate data, reflecting the higher average value for credit card transactions by businesses which, as noted above, are not included in the survey.

Table 3: Payment Values
Dollars

	Average	Median
Cash	28	11
EFTPOS	65	40
MasterCard/Visa debit card	81	40
MasterCard/Visa credit card	96	47
Amex/Diners Club card	115	54
Petrol/Store card	51	45
Cheque	387	100
BPAY	215	100
Other	184	60
All payment methods	51	19

Source: Roy Morgan Research

The average payment values from the survey are similar to the averages indicated by the data provided by a range of large retailers (Table 4). Consistent with the survey data, the retailer data indicate that cash is typically used at lower values, while cheques are used predominantly for high-value payments. The average payment values for card transactions are quite similar – all falling within the range of \$73 to \$82.

Table 4: Average Payment Values at Retailers
Dollars

	Average
Cash ^(a)	22
EFTPOS ^(b)	73
MasterCard/Visa credit card ^(b)	76
Amex/Diners Club card	82
Petrol/Store card	77
Cheque ^(a)	271
All methods	41

(a) Some cash and cheque figures were estimated by the retailers.

(b) Some retailers included scheme debit transactions in their data for credit cards. Most reported them as part of EFTPOS.

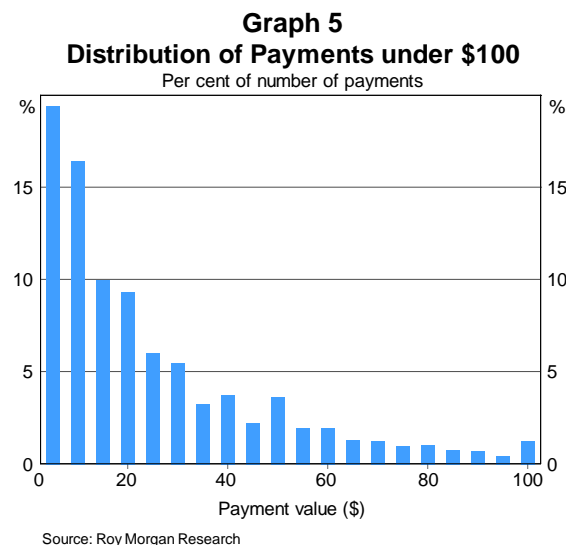
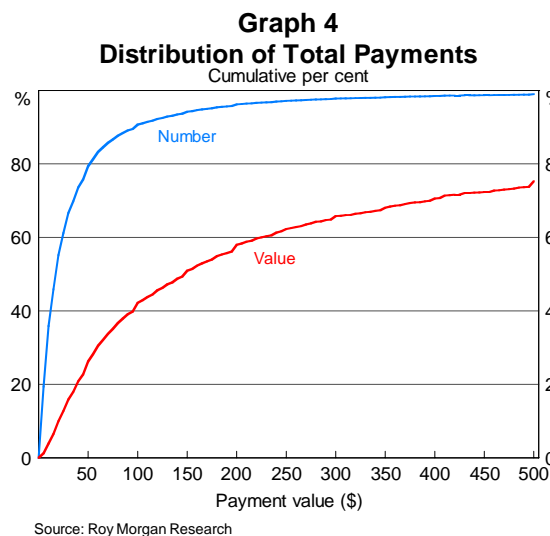
Source: Data from selected retailers

⁵ The adjustment involved excluding from the calculation of the average number of payments per day those respondents who made substantially fewer payments in week 2 than in week 1 of the survey (around 100 participants). It should be noted that these respondents have not been excluded from other results reported, as the distribution of payments across the various payment instruments is consistent through the survey and seemingly not affected by any survey fatigue.

⁶ The estimate of the number of cash transactions is described in more detail in Appendix C of the parallel study on payment costs in Australia. Table 13 in that document sets out the estimated total number of transactions by individuals.

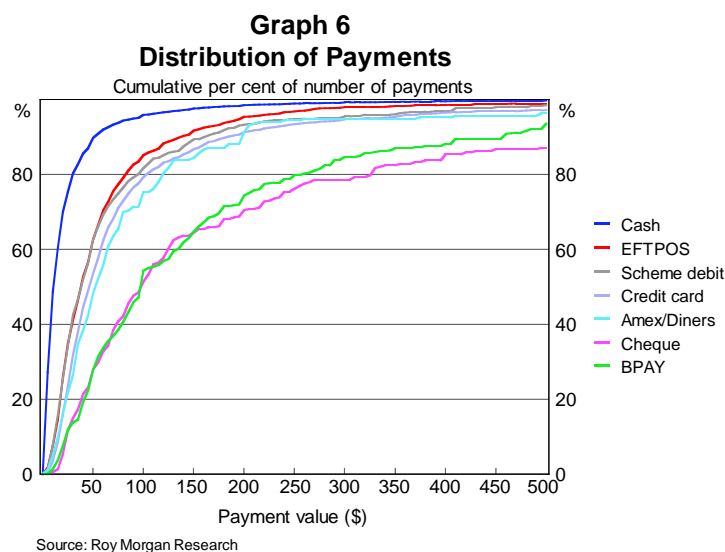
For all payment instruments, the median size of payments is considerably smaller than the average, reflecting the nature of payment distributions, with many more small payments than large payments (Graph 4). The median size of all payments recorded in the survey was \$19, less than half the average size of payments (Table 3). The median cash payment was \$11, compared with the average payment of \$28. Interestingly, the median sizes of credit and debit card payments are similar to one another, whereas the average size of credit card payments is considerably higher than the average size of debit card payments. This reflects the fact that while for many types of payments, credit and debit cards are often used in the same way, credit cards tend to be used more than EFTPOS for very large payments (see Section 6).

The survey results indicate that 91 per cent of payments are for less than \$100, with two-thirds of all payments for amounts under \$30 (Graph 4 and Graph 5). At the other end of the scale, the 2 per cent of payments above \$335 account for a third of the value of payments in the survey.



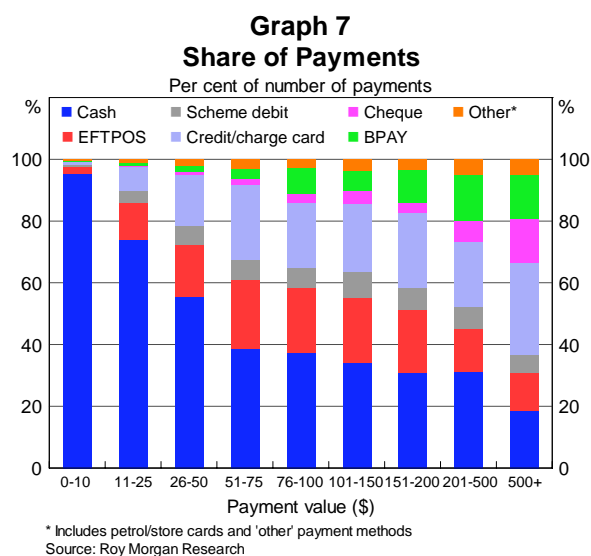
4.2 Use of Payment Instruments by Payment Size

The survey results suggest that the size of the payment is an important factor determining what payment instrument is used. The data indicate that cash tends to be used primarily for low-value payments, cheques and BPAY for high-value payments, and the various card payment methods for mid-sized payments (Graph 6).



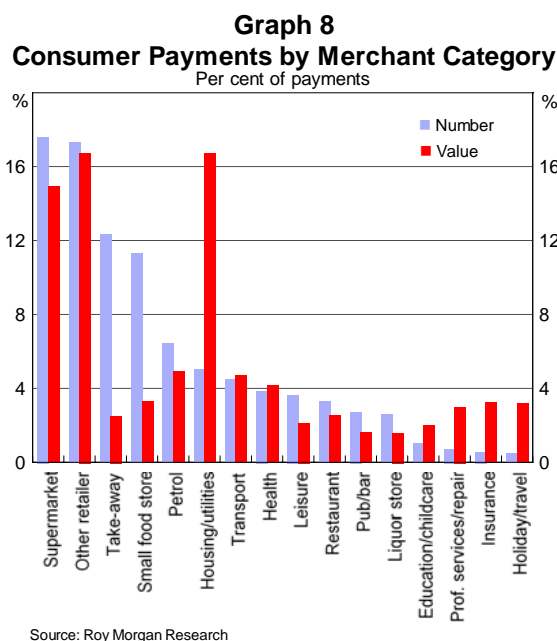
Cash is by far the most commonly used payment instrument for low-value transactions, accounting for nearly all transactions under \$10 and three-quarters of all transactions between \$11 and \$25 (Graph 7). Around 75 per cent of cash transactions have a value of \$25 or less. Conversely, cheques and BPAY are prominent at the high-value end of transactions, accounting for 29 per cent of the payments above \$500.

Cards are used extensively across all but very low transaction values. For transactions between \$25 and \$200, debit and credit/charge cards account for 45 per cent of all transactions. For transactions above \$200, debit cards tend to be used less than credit cards; for example, the diary survey results indicate that the number of credit card transactions recorded in excess of \$500 is around twice the number of EFTPOS transactions above this value. Data from financial institutions indicate that for all card payments this pattern is more pronounced – in March 2007 the ratio of credit card to debit card use above \$500 was around 4 to 1.



4.3 Payments by Merchant Category

The majority of payments recorded by individuals reflect day-to-day payments for living expenses and are associated with the purchase of food and petrol. Payments made in supermarkets, other retailers, small food stores, take-away and fast food outlets, and petrol stations accounted for 65 per cent of the number of payments recorded (Graph 8). The average size of payments made at these merchants is smaller than the overall average, so that they accounted for 42 per cent of the value of all payments.⁷ The largest average value payments were made in housing and utilities, travel and accommodation, insurance and professional and home services. These sectors only accounted for 7 per cent of the number of payments, but around 26 per cent of the value.



⁷ Excluded from Graph 8 are payments classified as falling into 'other' merchant categories. These include a range of merchants, goods and services which do not fit neatly into any particular category. From data received from financial institutions, the main payments in the 'other' category are tax payments, securities transactions and the payment of credit card balances.

4.4 Payment Channels

The majority of the payments recorded in the diary, including nearly all payments undertaken using cash and EFTPOS, were made in person (Table 5). Most scheme debit, credit and charge card transactions were also made in person, although these instruments were also used over the phone and the internet to varying degrees. The only payment method that was extensively used through the mail was the cheque. BPAY is only available by phone and internet and therefore followed a pattern unlike the other instruments: around three-quarters of BPAY payments were via the internet.

Table 5: Payment Channels
Per cent of number and value^(a)

	In person		Phone		Internet		Mail	
	Number	Value	Number	Value	Number	Value	Number	Value
Cash ^(b)	100	100	-	-	-	-	*	*
EFTPOS ^(c)	99	97	*	1	1	2	*	*
Scheme debit	87	77	6	9	6	14	1	*
Credit/charge	86	73	6	12	7	13	1	2
Cheque	57	81	-	-	-	-	43	19
BPAY	-	-	27	24	73	76	-	-

(a) Amounts less than 0.5 per cent are marked with an asterisk.

