

Cash Use in Australia: Results from the 2019 Consumer Payments Survey

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Photo: Toni Faint – Getty Images

Abstract

The Bank's 2019 Consumer Payments Survey (CPS) suggests that the use of cash for transactions has continued to fall alongside growing use of electronic payment methods. Despite this, a substantial share of consumers still use cash intensively, with this share having reduced only a little over recent years. These high cash users are more likely to be older, have lower household income, live in regional areas, and/or have limited internet access. The survey suggests that around one-quarter of consumers would face major inconvenience or genuine hardship if they could no longer use cash, although most respondents stated that their current access to cash was convenient. The survey was conducted before the emergence of COVID-19 and the associated social distancing measures, however, and so did not capture any change in behaviour that may have resulted from this.

Introduction

The Bank undertook its fifth triennial Consumer Payments Survey (CPS) in November 2019. Survey participants were asked to record details about every transaction they made for a week, and to provide extra information on cash holdings, perceptions of cash access, and payment preferences in a post-survey questionnaire. More than 1,000 individuals completed the survey, recording more than 11,000 in-person transactions

in total, as well as around 2,000 transactions that were not done in-person. Caddy, Delaney and Fisher (2020) gives a broad overview of the survey results, including use of online payments and newer payment methods. The focus of this article is cash, including the demographics of cash use, access to cash and other payment methods, and cash holdings, and so we limit our analysis to in-person payments, where consumers have the option to use cash if they so wish.^[1]

The CPS suggests that Australian consumers are continuing to switch to electronic payment methods in preference to cash, although the share of in-person payments made in cash was still substantial at 32 per cent by number and 19 per cent by value in 2019, down from 43 and 30 per cent, respectively, in 2016 (Graph 1). For comparison, if one considers all payments, including online payments where cash use is not an option, cash made up 27 per cent by number and around 10 per cent by value in 2019 (Caddy *et al* 2020).

The fall in the cash share of in-person transactions over the three years to 2019 was particularly pronounced for smaller payments, which reflects consumers increasingly using contactless ‘tap-and-go’ options for these purchases (Graph 2). Just under half of in-person transactions in the 2019 CPS valued at \$10 or less were made using cash, compared with 66 per cent in 2016. Consistent with previous surveys, cash use was lower for higher-value transactions, with only 16 per cent of in-person transactions over \$50 made using cash in 2019. Cards are now preferred over cash for all payment amounts over \$5.

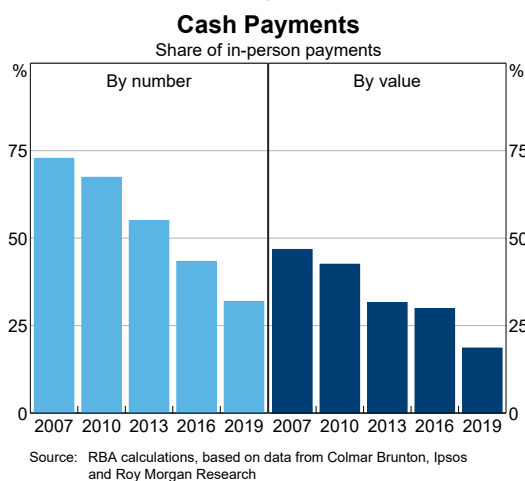
Despite the continued move away from cash and towards cards for in-person payments, the survey showed that some consumers still use cash intensively, and that the share of those doing so had declined only modestly over the previous three years. In particular, while almost half of the participants used cash for less than 20 per cent of

in-person transactions (henceforth defined as ‘low cash users’), around 15 per cent used cash for 80 per cent or more of in-person transactions (whom we define as ‘high cash users’) (Graph 3). At the extremes of the distribution, 10 per cent of participants used cash for *all* in-person transactions in 2019 (compared with 12 per cent in 2016) while 30 per cent did not use cash at all during the 2019 survey week (compared with 18 per cent in 2016).

