How Consumers Budget[†]

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Abstract

Although budgeting is widely considered a common method of managing household finances, surprisingly little is known about the budgeting process. Using a nationally-representative survey (N=3,826) of US adults, we examine budgeting behaviors and beliefs, including who budgets and why, how individuals categorize consumption, and how they adjust their behavior after over- or under-spending. We identify five facts that illuminate key features of budgeting and supplement findings with administrative data (N=194,678) from a large financial institution in Australia. Understanding systematic patterns in how individuals and households budget can serve a critical role in informing economic models of consumption-savings behavior.

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1 Introduction

Many people engage in some form of budgeting to manage their everyday finances. They set spending limits for different categories of consumption, use budgeting tools to monitor their spending, and adjust these limits in response to exceeding or underspending their budgets. In traditional economic models, budgeting plays a limited role. However, theoretical work suggests that the *practice* of budgeting—the process by which people set and manage their budgets—can meaningfully affect consumption patterns (Thaler 1985, 1999; Galperti 2019; Kőszegi and Matějka 2020). Consequently, understanding systematic patterns in how individuals and households budget may serve a critical role in informing economic models of consumption-savings behavior. Yet, empirical evidence identifying these patterns is surprisingly limited.

In this paper, we present new descriptive evidence on budgeting behaviors and beliefs using data from a survey we administer to a nationally-representative panel of U.S. residents. We focus on features of budgeting behavior that may be particularly relevant for models of consumption-savings behavior and document five new facts that can inform future research on budgeting and consumption.

First, budgeting is highly prevalent across the income distribution, even when liquidity is relatively high. Across our full sample, roughly 65.6 percent of respondents report that they currently budget, either formally or informally. Of those who don't currently budget, over 42.2 percent report having budgeted at some point in the past. Low-income individuals are only slightly less likely to report that they currently budget than high-income individuals, even after accounting for several measures of liquidity. This empirical pattern challenges the notion that people are only motivated to budget when faced with financial strain and suggests that the reasons for budgeting extend beyond the present state of a household's balance sheet.

Second, the frequency at which individuals assess the state of their current spending relative to their intended budgets varies substantially and is highly correlated with financial wellbeing. While the propensity to budget is positively correlated with financial wellbeing, we find that, conditional on budgeting, the frequency at which respondents check their budgets is *negatively* correlated with financial wellbeing. In particular, the evidence we find suggests that negative financial information may discourage people from budgeting to begin with. However, conditional on choosing to budget, people appear to rationally attend to their finances. This finding is consistent with prior work demonstrating that individuals selectively pay attention to financial information (Karlsson et al. 2009; Olafsson and Pagel 2018).

Third, nearly all individuals who budget do so by tracking their spending within distinct categories of consumption. While the use of "budgetary categories" has long been recognized, the prevalence and nature of such categories is largely unknown.[1] We find that over 90 percent of individuals who budget report doing so using budgetary categories. Recent studies suggest that individuals fail to treat funds as fully fungible across such budgetary categories (Hastings and Shapiro

[1] Early references describe households separating cash into different envelopes, pitchers, or tin cans (see, for example, Rainwater et al. 1959; Thaler 1985; Zelizer 2017).

2013, 2018; Zhang and Sussman 2018). This non-fungibility in combination with the widespread use of budgetary categories that we document may have important implications for the way that aggregate demand responds to economic shocks (Lian 2020; Heath and Soll 1996).

Fourth, there is wide heterogeneity in the level of granularity at which individuals categorize. For instance, some simply distinguish necessities from discretionary spending, while others maintain separate categories for internet, water, and gas utilities. This heterogeneity is present regardless of whether survey respondents are asked to describe the current budget they keep or the budget that they think they should keep. This fact presents a key challenge to theoretical efforts to construct unifying models of budgeting behavior. Any such model must not only be general enough to capture the widespread use of budgetary categories but must also be flexible enough to allow for differences in how broadly or narrowly individuals categorize their spending.