(b) A very small proportion of transactions were reported as cash through the mail.

(c) A small proportion of EFTPOS transactions were reported as taking place via phone, internet and mail.

Source: Roy Morgan Research

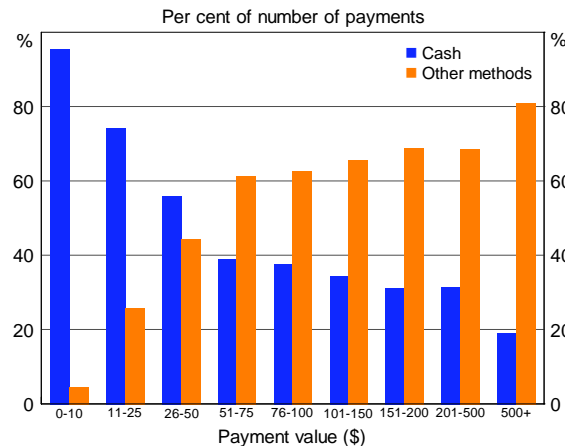
The following sections discuss the various payment instruments in more detail, drawing on the survey results as well as the other data collected by the Reserve Bank.

5. Cash Payments

5.1 The Use of Cash

As discussed above, cash is the most frequently used method of payment. During the survey, 70 per cent of payments, and around 38 per cent of the value of total payments, were undertaken using cash. Cash is most extensively used for low-value payments, being used more frequently than all other payment methods combined for transactions up to \$50 (Graph 9).

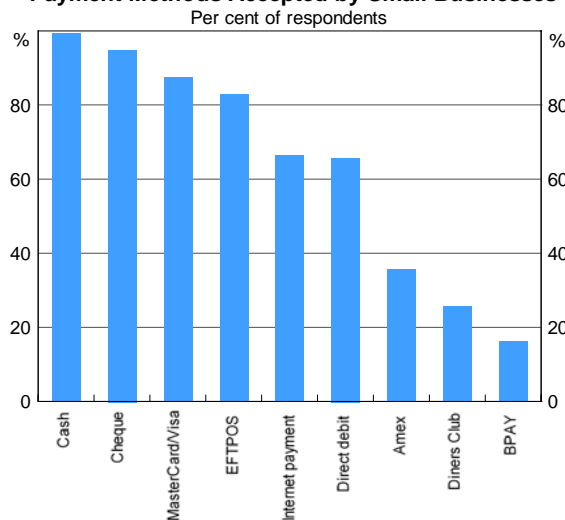
Graph 9
Use of Cash



Source: Roy Morgan Research

There are a number of reasons that explain why cash is used so extensively for low-value transactions. One is that the tender time associated with small cash transactions is considerably less than for other forms of payment, allowing transactions to be completed more quickly. In addition, some merchants impose minimum transaction values for card payments which limit the use of cards for small payments. For example, around one-third of respondents to the small business survey who accepted debit and credit cards indicated that they imposed a minimum transaction value for the use of cards, with the typical minimum value being \$10. This limit reflects, in part, the costs to merchants of small card-based transactions, both in terms of bank charges and tender time. Cash is also accepted almost universally: of the businesses participating in the small business survey, nearly all indicated that they accepted cash payments (Graph 10). The use of cash is also anonymous and does not require any electronic linkages.

Graph 10
Payment Methods Accepted by Small Businesses

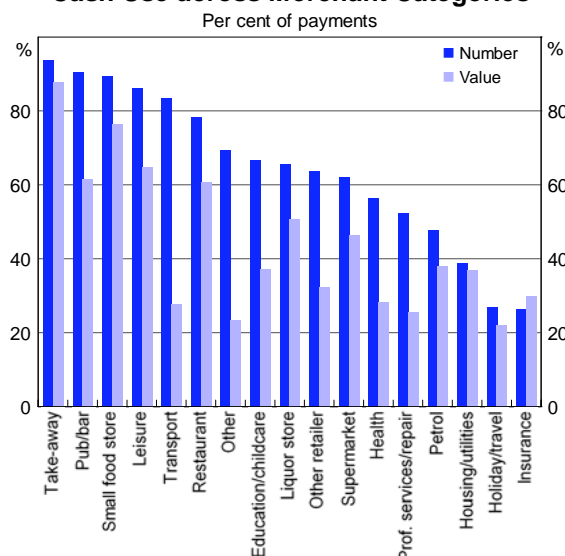


Source: RBA Small Business Survey

5.2 Merchant Categories

Cash is used extensively in most, but not all, merchant categories (Graph 11). Its use is highest in the take-away food/fast food sector, where around 95 per cent of transactions by number are made using cash. This is partly explained by the low transaction values in this sector – the median transaction value is \$8 – and the fact that many merchants do not accept card payments. Cash is also particularly heavily used in a number of other sectors, including pubs and bars, small food stores, and transport.

Graph 11
Cash Use across Merchant Categories



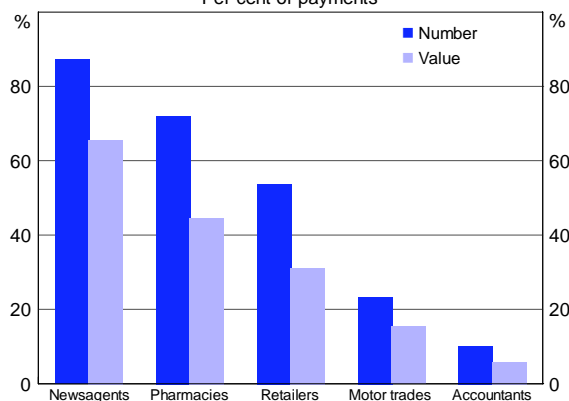
Source: Roy Morgan Research

In almost all sectors, the share of the number of transactions made in cash exceeds the value of transactions made in cash reflecting the fact that cash tends to be used for smaller transactions. This is perhaps most noticeable in the transport sector, where high-value payments (including payments for such items as motor vehicle registrations and transport season tickets) are often made by non-cash payment instruments, while individual fares are typically paid for in cash.

The use of cash is much less common in the travel and insurance industries. Insurance payments, for example, are mostly made via non-cash methods. Similarly, in the holiday travel and hotel accommodation sector, cash is used relatively infrequently, with cards being the most common method of payment (see Section 6). In both these merchant categories, payments tend to be for relatively high values.

Data collected directly from merchants as part of this study also provide information on the use of cash in different parts of the economy. In particular, responses to the survey of small business confirm that cash tends to be used more frequently in sectors where transaction sizes are small. As an example, newsagents indicated that the vast majority of payments received were cash: 87 per cent by number and 65 per cent by value. In contrast, accountants reported only very limited use of cash: 10 per cent by number and 6 per cent by value (Graph 12).

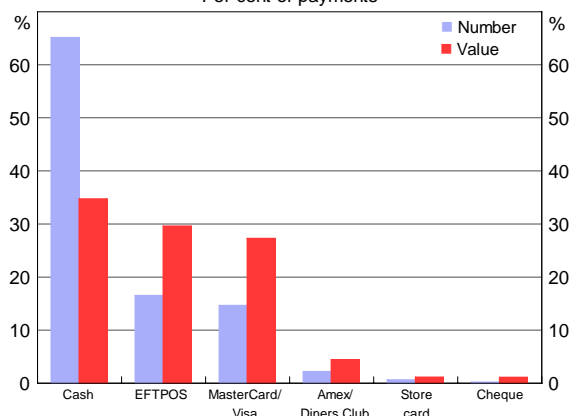
Graph 12
Use of Cash at Small Businesses
Per cent of payments



Source: RBA Small Business Survey

The data provided by a group of retailers also suggest that the bulk of transactions in their stores are in cash, and that cash transactions are relatively small (Graph 13). These data indicate that while cash payments comprise around 35 per cent of the value of transactions at these retailers, they account for around 65 per cent of transactions by number. The disaggregated data provided by some retailers also confirm that the majority of cash payments are for low values, with the median cash payment typically being between \$10 and \$15, and between 80 and 90 per cent of cash transactions being for less than \$50.

Graph 13
Payment Methods at Large Retailers
Per cent of payments

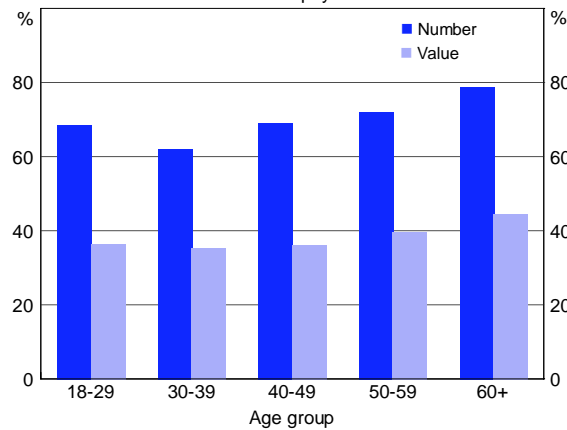


Note: 'Scheme debit' included in MasterCard/Visa. For some retailers, cash and cheque data are estimates.
Source: Data from selected retailers

5.3 Consumer Characteristics

All age groups make extensive use of cash, but there is a clear trend indicating that older individuals make greater use of cash (Graph 14). People over the age of 60 use cash for almost 80 per cent of their payments, compared to just over 60 per cent for those aged between 30 and 39. The more frequent use of cash by older Australians is a likely corollary of lower card ownership by these people, an issue that is discussed in more detail in Section 6. The greater use of cash by older individuals may also reflect the fact that they developed their payment habits before the widespread availability of cards.

Graph 14
Use of Cash by Age Group
Per cent of payments



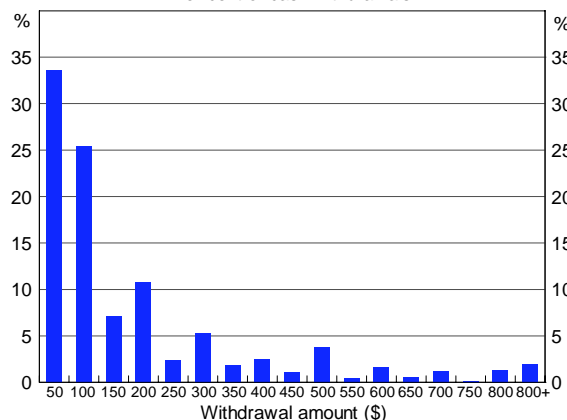
Source: Roy Morgan Research

The data also suggest that around 15 per cent of people exclusively use cash to make payments. This is somewhat lower than the results of a recent study in the United Kingdom that indicated that around 20 per cent of people in the UK only use cash.⁸ Consistent with patterns of cash use overall, cash-only consumers in Australia tend to be older, have lower than average incomes and do not hold a credit card. Almost every respondent made at least one cash payment over the two-week survey period.

5.4 Obtaining Cash

The survey data indicate that the average cash withdrawal is \$180. As for other payment transactions, the median is considerably lower, at \$100. Around 77 per cent of withdrawals in the survey were for amounts of \$200 or less, and around one third of withdrawals were for \$50 or less (Graph 15).