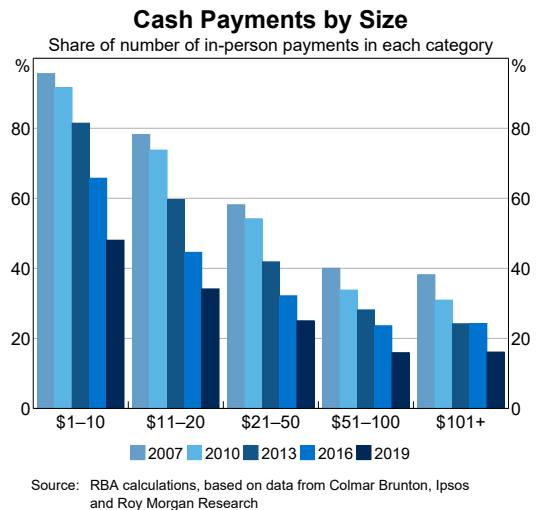
Demographics of Cash Use

In addition to highlighting overall trends in cash use, the CPS confirmed differences in cash use across demographic groups. Older survey

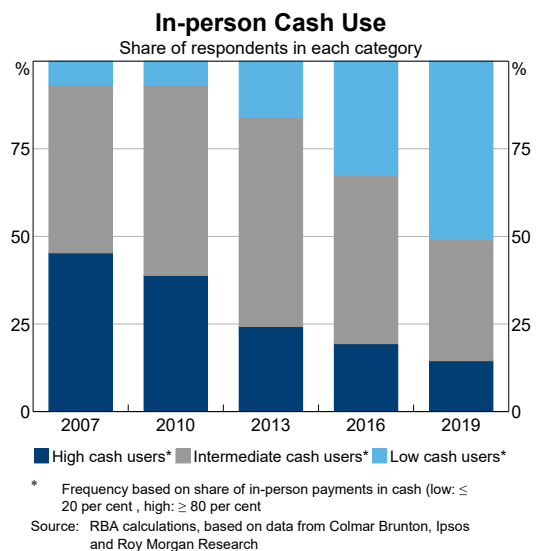
Graph 1



Graph 2



Graph 3



participants were relatively more likely to be high cash users, with almost 40 per cent of those aged 65 and above in this category, compared with only 4 per cent of 18–29 year olds (Graph 4).

Correspondingly, 70 per cent of 18–29 year olds were low cash users compared with 24 per cent of those aged 65 and above. While these results suggest that age is positively correlated with cash use, they do not tell us if this is because older people simply prefer to use cash, on average, more than younger people do, or if other characteristics – for example the average income of older people, or typical transaction sizes – are driving the result. To disentangle the effects of different demographic and transaction-level factors, we use regression analysis (see Table A1). The regression results confirm that the probability of using cash for an in-person transaction increases with age: after controlling for other variables, we estimate that people aged 65 and above are five times, or equivalently 25 percentage points, more likely to use cash for an in-person transaction, relative to people aged 18–29 years.

Payment behaviour also differed somewhat depending on the participant's area of residence, with those in regional areas tending to use cash a little more intensively: around 18 per cent of participants living in regional areas were high cash users, compared with 13 per cent for capital cities, while around 44 per cent were low cash users, compared with 54 per cent for capital cities

(Graph 5). After controlling for other factors, however, the regression results do not indicate that one's area of residence in and of itself has a direct impact on cash use; rather, participants who live in regional areas tended to be older and have inferior internet access relative to capital city dwellers, and these factors are associated with higher cash use (discussed further below).

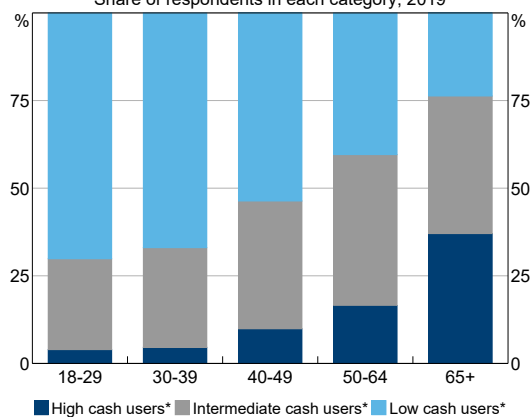
Survey participants with lower household incomes were more likely to be high cash users, while those with higher household incomes were more likely to be low cash users (Graph 6). For example, for households whose income was in the lowest 25 per cent of the population (i.e. the first income quartile shown in Graph 6), around 30 per cent were low cash users and another 30 per cent were high cash users. For households whose income was in the top 25 per cent of the population (the fourth income quartile) around 65 per cent were low cash users and only 3 per cent were high cash users. Similar to area of residence, however, the regression results suggest that it is not household income itself that is driving this result. Rather, household income is correlated with other factors that are associated with cash use, including age, credit card ownership and internet access.