Fifth, individuals respond asymmetrically when faced with too little versus too much slack in their budgets. While more than 85 percent of respondents would either adjust their spending or update their spending limits if they overspent within a budget category, less than 30 percent would make such changes if they underspent their limit. In other words, people appear to update their budgets conservatively. This asymmetry suggests that households budget in order to constrain (often category-specific) spending rather than simply as a means of tracking spending over time.

Together these findings illuminate several important features of budgeting behavior that are largely absent from traditional economic models but may meaningfully affect consumption decisions. In the last section of the paper, we supplement our survey results with further evidence from administrative data provided by a large financial institution in Australia. While we cannot directly link this administrative data with the intended budgets of the customers of the financial institution, the data allows us to examine the extent to which their financial behavior reflects the patterns we observe in the survey data. We focus our attention on the two facts for which we have the closest analogues within the administrative data. First, we directly examine the relationship between engagement with online and mobile-app account management features (as a proxy for attention to finances) and objective measures of financial wellbeing derived from customer bank records. Results from this exercise are consistent with our second fact that, conditional on engagement, attention to finances and financial wellbeing are negatively correlated. Second, we use this data to examine the extent to which customers segregate their spending across payment methods. Our evidence indicates substantial segregation of spending across payment methods, consistent with tracking spending within specific categories of consumption.

Our paper contributes to a small but growing empirical literature examining the characteristics and determinants of household budgeting behavior. Documenting these behaviors is critical because of its potential to inform our understanding of consumption patterns. Much of the existing empirical literature comes from fields outside of economics and has tended to either focus on specific budgeting practices in isolation, often within laboratory settings, (Heath and Soll 1996; Cheema and Soman 2006; Ülkümen, Thomas and Morwitz 2008; Soman and Cheema 2011; Choe and Kan 2021) or has drawn conclusions from in-depth interviews with relatively small, non-representative samples

(Davis and Carr 1992; Muske and Winter 2001; Halpern-Meekin et al. 2015; Morduch and Schneider 2017). Within economics, the literature has focused more heavily on long-term financial planning (e.g., retirement planning over the life-cycle), with comparatively little research on short-term budgeting behavior. And while the propensity to engage in short-term budgeting and in long-term financial planning appear to be highly correlated, evidence suggests that they are nonetheless distinct behaviors (Lusardi and Mitchell 2011; Ameriks et al. 2003).

Our paper makes three central contributions. First, we focus explicitly on features of budgeting behavior that can speak to and help distinguish between more recent theoretical models of budgeting and consumption-savings behavior (Galperti 2019; Kőszegi and Matějka 2020). Second, our paper comprehensively examines a wide range of budgeting practices rather than studying each in isolation. Third, we draw from a large and nationally-representative sample of individuals in the U.S. rather than focusing only on individuals who are relatively financially strained, as has tended to be the focus of prior work.

2 Survey Description

To explore households' budgeting behaviors and beliefs, we recruited a nationally representative sample of respondents from Lucid, an online platform used to carry out surveys and experiments (see Coppock and McClellan 2019). We informed respondents that we were interested in learning about how people budget and that they would be asked a series of questions about their budgeting process. Respondents who reported having experience with budgeting were asked to provide survey responses with their current (or most recent) budgeting process in mind while respondents who reported having never budgeted were asked to respond based on the budget they think they would keep if they were to start budgeting. We intentionally did not provide a specific definition of budgeting so that we could elicit responses based on what respondents believe budgeting to be. Instead, we asked people to provide additional details on their budgeting process in the survey itself. Our survey questions fall into three broad areas of inquiry.

- **Who Budgets.** We asked respondents whether they budget and their main reasons for budgeting or not budgeting. For those not currently budgeting, we also asked whether they believed they should be. We asked how unpleasant they considered budgeting to be and why they considered it unpleasant if they did. We also assessed financial wellbeing along several dimensions and whether respondents believe budgeting to help with being more financially prudent when spending.