Graph 15
Obtaining Cash
Per cent of cash withdrawals



Note: Withdrawal amount refers to a transaction band e.g. \$100 represents transactions from \$50.01 to \$100
Source: Roy Morgan Research

8 APACS (2007), p6.

Around 87 per cent of individuals acquired cash on at least one occasion during the two-week survey, with the average time between withdrawals being around four to five days; 14 per cent of people had at least one day where they obtained cash twice or more. The data suggest that for the typical individual, each cash withdrawal supports around 9 cash payments.⁹

The most common method of obtaining cash is through an ATM, with ATM withdrawals accounting for 64 per cent of the number of cash withdrawals and 65 per cent of the value withdrawn (Table 6).

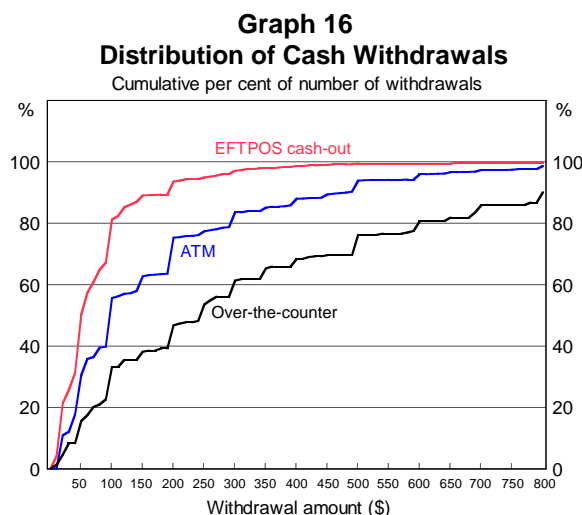
The second most commonly used method is through EFTPOS cash-out facilities. EFTPOS withdrawals account for 21 per cent of the number of cash withdrawals, although only 10 per cent by value of cash withdrawn, reflecting the lower average size of withdrawals through this channel. The median EFTPOS cash-out is \$50, compared with the median ATM withdrawal of \$100, with around 81 per cent of cash withdrawals through EFTPOS being for \$100 or less (compared to 56 per cent for ATM withdrawals) (Graph 16). The financial institution data indicate that around 15 per cent of EFTPOS transactions involve a cash-out, with the bulk of these (13 per cent) involving both a purchase and a cash-out.¹⁰ Most of these transactions take place at supermarkets and petrol stations, with the median amount withdrawn at supermarkets equal to \$50, and the median amount withdrawn at petrol stations equal to \$20. There is some evidence to suggest that the average purchase size is smaller for EFTPOS transactions involving a cash-out compared to those where cash is not withdrawn.

Table 6: Methods Of Obtaining Cash

Method of withdrawal	Share of number (%)	Share of value (%)	Average value (\$)	Median value (\$)
ATM	64	65	183	100
EFTPOS cash-out	21	10	84	50
Over-the-counter	10	20	382	250
Other ^(a)	5	4	157	85

(a) 'Other' includes, amongst other things, payment in cash by employers, person-to-person payments and Medicare rebates.

Source: Roy Morgan Research

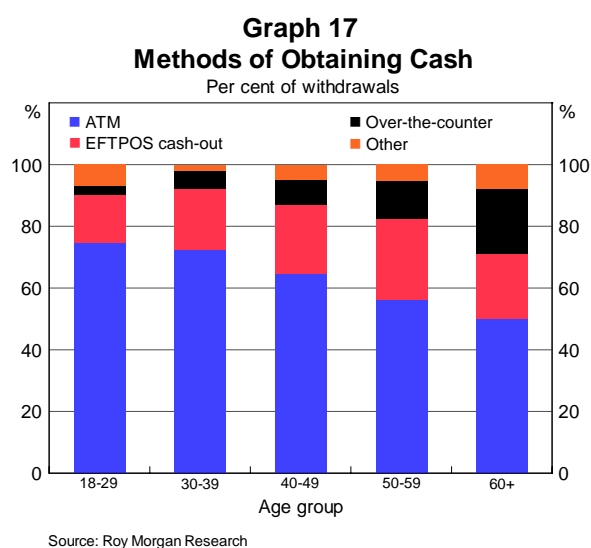


⁹ This figure is based on the median withdrawal (\$100) and the median cash payment (\$11). Using the average withdrawal and average cash payment implies a figure of 7 cash payments per withdrawal.

¹⁰ This is consistent with data from the Reserve Bank's *Retail Payments Statistics* collection.

Over-the-counter cash withdrawals account for only around 10 per cent of the number of withdrawals, but the relatively large average size of these withdrawals means that they comprise around 20 per cent of the value of cash withdrawn. The median size of an over-the-counter withdrawal is \$250, 2½ times higher than the median ATM cash withdrawal and 5 times higher than the median EFTPOS withdrawal. Around a third of cash withdrawals in excess of \$500 are made over-the-counter. Obtaining cash through other means accounted for 5 per cent of cash withdrawals in the survey.

The way in which individuals obtain cash appears to be influenced by their age (Graph 17). Respondents under the age of 40 use ATMs for the vast majority of their cash withdrawals, and use over-the-counter methods infrequently. Conversely, those over the age of 60 use a financial institution branch for around 20 per cent of the number of their withdrawals (and, when the larger average value for over-the-counter withdrawals is factored in, for almost 40 per cent of the value). While ATM use decreases with age, the use of EFTPOS cash-out is relatively consistent across most age groups, although individuals under 29 and over 60 tend to use this withdrawal method less often.



ATM use is higher in capital cities compared to regional areas, reflecting the greater availability of ATMs in metropolitan areas: 68 per cent of withdrawals in cities are via ATMs, compared to 58 per cent in regional areas. In regional areas, EFTPOS cash-out and over-the-counter withdrawals account for 24 and 13 per cent of withdrawals, compared to 19 and 8 per cent in capital cities.

6. Card Payments

Credit and debit cards are widely used for payments in Australia, accounting for over half of all non-cash payments. Card use is not, however, universal. Although most individuals carry a debit card, many do not have a credit card (around 91 per cent hold a debit card of some sort, compared to 55 per cent who hold a credit card).¹¹ Furthermore, some merchants do not accept cards and others impose restrictions on their use, including minimum transaction sizes. This section discusses the use of cards and how this varies across merchant categories and consumer characteristics. It draws on both the survey conducted by Roy Morgan Research and data supplied by financial institutions.

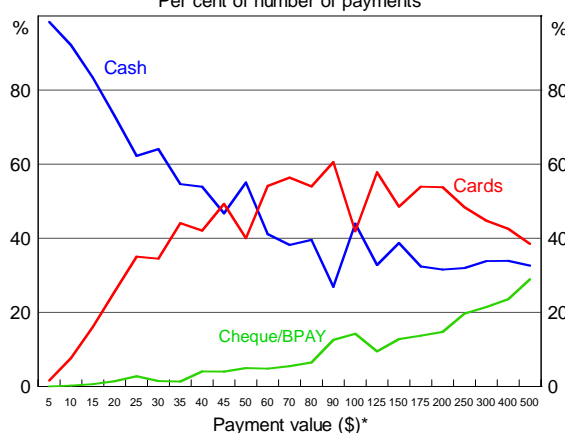
6.1 Use of Cards

As noted above, the survey data show that the use of cards for everyday payments is second only to cash. Card payments account for a quarter of the number and 40 per cent of the value of these payments. For

¹¹ Roy Morgan Research (2006).

transactions between \$50 and \$200, debit, credit and charge cards account for more than 50 per cent of the number and value of payments (Graph 18).

Graph 18
Share of Payments
Per cent of number of payments

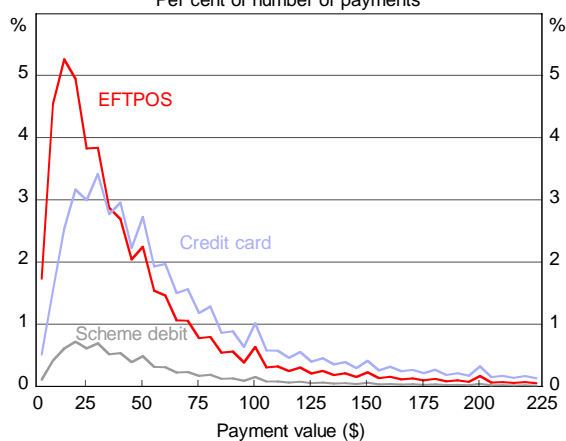


* Horizontal axis is condensed at higher values
Source: Roy Morgan Research

Although cards are used across a wide range of payment values, the majority of card payments are made for relatively low transaction values. Payments under \$225 account for 90 per cent of all card transactions. For these payments, EFTPOS cards are used more frequently for lower-value transactions than are credit cards (Graph 19). EFTPOS is the most commonly used card-based payment method for payments under \$25, where the number of EFTPOS transactions is almost double the number of credit card transactions.

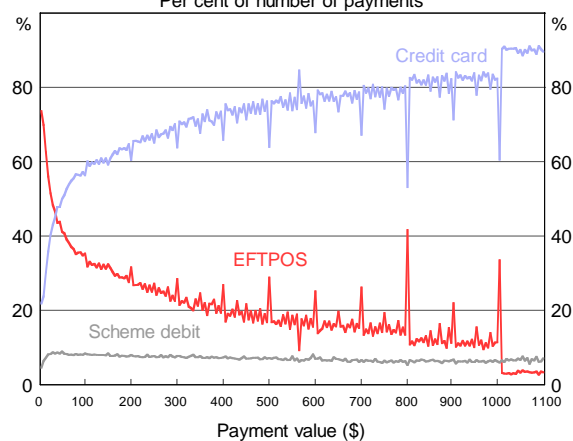
The broader profile shows the share of card transactions made on EFTPOS cards falls consistently as the payment value rises, from around 80 per cent at low transaction values, to under 5 per cent for larger valued payments (Graph 20). The effect of daily transaction limits on EFTPOS accounts is evident, with significant peaks in transaction share for \$800 and \$1 000 payments (the typical daily limit), followed by a marked decline in relative use following these limits.

Graph 19
Share of Total Card Payments Below \$225
Per cent of number of payments



Source: Financial Institution Data

Graph 20
Proportion of Card Payments
Per cent of number of payments



Source: Financial Institution Data

In contrast, the proportion of transactions on scheme debit cards remains largely unchanged across all transaction values. The absence of daily withdrawal limits results in scheme debit cards being used consistently for higher valued payments, even beyond the limits imposed on EFTPOS cards.

Despite credit cards being held by only slightly more than half the population, they are the most used card for high-value payments. Their share of card-based transactions increases from around 20 per cent

for \$5 transactions to over 80 per cent for transactions greater than \$800, and increases again to 90 per cent for transactions over \$1 000. The credit card share of the value of payments is even larger – credit cards account for 91 per cent of the value of all payments above \$800.

Across the distribution of card payments, there are peaks in the number of transactions at \$5 intervals. These ‘round transaction values’ reflect the influence of a number of merchant categories (see Box A).