As mentioned, a number of factors other than age, area of residence, and household income are associated with differing degrees of cash use (Table A1). One particularly strong predictor of cash use was whether participants had accessed the

Graph 4

Cash Use by Age

Share of respondents in each category, 2019



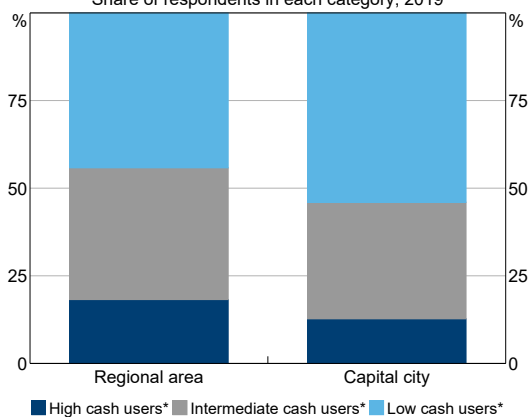
* Frequency based on share of in-person payments in cash (low: ≤ 20 per cent, high: ≥ 80 per cent)

Source: RBA calculations, based on data from Roy Morgan Research

Graph 5

Cash Use by Region

Share of respondents in each category, 2019



* Frequency based on share of in-person payments in cash (low: ≤ 20 per cent, high: ≥ 80 per cent)

Source: RBA calculations, based on data from Roy Morgan Research

internet in the past three months, or had internet access on their mobile phones, with ‘no’ answers associated with a 10–15 percentage point increase in the likelihood of cash use. This may be because those who choose not to – or cannot – access the internet simply prefer cash to newer payment methods, because they find newer payment methods difficult to use, or some combination of the two. Education level was also associated with differing degrees of cash use, although to a lesser extent than internet access: participants with a Bachelor’s degree or higher were 7 percentage points less likely to use cash, all else equal, compared with participants who had not completed further education past high school. Ownership of a credit card was associated with a 4 percentage point reduction in the probability of cash use. Regarding characteristics of the payment itself, payments related to food, leisure, and in-person bills were all relatively more likely to be made with cash, while higher-value payments were associated with less cash use.

Cash Attitudes and Access to Payments

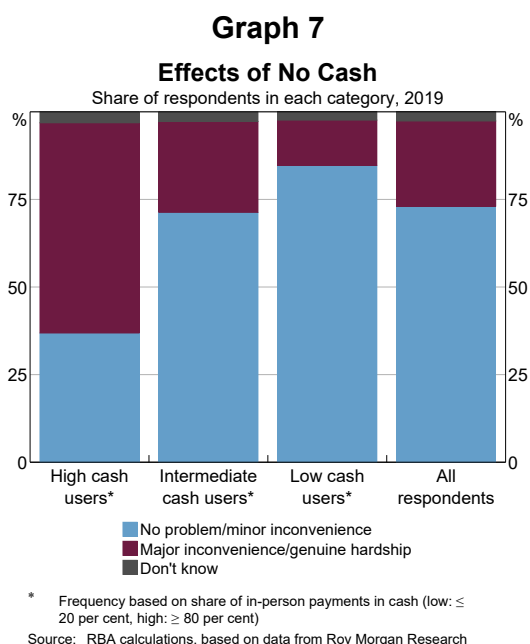
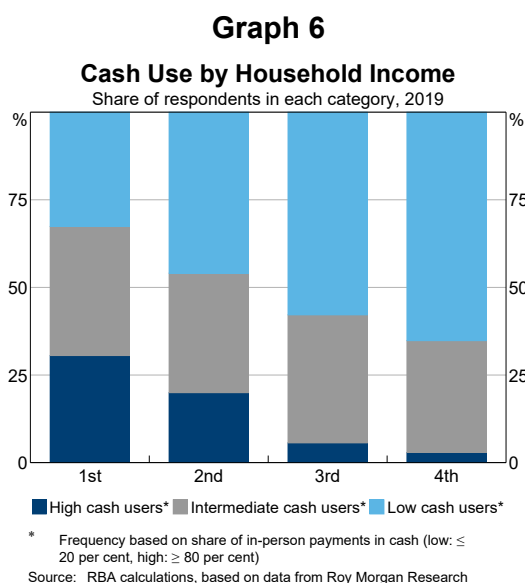
Cash use – choice or necessity?

In-person cash transactions in the 2019 survey were mainly made by people who prefer to use cash, rather than people who had to use cash because of barriers to using other payment methods. In particular, survey respondents were asked to list

their preference for different in-person payment methods, as well as the reason for the preference. Overall, around half of all cash transactions were made by people who listed cash as their most preferred in-person payment method, rising to around 90 per cent for those listing cash as one of their top three methods. The most common reasons for preferring cash were for budgeting or financial management purposes, and a preference for cash for smaller transactions.

The survey also asked whether respondents would be affected if shops stopped accepting cash or if it became difficult to withdraw cash, as is becoming the case in some northern European countries. The majority of high cash users in the CPS reported that they would experience a major inconvenience or genuine hardship if cash were no longer available, while, perhaps unsurprisingly, only a minority of low cash users felt the same (Graph 7).