- **Setting a Budget.** We asked all respondents if they budgeted (or would budget) formally or informally and about the tools and resources they use when creating a budget and when determining potential spending limits. We further asked whether respondents segregated their funds using different formal financial accounts, credit cards, or any other physical means of grouping funds separately. We also asked the time horizons over which they budget,

their use of budgeting categories for tracking their spending, and the malleability of these categorizations.

- **Managing a Budget.** We asked respondents about how frequently they assess the current state of their budget, how often they update their budget and why, how much effort they believe they put in to staying within their budget, and how guilty they feel if they fail to do so. We also asked how they adjust their budgets in response to an unusual expense or to having too much (little) slack in their budgets.

In addition to questions within the three areas above, we collected demographic information for our survey respondents. We also measured respondents' tendency to treat money as non-fungible by collecting responses to variants of two classic tests of mental accounting behavior: the "lost ticket-cash problem" and the "calculator-jacket" problem (Tversky and Kahneman 1981). Details on the exact language used for our survey questions can be found in Appendix B.

We took several steps to ensure the validity of our survey responses. First, we included an attention check to filter out respondents who may be skipping mindlessly through the survey. Second, to filter out respondents who may be making up responses, we included the same demographic question—how many children are in your household—twice in the survey and excluded those who provide inconsistent responses. From this sample of 3,893 respondents, we further excluded 38 respondents who provide inconsistent responses to the question of whether it would be a big deal if they were to go [5/50] dollars over their budget and 29 respondents who failed to respond to the question of whether they budget. We are left with a final analysis sample of 3,826 survey respondents.

A natural concern is the representativeness of our sample given that it is collected from an online panel of respondents. Table 1 presents descriptive statistics on key demographic and economic characteristics for our sample. In Appendix Table A.1, we benchmark these characteristics against other external data sources, specifically the American Community Survey (ACS) and the Current Employment Statistics (CES) survey. We find our sample to align fairly well with the broader U.S. population, though there are some differences. In particular, our survey appears to sample disproportionately more from lower income households. To the extent that we observe meaningful differences in budgeting behavior or beliefs by household income, we highlight those differences in the discussion of our findings.

3 Budgeting Behaviors and Beliefs

3.1 The Propensity to Budget

Informal financial advice often encourages households to budget, and an increasing number of financial products and offerings by financial institutions are designed to facilitate the budgeting process. We begin by determining how widespread the practice of budgeting is. As previously described in Section 2, we measure budgeting behavior by asking respondents to classify themselves

into one of three types based on which description most closely aligns with their behavior: I currently keep a budget, I have previously kept a budget but do not currently budget, and I have never kept a budget.

We find that the practice of budgeting is quite prevalent. As Table 2 shows, roughly 65.6 percent of respondents report that they currently budget, and of those who don't currently budget, over 42.2 percent report having budgeted at some point in the past. Turning to the demographic characteristics of respondents, we find that the propensity to budget does not differ by gender but does vary with age, exhibiting a hump-shaped profile over the life-cycle. The propensity to budget is also greater for those with higher levels of education, who are currently employed, and who live with a spouse or partner.

We next examine how the propensity to budget varies by income and wealth. If households budget primarily in response to facing financial strain, we might expect those with limited financial resources to be more likely to budget. Instead, as Table 2 shows, budgeting remains highly prevalent across the income distribution, and in fact increases slightly with income. Moving from the lowest to highest income range is associated with a statistically significant 5 percentage point increase in the likelihood that a respondent reports currently budgeting. We see a similar increase in the likelihood of reporting budgeting when moving across the distribution of household assets, though there is some evidence of non-monotonicity at the highest asset levels. The prevalence of budgeting even among those with higher levels of income and wealth suggests that people's motives for budgeting extend beyond simply the present state of their balance sheet.