6.2 Card Use by Industry

While the average transaction values differ significantly across industries, the average size of EFTPOS transactions is lower than the average size of credit card transactions in all industries, except insurance (Table 7). In almost all cases, the average size of scheme debit transactions lies between the average sizes of EFTPOS and credit card transactions. The disaggregated data provided by a number of retailers are consistent with this finding. The median card payment is typically in the range of \$30 to \$50, depending on the type of card and retailer.

Table 7: Transaction Value By Merchant Category

Dollars

	EFTPOS		Scheme debit		Credit card	
	Average	Median	Average	Median	Average	Median
Education/childcare	127	64	277	89	436	130
Health/medical care	67	42	94	50	132	56
Holiday travel/hotel accommodation	79	37	181	66	349	110
Housing/utilities	78	42	92	50	137	61
Insurance	321	283	153	70	193	87
Liquor store	38	30	49	35	75	44
Other	76	40	114	48	174	56
Other retailer	63	36	87	43	136	53
Petrol/fuel for motor vehicles	37	30	43	38	55	47
Prof. service/home repair/improvements	78	47	116	50	199	65
Pub/bar	38	30	46	33	66	40
Restaurant/formal dining	32	22	54	36	81	48
Small food store	31	21	43	28	63	33
Leisure	50	25	94	41	146	55
Supermarket	48	29	55	35	64	41
Take-away food/fast food	12	9	19	14	25	17
Transport	89	32	131	44	175	50
All categories	53	30	84	41	130	51

Source: Financial Institution Data

According to the data provided by financial institutions, over 40 per cent of all EFTPOS transactions occurred at supermarkets (25 per cent) and petrol stations (15 per cent), with these two merchant categories accounting for one third of spending on debit cards (Table 8). In contrast, supermarkets and petrol stations accounted for a lower 22 per cent of the number of credit card transactions and 10 per cent of the spending on credit cards.

Table 8: Spending By Industry
Merchant category per cent share of number and value

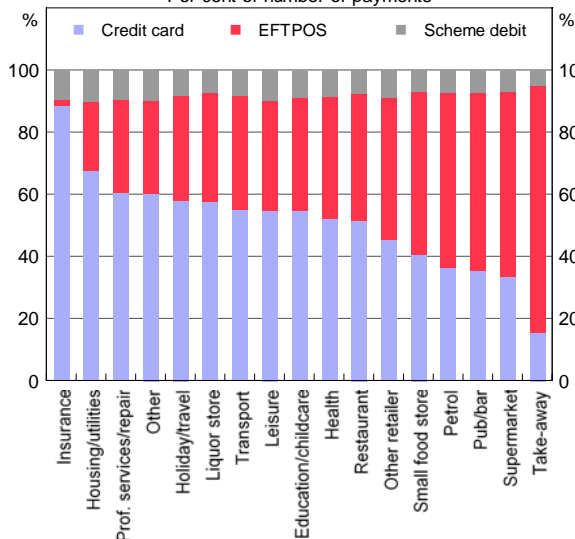
EFTPOS	Number	Value
Supermarket	25	Supermarket
Petrol	15	Petrol
Health/medical care	5	Health/medical care
Take-away/fast food	5	Transport
Restaurant	4	Housing/utilities

Credit Cards	Number	Value
Supermarket	13	Housing/utilities
Housing/utilities	10	Holiday travel/hotel accommodation
Petrol	9	Professional service/home repair
Health/medical care	6	Supermarket
Professional service/home repair	5	Health/medical care

Source: Financial Institution Data

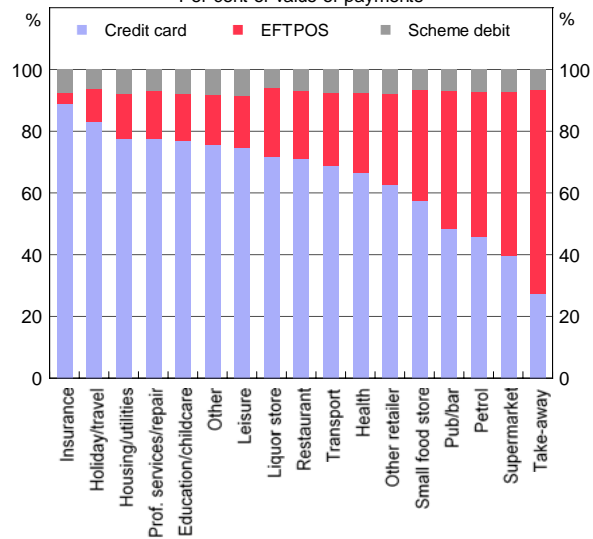
Credit cards tend to be more heavily used in industries with relatively high transaction sizes and where payments do not take place at the point of sale. For example, in the case of insurance, holiday travel/hotels, and professional services sectors, around 80 per cent of the value of card receipts (and 60 per cent of the number of payments) is accounted for by credit cards (Graph 21 and Graph 22). In contrast, where the average transaction size is low, for example, in supermarkets, take-away outlets and petrol stations, EFTPOS cards are used more frequently than credit cards.

Graph 21
Debit and Credit Card Spending by Industry
Per cent of number of payments



Source: Financial Institution Data

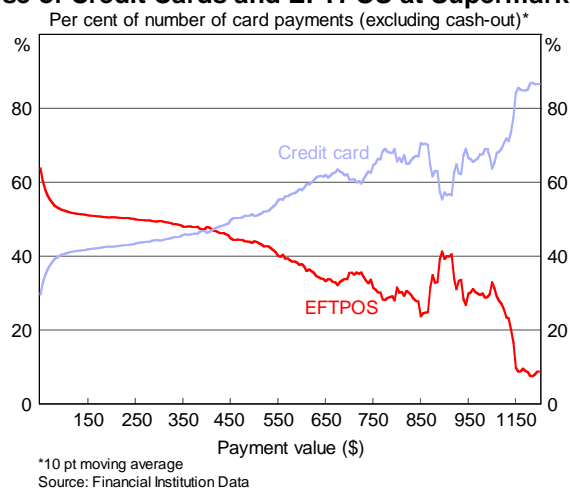
Graph 22
Debit and Credit Card Spending by Industry
Per cent of value of payments



Source: Financial Institution Data

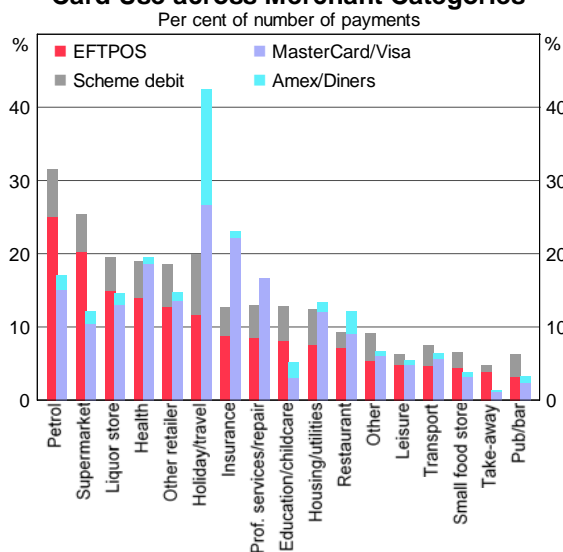
In supermarkets, almost 60 per cent of total card transactions are made using an EFTPOS card. EFTPOS is more likely to be used than a credit card for transactions under \$400, while for transactions above this value a credit card is more likely to be used (Graph 23). If the cash-out component is included as part of the transaction total, the cross over point is around \$650.

Graph 23
Use of Credit Cards and EFTPOS at Supermarkets



The data from the survey of individuals indicate that cards are used across a wide range of merchant categories (Graph 24). EFTPOS and scheme debit cards are used frequently at petrol stations and supermarkets, accounting for 32 and 25 per cent of the number of payments in these categories. Credit and charge cards are the most frequently used payment method for holiday and travel accommodation transactions, accounting for 42 per cent of payments in this sector. As discussed in Section 5.2, there are particular merchant categories where cash is the dominant payment instrument (e.g. take-away stores, small food stores, pubs and bars). In these categories, card payments tend to make up the balance of the use of payments (in other words, cards are the only method used apart from cash in these industries).

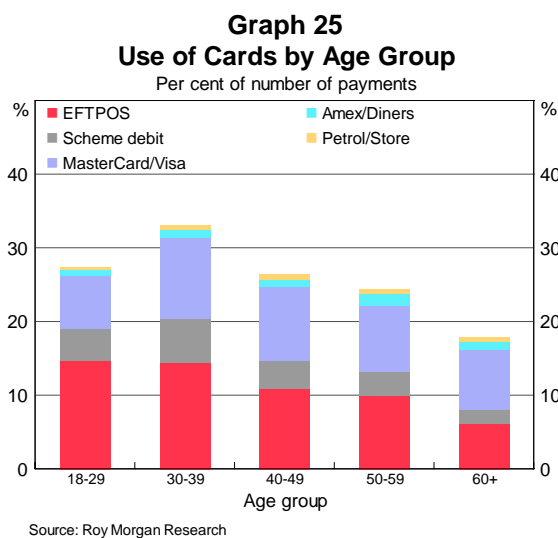
Graph 24
Card Use across Merchant Categories



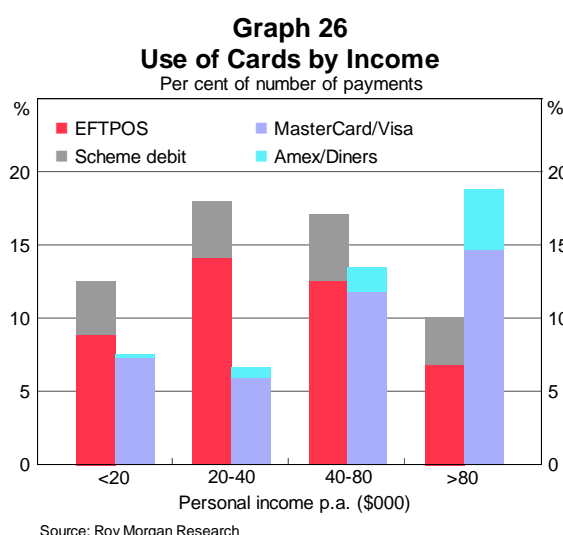
Source: Roy Morgan Research

6.3 The Influence of Consumer Characteristics

The use of the particular types of cards appears to be influenced by age (Graph 25). In particular, the use of EFTPOS is highest in the youngest age group and declines with age. The same is true for scheme-based debit cards. Conversely, the use of credit cards is lowest for the youngest age group. These patterns are likely to reflect the fact that credit cards are not as widely available to younger people; in the survey, 34 per cent of respondents aged 18-29 held a credit card (compared to 55 per cent of the adult population). In addition, a number of older respondents may never have used a debit card, having developed their transactions behaviour before this method became widely available. Data from 2006 indicate that around 22 per cent of Australians aged over 65 do not hold a debit card, compared to only 9 per cent across the wider population.¹²



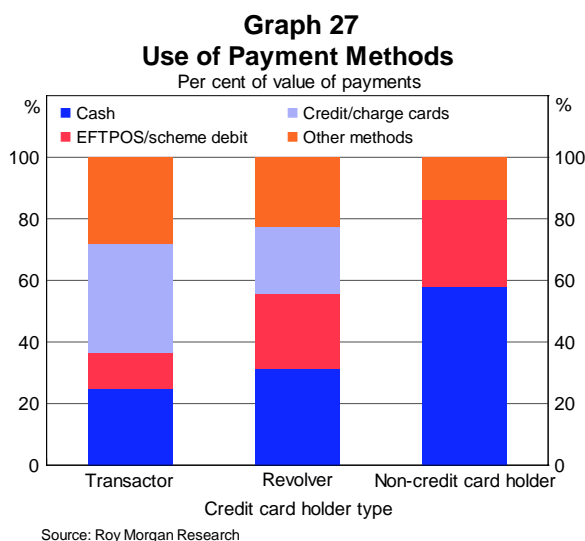
The relative use of card payment methods also appears to be influenced by income. Credit and charge card use increases at higher income levels, while debit card use is highest for middle income bands (Graph 26). Those with a personal income of \$80 000 or greater used credit and charge cards for around 18 per cent of their payments, more than twice the rate of use by those earning under \$40 000.