Participants who indicated that they would experience a major inconvenience or genuine hardship were asked why they needed to use cash rather than another payment method. Of these respondents, around 25 per cent listed privacy or security concerns as the most important reason, around 20 per cent cited merchant acceptance, while around 15 per cent reported that they needed to use cash for budgeting purposes (Graph 8). Overall, around 40 per cent of



respondents indicated that their need to use cash was based on preference (including due to security and privacy concerns, and for budgeting). Around 50 per cent of respondents indicated that their need to use cash was based on barriers to using other payment methods (merchant acceptance, payments to family and friends, and having limited access to the technology – including reliable internet access – required for some other payment methods).

Access to cash services and other payment methods

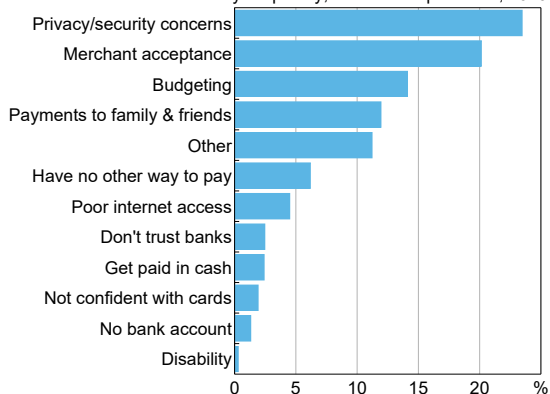
As discussed in Delaney, O’Hara and Finlay (2019), access to cash deposit and withdrawal services as measured by distance to the nearest access point appears to be good for the majority of Australians, although the provision of cash access points has fallen over recent years and this trend seems likely to continue. In this context, the 2019 CPS asked participants about their perceptions of access to cash withdrawal and deposit services. The results were in line with the earlier research, with around 90 per cent of respondents indicating that access to cash withdrawal was convenient, and around 60 per cent of those who make cash deposits saying that access to these services was convenient (Graph 9). Focusing on high cash users, almost 95 per cent indicated that their access to cash withdrawal was convenient, while more than 80 per cent indicated that cash deposit was convenient. Low cash users were slightly less likely

to report that access to cash was convenient. This may indicate that poor access is causing some people to use cash less often. Conversely, some people may think cash withdrawal (and cash use in general) is inherently inconvenient, and therefore choose to use other payment methods.

While most participants stated that their access to cash is currently good, access to new payment methods may be limited for some people as this often relies on users having both access to, and familiarity with, new technology. It is important that the payments system works for all Australians, and if some groups are excluded from certain types of payment methods this could be a concern. The 2019 survey indicated that access to the technology that underpins some newer payment methods is limited for a large number of high cash users, with around half of all high cash users – equivalent to 7 per cent of respondents – having no mobile internet access, for example (Graph 10). The regression analysis discussed earlier also indicates that those without mobile internet access are 13 percentage points more likely to use cash for an in-person transaction (Table A1). If access to cash deteriorated – for example due to the cost of cash distribution rising and banks responding by withdrawing cash access points – these consumers would find it harder to make payments. This would be a particular concern for older Australians and those with low household income or who live in regional areas, who tend to have inferior access to mobile internet, and use cash more, compared with younger Australians in urban areas.

Graph 8

Why Do You Need to Use Cash?
By frequency, share of respondents, 2019*

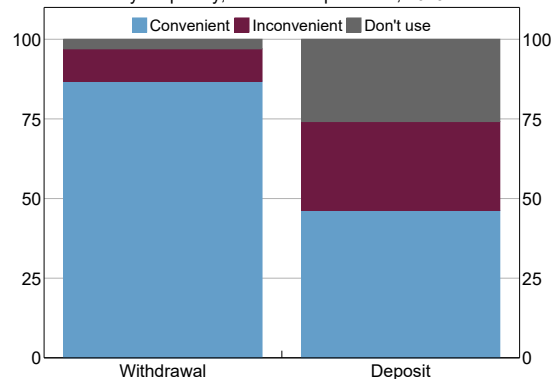


* Of the 277 respondents who indicated it would be difficult if shops stopped accepting cash or they could no longer withdraw cash
Sources: based on data from Roy Morgan Research; RBA calculations

Graph 9

Access to Cash Services

By frequency, share of respondents, 2019



Source: RBA calculations, based on data from Roy Morgan Research

Table 1: Cash Top-ups

	2007	2010	2013	2016	2019
Share of respondents making one or more top-ups (%)	86	72	76	45	48
Number of cash top-ups per person per week	1.4	1.6	1.5	0.7	0.8
Median value of top-up (\$)	100	100	60	100	80