To explore these motives more directly, we asked respondents who currently budget to identify their main reasons for budgeting. They could select one of multiple reasons from the following list: 1) to save for long-term goals (e.g., retirement), 2) to save for short-term goals (e.g., a new computer), 3) to avoid debt from predictable overspending 4) to get myself out of debt (e.g., repaying credit card debt), 5) to avoid debt from unforeseen expenses (e.g., an unexpected hospital visit), 6) to make sure that I can provide for my family, and 7) to make sure I don't spend more than my income.[2] Figure 1 presents the frequency of each of these reasons for the set of respondents who report that they currently budget, both in aggregate as well as disaggregated by household income.

Several interesting empirical patterns emerge from this figure.[3] First, the desire to avoid overspending one's income is by far the predominant reason why respondents budget. Nearly three-quarters of respondents who currently budget indicate that they budget for this reason. Second, this motivation for budgeting does not appear to vary substantially with income or wealth. In other words, concerns about overspending do not appear to reflect an individual's current financial state. One potential explanation for this finding is that these concerns are instead a reflection of an

[2]In addition to these response options, respondents could also indicate that they don't believe budgeting to be important or provide their own reasoning ("other"). Of those who report budgeting, less than 0.5 percent indicated that they don't believe budgeting to be important and less than 2.5 percent chose to provide their own reasoning. Given the low prevalence of these responses, we exclude them from our analysis.

[3]Appendix Figure A.1 presents analogous results disaggregated by asset levels and shows similar patterns.

individual's "type." For example, evidence documented across several studies links budgeting to problems with self-control (Thaler 1999; Ameriks et al. 2003; Galperti 2019). Third, the likelihood that respondents identify saving for future goals as a motivation for budgeting increases in income and wealth, and this relationship is significantly starker for long-term goals than for short-term goals. Higher-income individuals are nearly 2.5 times more likely than low-income individuals to report saving for long-term goals as a motivation for budgeting in comparison to 1.7 times more likely for short-term goals. This finding is consistent with evidence that individuals who are more financially-constrained behave as if they are more present-focused (Shah et al. 2012; Haushofer and Fehr 2014; Carvalho et al. 2016).

While detailed empirical data on budgeting is relatively scarce, a handful of existing surveys measure engagement with budgeting. For example, roughly half of respondents report using a spending plan or budget across several surveys, including the University of Michigan's 2001 Surveys of Consumers (46 percent; Hilgert et al. 2003), the 2015 National Financial Capability Study (56 percent; Lin et al. 2016), and the 2014 Canadian Financial Capability Survey (46 percent; Financial Consumer Agency of Canada 2015). In comparison, we find a slightly higher prevalence of budgeting, which may reflect differences in how we identify who budgets. As noted in Section 2, we intentionally did not provide survey respondents with a specific definition of budgeting so that we could elicit responses based on what respondents believe budgeting to be. However, we did ask respondents who reported budgeting to indicate whether they do so formally (e.g., written down or on a website) or informally (e.g., keep it in your head). Of the 65.6 percent of respondents who currently budget, only 58.9 percent (or 38.6 percent of all respondents) report doing so formally.

Together, these findings demonstrate widespread use of budgeting across the wealth spectrum. Importantly, they provide additional perspective on consumers' rationale for budgeting, suggesting that at lower wealth people budget to account for short term needs while at higher wealth people budget to plan for the long-term.

3.2 Attention to Finances and Financial Wellbeing

People exhibit limited attention, including when considering their finances. One explanation for this behavior is that people are "rationally inattentive." Those with sufficient financial slack may rationally choose to be inattentive to their finances because the cost to doing so is low (Shah et al. 2012; Morewedge et al. 2007). If this explanation is true, we should expect attention to be negatively correlated with financial wellbeing. On the other hand, a growing literature suggests that people selectively pay attention to their finances to avoid learning aversive negative financial information, in spite of potential benefits of increased attention (Karlsson et al. 2009; Olafsson and Pagel 2018). Dubbed the "ostrich effect," this avoidance behavior can explain why someone with mounting late payments might hide their bills in a drawer unopened. If this explanation is true, then we should expect attention to be positively correlated with financial wellbeing.