For holders of credit cards, payment patterns also appear to be influenced by whether the entire amount is usually paid off each month (transactors) or whether only part of the balance is paid off (revolvers). In particular, transactors use credit cards more frequently than revolvers – around 22 per cent of transactions compared to 12 per cent, and 35 per cent of the value of spending compared to 22 per cent

¹² Roy Morgan Research (2006).

for revolvers (Graph 27). Conversely, revolvers are more likely to use debit cards. In part, this pattern reflects the fact that for revolvers an additional purchase on their credit card accrues an interest charge immediately, increasing the incentive to use a debit card if funds are available in a deposit account.



Of those respondents holding credit or charge cards, 31 per cent used them for all of their card payments (i.e. they did not use a debit card at all). 38 per cent of all transactors exclusively used credit and charge cards for their card payments, compared to 18 per cent of revolvers.

6.4 Prepaid Cards

Although prepaid cards are a relatively recent development in Australia, there is some evidence that they are being used for lower value transactions than other cards. Several institutions have begun issuing prepaid cards under the brands of the major credit card companies. Prepaid cards can be used exactly like a scheme debit card or credit card, without the need for a linked account with a financial institution. To date, prepaid cards have been aimed at the gift card market, people without access to banking services, and travellers. This different target market is reflected in where and how the cards are used.

While their use is not widespread, some preliminary analysis indicates that the average transaction value is \$66, but the median is significantly lower at around \$12. This is very similar to the median cash transaction value reported in the diary survey. Over 90 per cent of the number of payments by prepaid card are for amounts less than \$150.

The spending profile for prepaid cards is different from other card products. One third of all transactions and 40 per cent of value occur at 'other retailers'. Most of these transactions occur at newsagents, discount stores and music retailers. Supermarkets account for only 12 per cent of the number of prepaid card transactions (and five per cent of the value), much less than for debit and credit cards.

7. Bill Payment Methods

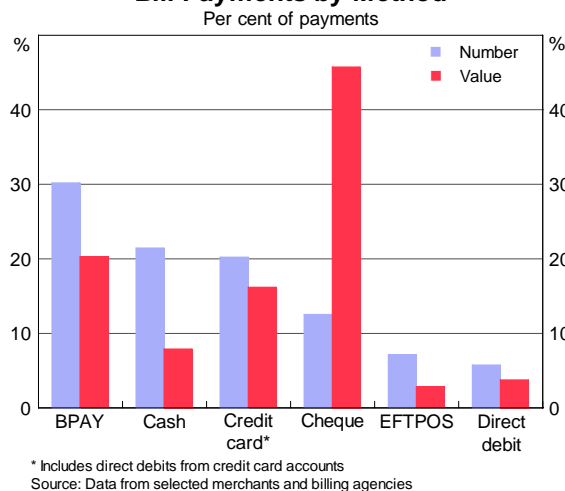
A wide variety of payment instruments can be used for the payment of bills – defined here as transactions with merchants where payment is not made at point-of-sale. This section discusses the various ways that bills are paid, focusing particularly on the use of cheques and BPAY.

7.1 Instruments Used for Bill Payments

For most households, regular bills include those for utilities such as gas, electricity and water, telecommunications (including telephone, internet and cable television), and insurance for home, car and health cover. Most businesses typically offer their customers a number of ways to pay these bills, as well as a variety of channels through which to do so.

The data collected from businesses that issue a large number of bills suggest that BPAY is the most frequently used bill payment method, accounting for around 30 per cent of bill payments (Graph 28). Cash and credit cards are also used regularly to pay bills, each accounting for around 20 per cent of bill payments. In comparison, cheques are used less frequently than these other payment instruments, but the large average size of cheque payments means that cheques account for the largest share of bill payments by value (around 46 per cent). The EFTPOS and direct entry systems are also used for bill payments, although they each account for less than 5 per cent of the value of all bill payments.

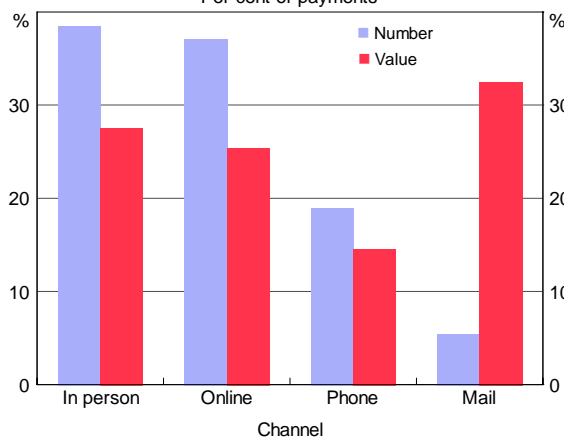
Graph 28
Bill Payments by Method



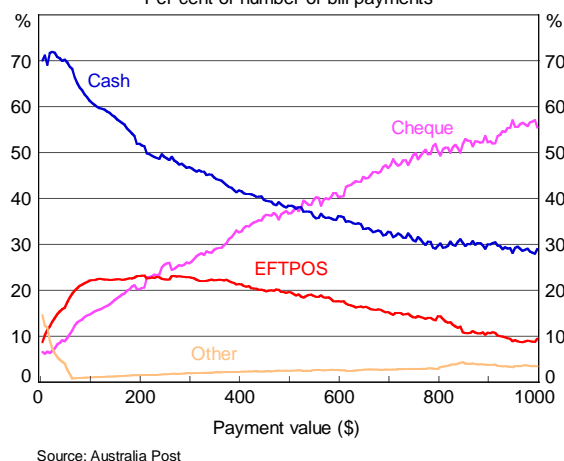
7.2 Bill Payment Channels

The data supplied by billers suggest that many bills are still paid over-the-counter, typically through a third-party agent, such as the post office or a bank, with this form of payment accounting for a little less than 40 per cent of all bills paid (Graph 29). Data provided by Australia Post – a major third-party agent – show that a majority of all the over-the-counter payments it processes are in cash, with cash payments being the most common form of payment up to around \$500 (Graph 30). EFTPOS and cheque payments account for roughly equal shares of the remaining over-the-counter payments at Australia Post, with cheques being the predominant payment method for large bills.

Graph 29
Bill Payments by Channel



Graph 30
Payment Methods at Australia Post



Internet and other electronic ('online') forms of payment account for a similar share of bill payments as over-the-counter payments (around 37 and 39 per cent respectively), with payments over the phone accounting for a further 19 per cent of the total number of payments. Payments sent by mail represent

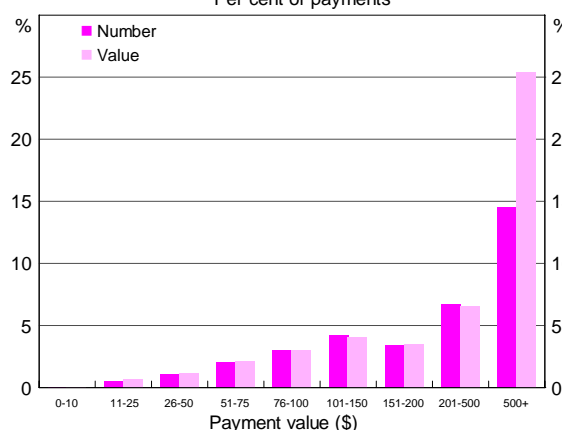
about 5 percent of the total, although given that these are predominately made by cheque with large average values, payments through the mail account for a significant share of the value of all payments.¹³

7.3 The Use of Cheques

Cheques have a long history of use for payments in Australia. One reason for this is their broad acceptance by merchants, with the survey of small business finding that over 90 per cent of small businesses accepted cheque payments.¹⁴ However, as discussed in Section 2, the use of cheques has declined significantly over the past decade, with data from Roy Morgan Research indicating that only around 30 per cent of people currently have access to a chequebook.¹⁵ Further, the available data suggest that the median number of cheques drawn per account per month is just two, and 90 per cent of cheque accounts have eight or fewer cheques drawn per month.¹⁶

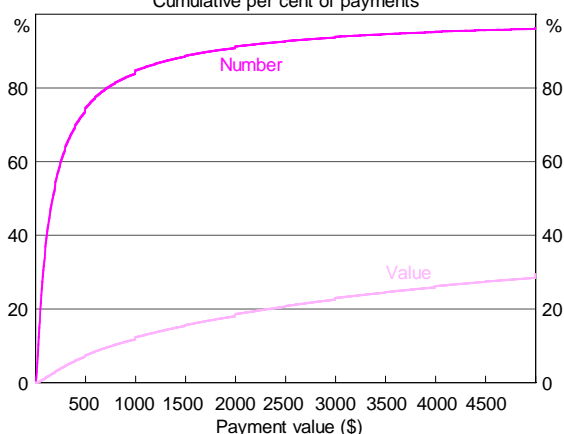
While the use of cheques has declined, they remain an important payment method for high-value transactions. In the diary survey, cheques accounted for only 1.1 per cent of all payments, but for around 15 per cent of payments of \$500 or over and around 25 per cent of the value of these large payments (Graph 31). The average cheque payment recorded in the diaries was \$387, and the median was \$100.¹⁷ Data provided by financial institutions on cheques written on personal accounts show a broadly similar picture, although the average and median values are higher (\$1 500 and \$171 respectively). Reflecting the fact that some cheque payments are for very large amounts, the data provided by financial institutions show that cheques over \$2 000 account for around 80 per cent of the value of cheques written on personal accounts, but only around 10 per cent of the number of these cheques (Graph 32).