Source: RBA calculations, based on data from Colmar Brunton, Ipsos and Roy Morgan Research

Cash Top-ups

As part of the CPS, participants were asked to record any cash top-ups that they made during the survey week. Consistent with the decline in the use of cash for transactions, the share of respondents making cash top-ups has also decreased over time:

86 per cent of respondents in the 2007 survey made at least one top-up, compared with 48 per cent in the 2019 survey, although this was little changed over the past three years (Table 1). Similarly, the average weekly number of top-ups per person as recorded in the CPS has almost halved, from 1.4 in 2007 to 0.8 in 2019. On the other hand, the median value of cash top-ups, at \$80 in 2019, has remained relatively stable since the 2007 survey. Together, these results suggest that as consumers use cash less, they are choosing to withdraw cash less frequently, rather than reduce the value of each top-up.

Consistent with previous surveys, these top-ups tend to occur either via ATMs or via other non-bank sources (wages, transfers from friends, etc.), rather

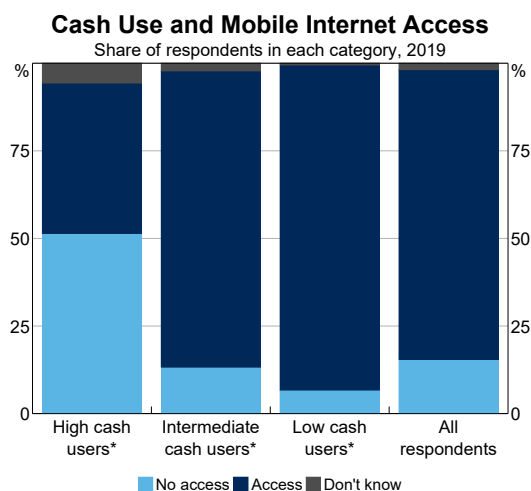
than at a bank branch or via cash-out at the point of sale. Survey results indicate that people typically make around 17 ATM withdrawals per year (roughly one withdrawal every three weeks), down from around 47 in 2007 (roughly one withdrawal per week), with the 2019 CPS suggesting that around 14 per cent of ATM withdrawals are made at ATMs which charge a fee.

Cash Holdings

Survey participants were asked to record the number and value of banknotes held in their wallets. Around one-fifth of people held no cash in their wallet, up from 8 per cent in 2013, but little changed from 2016 (Graph 11). At the other extreme, the share of respondents holding more than \$100 in their wallet fell from 32 per cent in 2013 to 29 per cent in 2019, although again this was little changed from 2016. These data indicate that even though cash use is declining, most people continue to hold cash in their wallet, often for precautionary purposes.

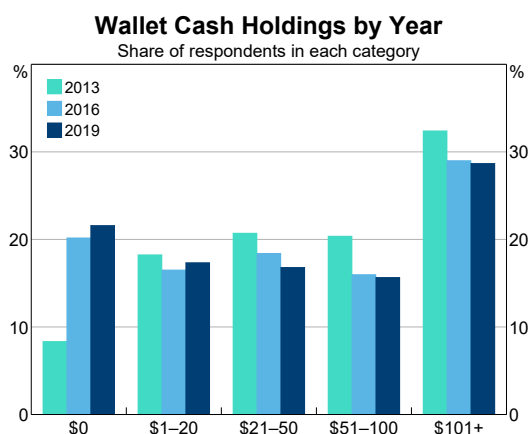
Of the people who hold cash in their wallet, the most important reason for doing so – other than for

Graph 10



* Frequency based on share of in-person payments in cash (low: ≤ 20 per cent, high: ≥ 80 per cent)
Source: RBA calculations, based on data from Roy Morgan Research

Graph 11



Source: RBA Calculations, based on data from Colmar Brunton, Ipsos and Roy Morgan Research

day-to-day purchases – was for emergency transactions (42 per cent of respondents), followed by issues relating to accessibility of cash, including minimising ATM withdrawal times or fees (20 per cent of respondents) (Graph 12). People who reported holding cash outside their wallet also cited emergency transactions as the most important reason, followed by saving for large purchases. These results suggest that many consumers perceive cash to be important as a back-up payment method.