In this subsection, we examine the relationship between attention and financial wellbeing. We measure attention to finances in two ways. First, we consider the act of budgeting as a way of

paying attention to one's finances and examine how the propensity to budget varies with financial wellbeing. Second, we consider attention on the intensive margin and examine how the frequency of checking one's budget, conditional on having a budget, varies with financial wellbeing.

We proxy for financial wellbeing using three different measures: asset holdings, confidence in the ability to come up with $500 if an unexpected need arose, and perceived wellbeing. Confidence was measured using a four-point scale that ranged from "I am certain I cannot come up with [$500 if an unexpected need arose]" to "I am certain I could come up with [$500 if an unexpected need arose]" (Lusardi et al. 2011). To measure perceived wellbeing, we asked respondents four questions, with two designed to assess their perception of the current state of their finances and two designed to assess their expectations for their financial security in the future. Prior research has shown that perceptions of financial wellbeing are best captured by measures that address these two key dimensions (Netemeyer et al. 2018). For ease of comparison, we create a composite index of perceived wellbeing by combining the individual scores from these four questions.[4] We use this composite index as the third measure of financial wellbeing in our main analysis, though we also consider each of the four individual questions separately in the Appendix. The three proxy measures of financial wellbeing are moderately correlated with each other, with correlation coefficients between each pair ranging from 0.49 to 0.58.

Extensive Margin: Propensity to Budget

Figure 2 shows that the propensity to budget is positively correlated with financial wellbeing across all three measures. For example, the propensity to budget increases significantly from 60.5 percent to 67.8 percent when moving from respondents with the lowest to highest self-reported confidence in their ability to come up with $500 if an unexpected need arose. Similarly, the propensity to budget increases significantly from 41.8 percent to 71.1 percent when moving from the lowest to highest index score for perceived financial wellbeing. Consistent with these findings, the propensity to budget is also positively correlated with asset holdings, as first described in Section 3.1.[5]

While our survey findings do not allow us to infer the direction of causality underlying the positive correlation we observe, we do find suggestive evidence that this relationship is reflective of the ostrich effect. Specifically, we ask respondents who are not currently budgeting and report finding budgeting unpleasant why they find budgeting unpleasant. Appendix Table A.2 presents the distribution of responses to this question by level of financial wellbeing for each of our three measures. While respondents with high financial wellbeing most commonly report that budgeting takes too much time, by far the most common response among respondents with low financial wellbeing is that budgeting makes them feel like they have less money than they thought. These

[4] Our composite index of perceived wellbeing ranges in value from -8 to 8, with higher values indicating higher perceived wellbeing. See Appendix Figure A.2 for additional detail on the four perceived wellbeing questions and how the composite index measure is constructed.

[5] As noted previously, there is some evidence of non-monotonicity at the highest asset levels. However, taken together with our other measures of financial wellbeing, and in particular our measure of perceived wellbeing, we interpret these findings as indicative of a positive association between financial wellbeing and the propensity to budget.

findings suggest that the relatively lower propensity to budget among those with low financial wellbeing may be motivated by a desire to avoid these negative feelings.

Intensive Margin: Frequency of Budget Checking

On the intensive margin, we find the opposite relationship between attention to finances and financial wellbeing. As Figure 2 shows, conditional on having a budget, the frequency at which respondents check their budgets is *negatively* correlated with financial wellbeing. In other words, conditional on budgeting, respondents with lower financial wellbeing pay more frequent attention to their budgets than respondents with higher financial wellbeing. For instance, 43.4 percent of those with the lowest confidence level in their ability to come up with $500 check their budget several times per week in comparison with only 34.8 percent of those with the highest confidence level. Similarly, 42.6 percent of respondents with the lowest perceived wellbeing check their budget several times per week in comparison with 33.6 percent of those with the highest perceived wellbeing.[6] We find the same stark relationship between the frequency with which respondents check their budgets and asset holdings. Respondents with over $100,000 in assets are roughly half as likely to report checking in with their budget several times per week and nearly 1.5 times more likely to report checking monthly than respondents with less than $250 in assets.