Graph 31
Use of Cheques
Per cent of payments



Source: Roy Morgan Research

Graph 32
Distribution of Cheque Payments
Cumulative per cent of payments



Source: Financial Institution Data

7.3.1 Merchant Categories

Cheques tend to be much more frequently used to pay for services and utilities than for goods purchased at retailers. According to the diary survey, around 13 per cent of payments for professional services are by cheque, whereas cheques are used very infrequently, if at all, in a range of merchant categories, including take-away food and liquor stores (Graph 33). Cheques are more likely to be used where there is some type of ongoing relationship between the payer and the recipient of the cheque which can be called upon if the cheque 'bounces'. They are also used extensively for payments by mail and are used infrequently at large retailers. Data supplied by retailers indicate that payments by cheque account for less than two per cent of turnover (see Graph 13 above).

¹³ It is likely that some of these are business-to-business cheque payments.

¹⁴ This is consistent with the recent DCITA (2006) study which found that 89 per cent of businesses accept cheque payments.

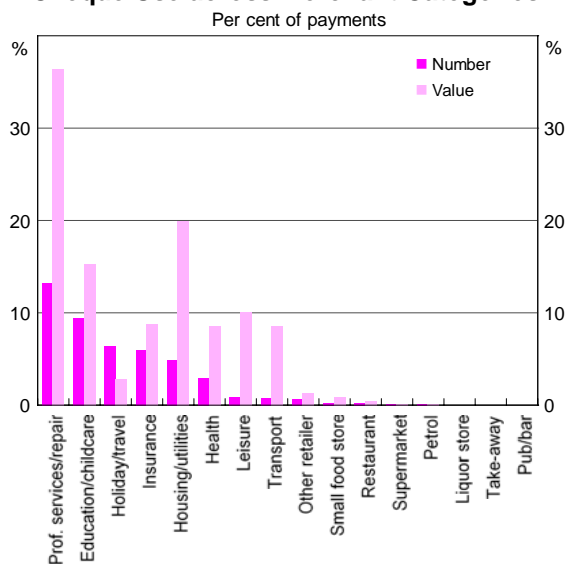
¹⁵ The data from Roy Morgan Research (2006) indicated that 22 per cent of people had used a chequebook within the past four weeks.

¹⁶ Roy Morgan Research (2006).

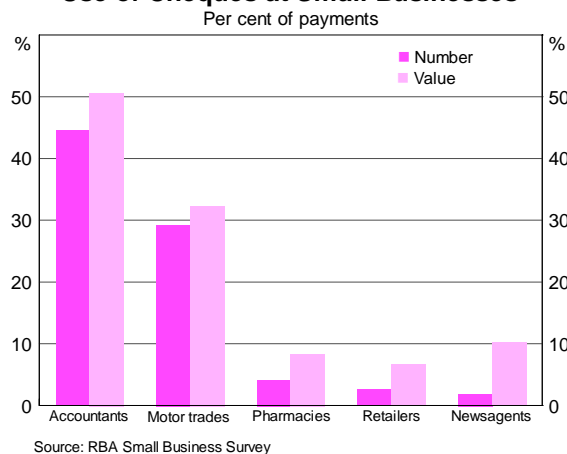
¹⁷ The divergence from the financial institution data reflects the long-tailed distribution of cheque payments, which is not necessarily captured in a two-week survey.

Data from the small business survey support these findings. Cheques, for example, were the most frequently used method of payment in the accounting and motor trades sectors, both categories in which payments are relatively large and where there is likely to be an ongoing relationship between the individual and the business. On the other hand, cheques were very seldom used for payments at pharmacies, retailers and newsagents (Graph 34).

Graph 33
Cheque Use across Merchant Categories



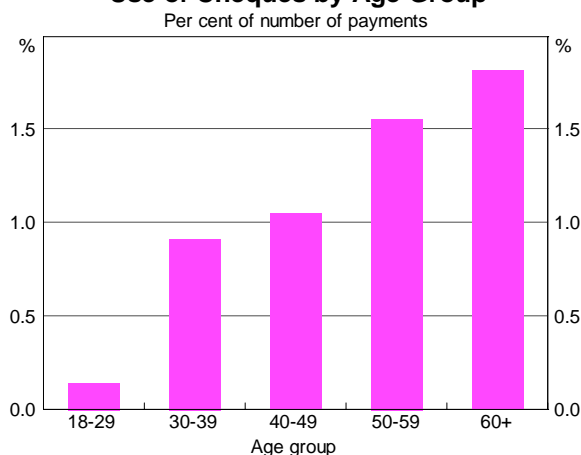
Graph 34
Use of Cheques at Small Businesses



7.3.2 Consumer Characteristics

Cheque use appears to be at least partly dependent upon the age of the individual. Data from the diary survey suggest that cheque use accounts for a larger share of payments for those over 50 than for those under 50, and in particular cheque use is extremely limited for those under the age of 30 (Graph 35). People aged over 50 account for 63 per cent of the number and 48 per cent of the value of all cheques written.

Graph 35
Use of Cheques by Age Group



In addition, cheques are more frequently used in regional areas than the capital cities, with cheques forming 1.3 per cent of the number of payments by people living in regional areas, compared to 1 per cent in capital cities.

7.4 The Use of BPAY

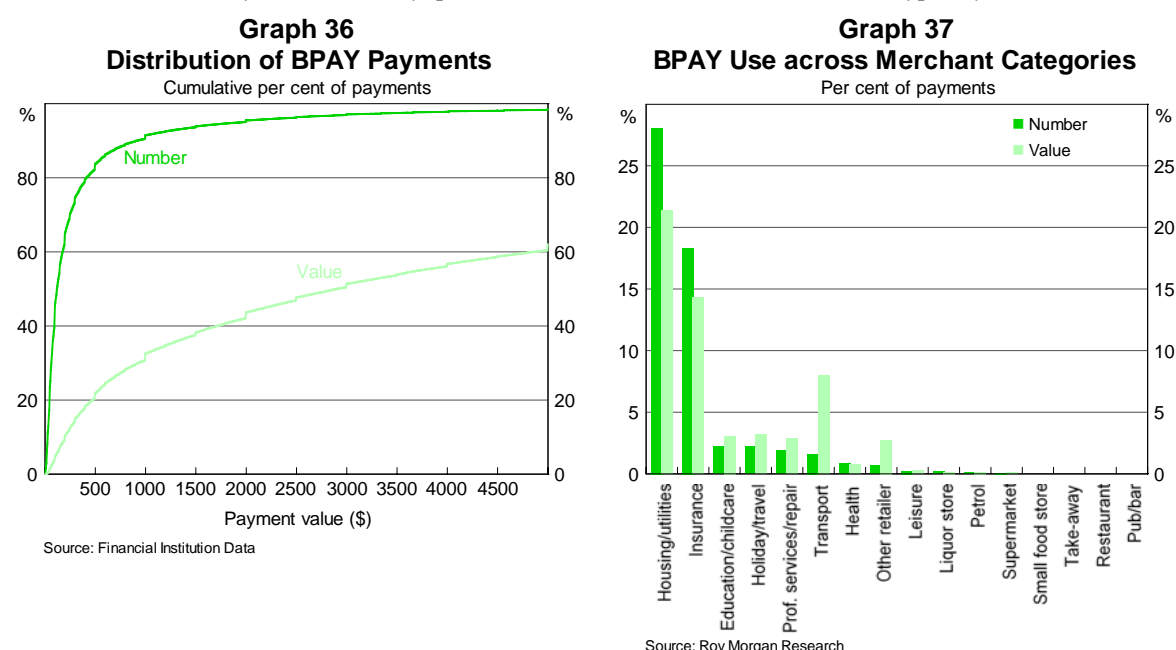
Like cheques, the average value of BPAY payments is relatively high, reflecting its role as a bill payments facility. Data from financial institutions show that the average value of a BPAY payment is around \$530, with over 10 per cent of payments for amounts over \$1 000.

BPAY is used to make some very large payments, with payments over \$5 000 accounting for around 40 per cent of the value of all BPAY payments (Graph 36). Like other payment instruments, however, the bulk of payments are for relatively small values, with the median value of a BPAY payment equal to around \$120.

While BPAY payments can be initiated over the phone or the internet, it is the latter channel that has grown most strongly in recent years, with data from BPAY indicating that in 2007 74 per cent of payments were made over the internet.¹⁸

Data from the diary survey confirm the tendency for BPAY payments to be used for high-value transactions. For the survey, the median BPAY payment was \$100 and the average \$215.¹⁹

The small business survey did not reveal extensive use of BPAY in the sectors surveyed, other than some limited use for payments to accountants and motor traders. This reflects the fact that many of the businesses in the survey were essentially ‘point-of-sale’ businesses, for which BPAY is typically not feasible.



7.4.1 Merchant Categories

BPAY transactions are concentrated in a small number of merchant categories for which payments are typically large and infrequent. These include housing and utilities, insurance, and certain transport-related payments (Graph 37). BPAY was also the most frequently used instrument for those merchant categories falling into the miscellaneous classification of ‘other’ (not shown in Graph 37). Data provided by financial institutions indicate that by value this category consists mostly of tax payments and securities transactions, as well payments such as fines and gifts to charity. There were no BPAY payments in more than half of the categories in the diary survey, reflecting the more limited circumstances in which BPAY is a payment option.

7.4.2 Consumer Characteristics

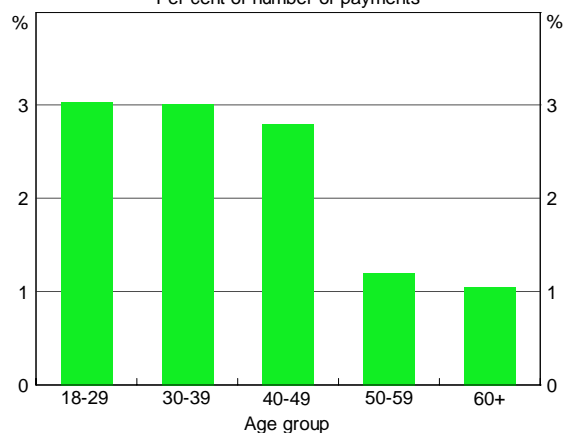
Age also appears to play a role in the use of BPAY. In contrast to patterns of cheque use, BPAY tends to be more frequently used by younger people, with age groups under 50 using BPAY at three times the rate of

¹⁸ BPAY (2007).

¹⁹ As with cheque payments, the median and average values for BPAY in the consumer survey are lower than reflected in the data from financial institutions, due to the long-tailed distribution of such payments.

those over 50 (Graph 38). People between the ages of 18 and 49 account for 79 per cent of the number and 72 per cent of the value of BPAY payments.