Almost 40 per cent of respondents indicated that they typically hold cash somewhere other than their wallet, with around 15 per cent of respondents reporting holding up to \$100, while 3 per cent reported holding more than \$1,000 (Graph 13). Scaling up these estimates to the entire population would suggest that Australians hold roughly \$4 billion in cash outside of their wallets, which is equal to around 5 per cent of the total value of Australian banknotes on issue. While sizeable, this is nonetheless likely to be an underestimate, since people who hold a large amount of cash may not be willing to disclose this in a survey (see also Finlay, Staib and Wakefield (2018)).

Conclusion

Results from the 2019 Consumer Payments Survey suggest that the use of cash for transactions has continued to fall alongside growing use of electronic payment methods. Despite this, a

substantial number of consumers continue to use cash intensively. These high cash users tend to have one or more of the following characteristics: they are more likely to be older, live in regional areas, have lower household income, and/or have relatively poor internet access.

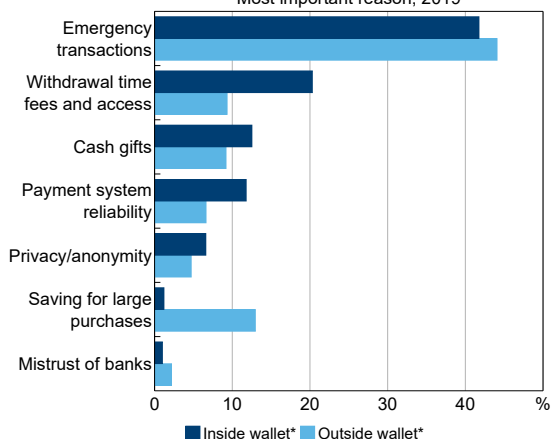
The survey results suggest that a large majority of consumers are currently satisfied with their level of access to cash services, although as the provision of cash access points falls this will bear ongoing monitoring. A large share of respondents indicated that their use of cash was based on preference, while some indicated that factors out of their control, such as poor internet access, prevented them from using non-cash payment methods. Consistent with this, the majority of high cash users in the survey indicated that they would suffer a major inconvenience or genuine hardship if they could no longer withdraw cash or if merchants stopped accepting cash. Alongside the decline in the use of cash for payments, the CPS suggests that consumers are holding less cash on-person, and are making cash top-ups less frequently.

Overall, the survey suggests that Australian consumers are continuing to switch to electronic means of payment in preference to cash, but that a substantial number of consumers continue to have a preference or need to use cash.

Graph 12

Why Hold Cash?

Most important reason, 2019

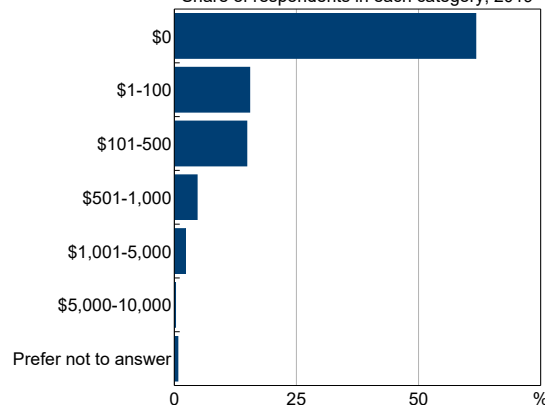


* Share of respondents who hold cash inside and/or outside their wallet
Source: RBA calculations, based on data from Roy Morgan Research

Graph 13

Value of Cash Outside Wallet

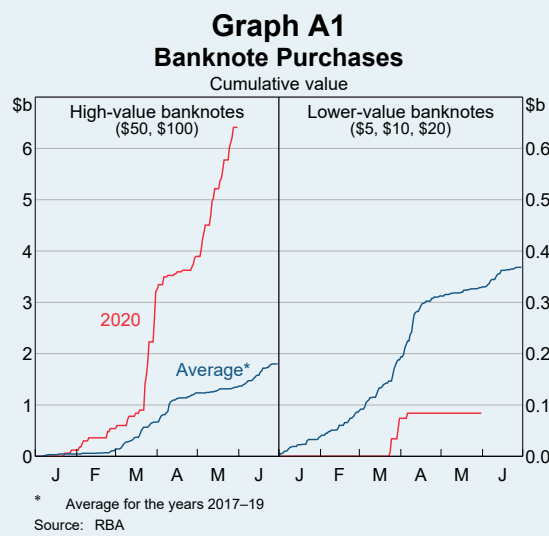
Share of respondents in each category, 2019



Source: RBA calculations, based on data from Roy Morgan Research

Box A: COVID-19 and Cash Demand

Over the second half of March 2020, and following the COVID-19 outbreak and associated social and economic impacts, a larger-than-usual volume of \$50 and \$100 banknotes, worth around \$2.6 billion, were purchased by commercial banks to meet both current and expected future customer demand (Graph A1). These purchases were made in response to, and in anticipation of, increased store-of-wealth demand by the public; indeed, fears about COVID-19 prompted a shift from cash to contactless payment methods at the point of sale, reducing transactional cash demand. At the time, some banks noted a substantial increase in high-value cash withdrawals at branches, and a decline in cash deposits, although ATM withdrawals fell (RBA 2020). This sharp rise in demand abated in early April, although demand has since picked up again in anticipation of an easing in social distancing restrictions.