Graph 38
Use of BPAY by Age Group
 Per cent of number of payments



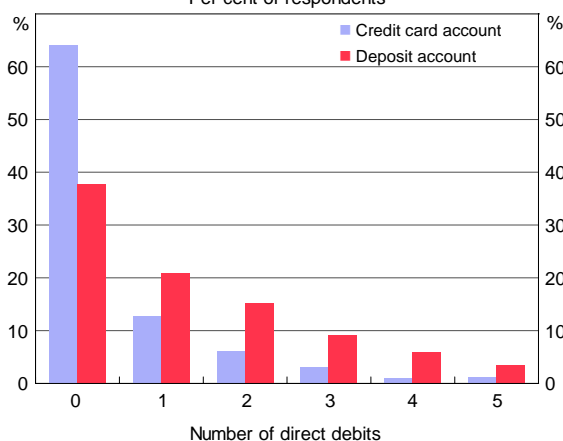
Source: Roy Morgan Research

7.5 The Use of Automated Debits

Participants in the survey of individuals were asked to complete a separate questionnaire on automatic debits from their deposit or credit card account over the two-week period of the survey (the separate questionnaire reflected the fact that as these payments are automated, they are not identifiable at the time of payment and thus not suitable for a diary survey). Of the 662 diary respondents, 587 filled out this questionnaire. Around 70 per cent of this subset of respondents recorded an automatic debit from at least one of their accounts, with an average value of \$138. It is not possible to determine whether those people who omitted to return the questionnaire did so because they did not make any automated debits. In the absence of information on these non-respondents, the data presented here relate to the subset of individuals who reported making an automated debit transaction (if, as is probable, the non-respondents tended to make fewer or no automated debits, the results represent upper bound estimates of the use of automated debits).

The data indicate that direct debits from deposit accounts are more frequently used than direct debits from credit card accounts (Graph 39). Around 62 per cent of the subset of respondents had a direct debit from their deposit accounts, with 26 per cent having three or more direct debits over the two-week period. The average automated debit from a deposit account is for \$136, but this varies with the number of arrangements. For example, respondents who had five automated debits had an average as low as \$50, while those with just one direct debit had a much higher average at \$227.

Graph 39
Direct Debits
 Per cent of respondents



Source: Roy Morgan Research

Of those respondents who completed the questionnaire, 25 per cent reported having made an automated debit from a credit card account.²⁰ Compared to the occurrence of multiple direct debits from deposit accounts, fewer respondents reported making more than one credit card account debit.

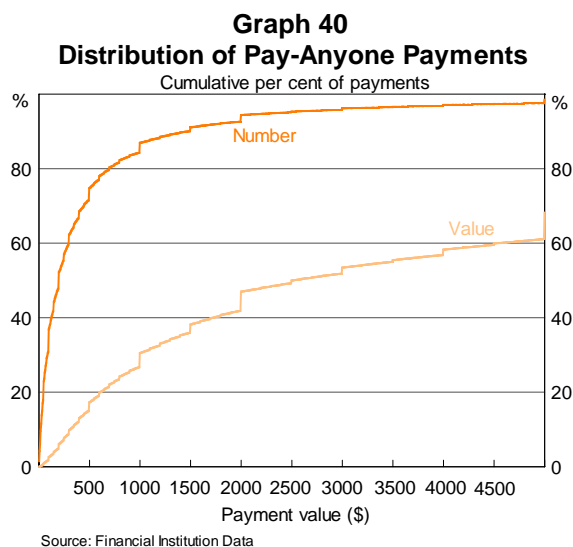
7.6 The Use of Third Party Funds Transfers (Pay-Anyone)

The data from financial institutions also provide some insights into the use of ‘pay-anyone’ funds transfers (Graph 40). Third party funds transfers, which are typically available via internet banking services, offer a means of transferring funds between individuals and businesses. Payments can be made immediately, scheduled for future payment, or set as a regular payment from an account. While such payments are convenient, they do require the sending party to enter the personal details, including name and account number, of the recipient.

In 1998, just one per cent of adults used the internet to make bill payments or transfer funds.²¹ In contrast, a more recent survey reported that almost 50 per cent of bank customers had accessed their internet banking accounts several times a week in the six months to June 2006.²²

Internet pay-anyone functionality tends to be used for larger valued payments. The average payment is for \$702. The median, while significantly lower (at around \$200), is above the medians for cheques and BPAY. This larger average transaction amount may reflect the transfer of funds between accounts of the same person, as opposed to actual payments for goods and services.

The data indicate that people who make transfers by pay-anyone tend to make regular use of this facility. Around 70 per cent of people making a pay-anyone transfer in March 2007 made more than one payment or transfer from their account. In addition, over 50 per cent of people recorded more than \$1 000 in transfers and payments via this method (these data include transfers between different accounts, as well as payments to third parties).



20 10 per cent of respondents provided information on deposit account debits but not on direct debits from credit card accounts. Hence the credit card figures in Graph 39 do not sum to 100 per cent.

21 ABS (1998).

22 AC Nielsen (2006).

8. Conclusions

Australian households make around 11 billion payments per year. Cash, which accounts for around 8 billion of these payments, is the most widely used form of payment for individuals, and is the dominant method of payment for small transactions. In some merchant categories, cash is used for more than 80 per cent of all payments – again, typically where the average size of payments is low. Evidence from *Payment Costs in Australia* reveals that cash typically provides for shorter tender times than other instruments, especially for low-value transactions.²³

Card payment methods are also widely used. Taken together, debit and credit cards are the most frequently used form of payment for transactions between \$50 and \$500. At lower payment values, EFTPOS is more frequently used than credit and charge cards. This pattern is reversed, however, for high-value payments: credit cards account for more than 80 per cent of card payments above \$800. In the case of EFTPOS, daily transaction limits of around \$1 000 are at least one influence on these patterns. Cards are used across a wide range of merchant categories – in particular, EFTPOS is used frequently for supermarket and petrol spending, where the availability of cash-out plays a role, while credit cards account for a substantial proportion of transactions in sectors such as insurance, holiday and travel spending, and housing and utilities payments.

While the use of cheques has been gradually declining, cheques remain an important part of the retail payments system, with cheque payments via the mail still accounting for a substantial share of the value of bills paid. Conversely, BPAY has been growing in importance as a payment method, and is the most frequently used method for payment of bills. A substantial number of bills are, however, still paid over-the-counter, rather than electronically.

Demographic factors, in particular the age of Australians, appear to have a significant influence on payment patterns. Generally, older individuals tend to use cash and cheques more frequently than do younger people. Conversely, debit cards are more frequently used by people aged between 18 and 40. The use of credit cards is highest for those aged between 30 and 50, while BPAY is used more often by those under 50.

ATMs are the most used method of obtaining cash, accounting for more than 60 per cent of the number and value of withdrawals. Cash-out at point of sale is also used frequently, but generally for quite small values. Over-the-counter withdrawals tend to be used more frequently by older people and, on average, are for larger amounts than withdrawals through ATMs.

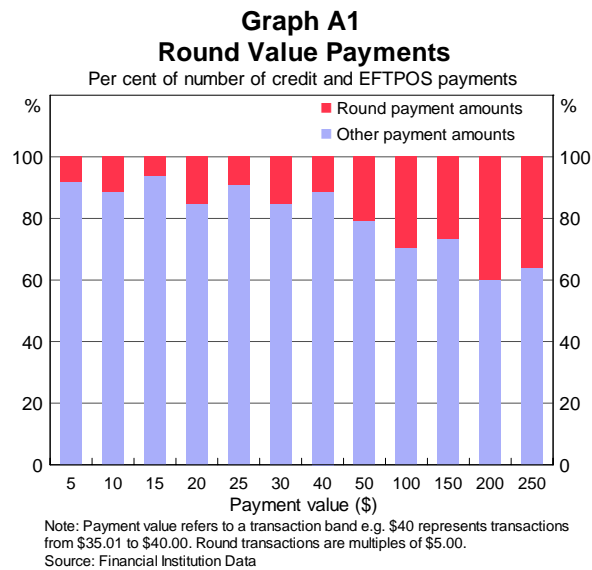
Finally, the Reserve Bank thanks all the financial institutions, businesses and individuals who participated in this study. The Bank welcomes comments on the findings presented in this paper.

²³ Reserve Bank (2007).

Box A: Round Payment Amounts

Data provided by card acquirers suggest that there is a strong pattern in electronic transactions for payments to occur precisely at multiples of \$5.00.

As outlined, transactions have been aggregated into buckets of \$5, combining up to 500 different, but closely related transaction sizes. The data indicate that instead of a uniform distribution across these transaction sizes, some buckets have a large proportion of transactions at exact \$5 multiples. In these circumstances, these 'round' payment amounts can account for one quarter, and up to 40 per cent, of the number of total transactions in that bucket (Graph A1). For example, one-third of card payments between the values \$95.01 and \$100 are for \$100 exactly.



Examination of disaggregated merchant industry codes shows the primary drivers of these transactions to be pre-authorized direct debits, or services provided by professionals. At lower transaction values, charity donations and parking stations are the primary merchants who collect round transaction amounts (Table A1). Mid-range transactions are largely transport related, covering tolls and fees, and service stations, while larger transaction values are dominated by professional services and large retail purchases such as spending on car repairs, hotel accommodation and furniture.

Table A1: Proportion of Round Value Transactions by Merchant Category
Per cent of round value payments

	\$5		\$10		\$20	
Low Value	Charity	23	Charity	20	Service stations	18
	Restaurant	13	Parking	9	Charity	12
	\$40		\$50		\$100	
Medium Value	Service stations	16	Toll/bridge fees	12	Toll/bridge fees	14
	Charity	6	Service stations	11	Hotels	7
	\$500		\$800		\$1 000	
High Value	Car sales/service	12	Furniture	10	Car sales/service	16
	Furniture	6	Hotels	5	Furniture	9

Source: Financial Institution Data

Appendix A: Survey of Individuals

The Bank commissioned Roy Morgan Research to design and conduct a survey of the day-to-day use of payment methods in Australia. The survey involved individuals recording the details of every purchase they made over a two-week period in a specially designed pocket-sized diary. Participants were also asked to enter details in the diary every time they obtained cash during the survey period.

The survey shares some similarities with two previous studies – the Visa Payment Panel Study in the United States and APACS' Consumer Payments Survey in the United Kingdom – both of which employ a diary methodology to gather information on the use of payment methods. These overseas studies are conducted on an ongoing basis.¹

A representative sample of 1 000 individuals was selected by Roy Morgan Research from its Single Source database in late May 2007.² Each of these individuals was sent an information package containing the Financial Transactions Diary and accompanying instructions shortly after telephone recruitment interviews. Participants were asked to complete the survey over a two-week period in early June 2007. Responses were received from 677 people. Fifteen respondents had reported making credit or charge card transactions despite being recorded as not holding a credit or charge card, and hence were excluded from the final dataset of 662 responses. An additional questionnaire on automated debits and surcharging was included for completion at the end of the two weeks. 587 of these questionnaires were returned.

The sample was designed to be representative of the Australian population, although ultimately older age groups were over represented in the completed diaries. Accordingly, Roy Morgan Research applied weightings to ensure that the final data were representative of the population as a whole.

The diary captured data on the use of nine different payment methods in 17 merchant categories. The diary also captured information on the 'channel' the individual used to make the payment – for example whether the person used a credit card in person at a store, or over the internet. Participants were also asked to mark a check-box for purchases where they were charged a fee by the merchant for using a particular payment method (a 'surcharge'). In addition the diary captured information on the use of four methods of obtaining cash, and whether people made a 'special trip' each time when obtaining cash. The various items that participants were asked to record in the diary are shown in Table AA1.

General demographic information on the participants was provided by Roy Morgan Research from its Single Source database.

The diary survey results indicated that around 5 per cent of credit card transactions attracted a surcharge. Of those respondents who reported facing a surcharge on a credit card payment, and subsequently filled in the automated debits and surcharging questionnaire, 44 per cent reported that it affected their choice of payment instrument 'very much' or 'somewhat', while 52 per cent thought it affected their choice 'very little' or 'not at all'. Roy Morgan Research noted that some respondents may have incorrectly understood the instructions on surcharging, as a number of respondents reported being surcharged for the use of cash.

The results exhibited some signs of 'survey fatigue'. There was a drop-off in payments reported after the first day of the diary survey (suggesting that some respondents filled in the first day in more detail than the remaining two weeks), but there was only a small difference in the number of payments recorded thereafter. The Bank conducted further analysis of this 'survey fatigue' and concluded that while it did not appear to affect the results regarding the relative use of payments, it may have served to underestimate the total number of payments made. A small adjustment for this was therefore made when calculating the average number of payments per day per respondent.

The diary survey provides a snapshot of where Australians make their payments. This information should be tempered with the recognition that many payments are seasonal, and so the composition is influenced by the time of year that the survey was taken. (For example, certain sectors would be expected

1 See APACS (2007) and Visa USA Research Services (2006).

2 The process is described in detail in Roy Morgan Research (2007).

to be influenced by Christmas shopping and January/July sales. Similarly, travel spending would likely peak during school holiday periods.) An analysis of the Bank's retail payments statistics, however, indicates that June is a reasonably representative month compared to overall averages.

Table AA1: Fields in the Diary Survey

	Payments^(a)	Cash withdrawals
Date	Yes	Yes
Transaction amount (rounded to nearest dollar)	Yes	Yes
Method	One of the following methods: 1. Cash 2. Debit card using a PIN 3. MasterCard/Visa debit card 4. MasterCard/Visa credit card 5. American Express/Diners Club card 6. Petrol/Store card 7. Personal Cheque 8. BPAY 9. Other	One of the following methods: 1. ATM 2. EFTPOS cash-out 3. Over-the-counter 4. Other
Channel	One of the following channels: 1. In person 2. Phone 3. Internet 4. Mail	Not Applicable
Merchant Type	One of the following merchant types: A – Supermarket B – Liquor store C – Small food store E – Other retailer F – Petrol/fuel for motor vehicles G – Transport H – Take-away/fast-food J – Restaurant/formal dining K – Pub/bar L – Sporting and entertainment (Leisure) M – Holiday travel/hotel accommodation N – Insurance P – Health/medical care R – Housing/utilities S – Education/childcare U – Professional service/home repair or home improvements Z – Other	Not Applicable
Surcharge Paid	Yes	Not Applicable
Special trip	Not Applicable	Yes/No

(a) Participants were asked to report payments of bills as payments but were asked not to include any repayments of loans such as credit card repayments or mortgage instalments. Participants were asked to record only personal payments and exclude 'business' payments such as those made on behalf of an employer.

Appendix B: Survey of Small Business

In March-April 2007 the Reserve Bank conducted a survey of small business across Australia on the methods they used to receive payments from customers. The survey – which was largely conducted online – was undertaken with the assistance of the Office of Small Business (OSB) and a number of industry associations. These included the Australian Newsagents' Federation, the Australian Retailers Association, the Council of Small Business Organisations of Australia, CPA Australia, the Motor Trades Association of Australia, the National Institute of Accountants, the Pharmacy Guild of Australia, and Restaurant and Catering Australia.

An initial draft of the survey was circulated to the participating industry associations for their comment, with the survey forms being tailored to the particular industry sectors. In total, 11 different versions of the survey were produced, reflecting the participating industries; a 'generic' example of the survey is provided below. After the surveys were finalised, they were circulated to businesses by the participating industry associations for completion by 30 April 2007. For the Australian Retailers Association, in addition to the online survey, a paper version of the survey was produced and circulated within a national magazine.

The survey was kept brief so as to encourage completion. In total, 263 responses were received and a summary of the results was provided to participating industry associations in June 2007.



Exit this survey >>

Reserve Bank of Australia

2007M Use of Payment Methods - Survey of Australian Businesses

1. Introduction

Reforms to credit card and EFTPOS arrangements by the Reserve Bank over the past 5 years have had a significant impact on Australian businesses. The Reserve Bank is reviewing these reforms and invites you to participate in a web-based survey. The survey is short and relatively straightforward. All the questions you will be asked are on this page.

If you wish to verify that this research is being conducted by the Reserve Bank of Australia, or if you would like more information about the purpose of this study, please contact Stephanie Weston or David Emery at the Reserve Bank. They can be contacted directly by email at paymentsurvey@rba.gov.au or by telephone during business hours through (02) [] or (02) [].

All responses using this online survey are sent over a secure encrypted connection. Individual responses will remain confidential. Aggregate and summary information will provide input to the Reserve Bank's policy deliberations and may be included in material published by the Bank for the review of payments reforms.

If you'd like to leave the survey at any time, just click "Exit this survey". Your answers will be saved. When you have finished the questions, click "Next" at the bottom of the page.

If you click on "Exit this Survey", you will leave the secure connection and be taken to the RBA website. Your computer's web browser may inform you that you are leaving a secure connection and ask if you wish to continue. You should select 'Yes'.

1. Please indicate which of the categories below best describes your business. You may select more than one.

- Supermarket
- Liquor store
- Hardware/Home Improvements/Manchester
- Clothing - Childrenswear/Ladieswear/Menswear
- Cards/Gifts/Newsagents
- Fashion Accessories
- Auto Accessories
- Sportswear/Sports Accessories
- Home Entertainment
- Pharmacies/Optical/Dental/Medical
- Department stores/Discount stores
- Other (please specify)

2. Please provide the following information regarding the location and size of your business. If exact figures are not available, please provide estimates.

Postcode of principal place of business:

Number of employees:

Annual turnover \$:

3. How many payments did you receive from your customers/clients in the last year? Please specify an exact figure if you can, otherwise select a range which you think is close to your total transactions for the year.

- Up to 5,000
- 5,001 to 20,000
- 20,001 to 50,000
- 50,001 to 100,000
- 100,001 and over
- Exact (please specify)

4a. What methods of payment does your business accept from customers/clients?

	Yes, Accept	No - do not accept due to cost	No - do not accept due to other reasons
Cash	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EFTPOS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VISA/MasterCard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AMEX	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diners Club	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cheque	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BPay	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Direct debit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet payment (excluding credit and charge cards)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4b. Do you apply a minimum transaction value for any of the following payment methods?

If you do not apply a minimum transaction value, or do not accept that payment method, please leave the relevant box blank.

Cash \$

EFTPOS \$

VISA/MasterCard \$

AMEX \$

Diners Club \$

Cheque \$

BPay \$

Direct debit \$

Internet payment \$

5. To answer questions 6 to 7 you will need to know the value and number of transactions made by your customers. Please provide this information for March 2007.

6a. For March 2007, what was the **total value** of payments from your customers/clients?
 \$

6b. For March 2007, what was the **value** of payments from customers/clients, for each payment method you accept?

Example: if your business received \$5000 in cash and \$12,000 in EFTPOS transactions, you would put 5000 and 12000 in the first two boxes. If you do not accept a particular payment method, please leave the box blank.

Cash \$	<input type="text"/>
EFTPOS \$	<input type="text"/>
VISA/MasterCard \$	<input type="text"/>
AMEX \$	<input type="text"/>
Diners Club \$	<input type="text"/>
Cheque \$	<input type="text"/>
BPAY \$	<input type="text"/>
Direct debit \$	<input type="text"/>
Internet payment \$	<input type="text"/>

7a. For March 2007, what was the **average value** of a payment transaction for payments made to your business by your customers/clients?

Average value of a transaction \$

7b. For March 2007, what was the **total number** of payments made to your business by your customers/clients, by each payment method?

Example: if you received 500 cash transactions, 380 EFTPOS transactions, and 320 VISA/MasterCard transactions, you would place 500, 380 and 320 in the first three boxes. If you do not accept a particular payment method, please leave the box blank.

Cash	<input type="text"/>
EFTPOS	<input type="text"/>
VISA/MasterCard	<input type="text"/>
AMEX	<input type="text"/>
Diners Club	<input type="text"/>
Cheque	<input type="text"/>
BPAY	<input type="text"/>
Direct debit	<input type="text"/>
Internet payment	<input type="text"/>

8a. Please specify whether you surcharge or discount for any of the following types of payment method.

If you do not accept a payment method, please leave the line blank.

	Surcharge - % of transaction	Surcharge - flat fee	Neither surcharge nor discount	Discount
Cash	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EFTPOS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VISA/MasterCard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
AMEX	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diners Club	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cheque	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BPAY	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct debit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet payment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8b. Where you indicated a surcharge above, please specify the surcharge rate you apply to the following types of payment method.

If you don't apply a surcharge, please leave the line blank.

Cash	<input type="text"/>
Debit Card/EFTPOS	<input type="text"/>
VISA/MasterCard	<input type="text"/>
AMEX	<input type="text"/>
Diners Club	<input type="text"/>
Cheque	<input type="text"/>
BPAY	<input type="text"/>
Direct debit	<input type="text"/>
Internet payment	<input type="text"/>

9. You are welcome to make any other comments on the Australian payments system in the box below.

2. Thank you

Thank you for completing this survey. When you click on "Done", you will leave the secure connection and be taken to the RBA website.

Your computer's web browser may inform you that you are leaving a secure connection and ask if you wish to continue. You should select 'Yes'.

We have included fields for your business name and contact details. These are entirely optional and may be left blank - your responses will still form part of the survey. However, completion of these will enable us to contact you should we require further information or seek clarification.

Please enter business name, and name and contact details of the person completing the survey (optional)

Business name:	<input type="text"/>
Name:	<input type="text"/>
Contact phone:	<input type="text"/>
Contact email:	<input type="text"/>

<< Prev Done >>

References

Australian Bureau of Statistics (1998), *Household Use Of Information Technology 1998*, Catalogue No.8146.0.

ACNielsen (2006), *Retail Banking Report News Release*, June <http://au.acnielsen.com/site/documents/RetailBankingReleaseJune30.pdf> (accessed 6 November 2007).

APACS (2007), *The Way We Pay: UK Cash & Cash Machines 2007*, London.

BPAY (2007), *BPAY Fast Facts* http://www.bpay.com.au/about/fast_facts.aspx (accessed 30 October 2007).

Department of Communications, Information Technology and the Arts (2006), *Exploration of Future Electronic Payments Markets*, Canberra.

Reserve Bank of Australia (2007), *Payment Costs in Australia*, Sydney.

Roy Morgan Research (2006), *Single Source Survey*, March, Sydney.

Roy Morgan Research (2007), *Understanding Financial Transactions: A Reserve Bank of Australia Diary Study – Technical Report*, Sydney.

Visa USA Research Services (2006), *Visa Payment Panel Study: 2006 Payment Trends Summary*, USA <http://www.bos.frb.org/economic/eprg/conferences/payments2006/papers/hampton.pdf> (Accessed 9 November 2007).