To put the increase into perspective, the total value of banknotes in circulation grew by 5.6 per cent in seasonally adjusted terms over the March quarter, around four times faster than average, although by less than during the global financial crisis when the value of banknotes in circulation increased by 11.5 per cent over the final quarter of 2008.

Box B: Merchant Acceptance of Cash and Cards^[2]

For a consumer to be able to use their preferred payment method, the merchant they are visiting must accept it. Most Australian merchants with a physical presence accept payment via both cash and card, although there are examples where this is not the case: Spice Alley in Sydney is card-only, while most people probably know of at least one café, restaurant, or take-away store that is cash-only.

To investigate the prevalence of cash- or card-only stores, we conducted a survey of randomly chosen retail outlets. The survey was run in January and February 2020, and retail businesses or services that had a physical shop-front were in-scope. So cafes, grocers, and hairdressers, for example, were included. But online-only stores, trades people, wholesalers, or any other type of business that a regular consumer would not typically walk into and buy something from were excluded. To generate a random sample of businesses to survey, we made use of the fact that every business in Australia has an 11-digit Australian Business Number (ABN). In particular, we randomly generated 11-digit numbers, used the government's ABN Lookup service to see if the number corresponded to an ABN, and, if it did, and that business was identifiable and in-scope, we contacted the business and asked them whether they accepted cash and/or cards as a payment method.^[3]

In total we contacted 470 businesses, 467 of which accepted cash as a payment method and 462 of which accepted cards. As our sample was a random draw from the population of consumer-facing businesses with a physical presence, we can use these numbers to estimate the total share of in-scope Australian businesses accepting cash and/or cards (Table B1).^[4]

Table B1: Share of Merchants Accepting Cash and Cards

January/February 2020

	Accept cash?	Accept card?
Number answering 'yes'	467	462
Total number surveyed	470	470
Estimate of share (per cent)	99.4	98.3
95 per cent confidence interval (per cent)	(98.1, 99.9)	(96.7, 99.3)

Source: RBA

Overall, our results suggest that the vast majority of consumer-facing businesses in Australia with a physical presence accept both cash and cards, and that consumers can in most circumstances freely choose which payment method to use. However, the survey was run before social isolation measures associated with COVID-19 were put in place, and it will be important to monitor merchant acceptance of cash and cards to see if the current crisis leads to any permanent change in practice.

Appendix A: Logit Regression Results

Table A1 shows the results of a regression where the dependent variable is whether or not a transaction was made using cash, and the explanatory variables either relate to the individual making the transaction (e.g. their age), or the transaction itself (e.g. the value of the transaction). In the table, the odds ratio for a given explanatory variable is defined as the probability of using cash given that a respondent/transaction falls within that variable category (e.g. the respondent is between the ages

of 30 and 39), divided by the probability of using cash given that a respondent/transaction does not fall within that variable category; an odds ratio above 1 implies that using cash is more likely for that group or transaction type. The change in probability is the marginal change in the probability of using cash if a respondent/transaction falls within that variable. Odds ratios greater than one are associated with positive marginal changes in probability ↗

Table A1: Logit Regression Results^(a)

Dependent variable: whether or not a transaction was made using cash

Independent variable		Odds ratio	Change in probability
Gender	Male	1.23*	0.03*
Age (years)	30–39	1.72***	0.07***
	40–49	3.15***	0.16***
	50–64	4.74***	0.24***
	65+	5.00***	0.25***
Region	Capital city	0.95	–0.01
Occupation	Professional	0.72	–0.05
	Labourer or tradesperson	0.63	–0.07
	Managerial	0.68	–0.06
	Clerical or administrative	0.87	–0.02
	Sales	0.63	–0.07
	Unemployed	1.06	0.01
	Student	1.23	0.04
	Retired	1.03	0.01
Maximum education	Other	0.45	–0.12
	Diploma, certificate etc.	0.78*	–0.04*
Household income	Bachelor degree or higher	0.65***	–0.07***
	\$40,000–\$79,999	0.94	–0.01
	\$80,000–\$129,999	0.74*	–0.05*
Own credit card?	\$130,000 and over	0.72*	–0.05*
	Yes	0.79**	–0.04**
Accessed internet in last three months?	No	1.88***	0.11***
Internet access on mobile phone?	No	2.12***	0.13***
Payment purpose	Food retail	1.93***	0.10***
	Goods	1.19*	0.03*
	Transport	0.40***	–0.11***
	Petrol	1.07	0.01
	Leisure	3.97***	0.24***
	Holiday	0.95	–0.01

Independent variable		Odds ratio	Change in probability
	Bills	1.80**	0.09**
	Services	1.17	0.02
	Other	3.68***	0.22***
Payment amount	\$11–\$20	0.51***	–0.12***
	\$21–\$50	0.28***	–0.22***
	\$51–\$100	0.16***	–0.29***
	Over \$100	0.14***	–0.31***
Constant		0.36	n/a
Number of observations		11,178	n/a

***, ** and * represent statistical significance at the 1, 5 and 10 per cent level, respectively

(a) Estimated using transaction-level data with clustered standard errors; the base transaction is by a female aged 18–29 years who lives in a regional area, works in community or personal services, has an education level of Year 12 or below, has a household income of below \$40,000, does not own a credit card, has accessed the internet over the past three months, and has mobile internet access, with the transaction itself \$10 or less and made at a supermarket

Source: RBA calculations, based on data from Roy Morgan Research

Footnotes

[*] The authors are from Note Issue Department.

[1] Note that the survey was conducted before the emergence of COVID-19 and the associated social distancing measures, and so will not capture any change in behaviour that may have resulted from this; see 'Box A: COVID-19 and Cash Demand' for a discussion of banknote demand over recent months. The assumption that consumers can in general choose how they wish to pay – that is, that merchants typically accept both cash and cards – is discussed further in 'Box B: Merchant Acceptance of Cash and Cards'. Also note that survey respondents are unlikely to report any shadow economy transactions that they undertake; to the extent that these types of transactions are more likely to be made using cash than other payment methods, this may result in some understatement of the use of cash.

[2] Special thanks to Shanah Catley, Jayaprakash Narayanan, Aidan O'Hara, Jessica Pantic and Priyanka Ranjan for helping with this survey.

[3] Of roughly 5 million randomly generated numbers that conformed to the ABN number format (see <<https://abr.business.gov.au/Help/AbnFormat>>), around

100,000 were actual ABNs, of which around 10,000 were active, registered for GST and for entities that could possibly be retail businesses (e.g. excluding self-managed superannuation funds, unit trusts and the like), of which roughly 500 were retail businesses that we were able to contact.

[4] The number x of positive responses to the question 'do you accept cash?' can be thought of as a random draw from a Binomial distribution of size $n = 470$. The best estimate of the (unknown) probability p that a randomly selected business will answer 'yes' is given by x/n , while a $1 - \alpha$ confidence interval is given by $(B(\alpha/2, x, n - x + 1), B(1 - \alpha/2, x + 1, n - 1))$ where $B(q, b, c)$ is the q th quantile from a beta distribution with parameters b and c ; see Clopper and Pearson (1934). Note that we could only collect responses from businesses that were identifiable via an internet, White Pages or Yellow Pages search, and which we were able to contact, which could potentially introduce some bias into our results.

References

ABS (Australian Bureau of Statistics) (2019), 'Data by Region, 2013-18', CAT number 1410.0. Available at <<https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/1410.02013-18?OpenDocument>>.

Caddy J, L Delaney, C Fisher and C Noone (2020), 'Consumer Payment Behaviour in Australia, RBA *Bulletin*, March, viewed 30 May 2020. Available at <<https://www.rba.gov.au/publications/bulletin/2020/mar/consumer-payment-behaviour-in-australia.html>>.

Clopper CJ and ES Pearson (1934), 'The Use of Confidence or Fiducial Limits Illustrated in the Case of the Binomial', *Biometrika* 26(4), pp 404–413.

Delaney L, A O'Hara and R Finlay (2019), 'Cash Withdrawal Symptoms', *RBA Bulletin*, June, viewed 21 February 2020. Available at <<https://www.rba.gov.au/publications/bulletin/2019/jun/cash-withdrawal-symptoms.html>>.

Finlay R, A Staib and M Wakefield (2018), 'Where's the Money? An Investigation into the Whereabouts and Uses of Australian Banknotes', RBA Research Discussion Paper 2018-12.

Meredith J, R Kenney and E Hatzvi (2014), 'Cash Use in Australia', *RBA Bulletin*, June, pp 43–54.

RBA (Reserve Bank of Australia) (2020), *Financial Stability Review*, April.