Together the results from this section highlight interesting patterns in when and why people choose to pay attention to their finances. A number of potential mechanisms may explain the different relationships we find on the extensive and intensive margins. For example, it may be that financial engagement should be thought of as a two-step process, with motivated attention driving engagement on the extensive margin and rational inattention driving engagement on the intensive margin. Alternatively, these findings are consistent with a model featuring two types of individuals, those who are rationally inattentive and those who suffer from the ostrich effect. While it is outside the scope of this paper to explore this further, one fruitful avenue for future research would be to distinguish between these alternative explanations.

3.3 The Use of Budget Categories

Though the particular budgeting process may vary from household to household, a growing body of empirical evidence suggests that people allocate and track their spending within distinct budgetary categories (Henderson and Peterson 1992; Heath and Soll 1996; Antonides et al. 2011; Hastings and Shapiro 2013, 2018). For instance, a household might maintain a separate "entertainment budget" or "clothing budget." Furthermore, households appear to treat these categories as rigid, with funds not fully substitutable across categories (Hastings and Shapiro 2013, 2018).

Understanding budgetary categories is of particular interest because their use may meaningfully affect consumption patterns. For example, if budget categories are rigid, a price shock experienced in one category may only affect spending within the same category and prompt little adjustment of

[6] As Appendix Figure A.2 shows, we observe consistent findings when separately examining the four individual components making up our overall index of perceived wellbeing.

other spending. However, despite their importance for our understanding of consumption patterns, relatively little is known about the prevalence or nature of budgetary categories. Most empirical studies make reasonable but ultimately ad hoc assumptions about the existence of particular categories.[7]

In this subsection, we provide new evidence on budgetary categories. To better understand the extent to which individuals use budgetary categories, we asked respondents to list the five categories in their budget in which they spend the most money. Respondents were able to provide up to five open-ended responses and were also given the choice to indicate that they have spending limits but don't track categories in their spending.[8] We find that over 90 percent of individuals who budget, whether formally or informally, do so by tracking their spending within distinct budget categories. The use of budget categories is equally prevalent among those who do not currently budget but did so in the past.

Appendix Table A.3 lists the twenty-five most common category descriptors that were provided by respondents who currently keep a budget. Two patterns are worth noting. First, many of the budget categories that prior research has assumed to exist (e.g., food, clothing, gas, entertainment, etc.) appear in our list. Second, there is clear variation in the level of detail at which individuals categorize their spending. For instance, "bills" is a relatively broad category in comparison with the more narrow categories of "utilities" and "rent."

We directly examine this potential heterogeneity in the granularity of budget categories in our survey. Specifically, we ask respondents to identify the level of detail that most closely aligns with their actual budget from the following list (ordered from least detailed to most detailed):

- Necessities, Discretionary
- Housing & Transportation, Food, Discretionary, Other
- Housing & Transportation, Food, Entertainment, Clothing, Other
- Housing, Car, Groceries, Dining Out, Entertainment, Clothing, Other
- Rent, Utilities, Cell phone, Car, Groceries, Dining Out, Movies, Travel, Clothing, Other
- Rent, Utilities, Cell phone, Internet, Car, Groceries, Dining Out, Movies, Travel, Clothing, Exercise, Healthcare, Other.

Panel A of Figure 3 presents the frequency of each of these levels of categorization for the set of respondents who report that they currently budget. Consistent with what we observe from the category descriptors in Appendix Table A.3, we find substantial cross-sectional heterogeneity in the level of detail at which individuals categorize their spending. For instance, while 12 percent

[7] One important exception is Antonides et al. (2011) who survey a representative sample of the Dutch population and find that about one-third of respondents report reserving money for different expenses.

[8] Respondents were reminded to consider the most recent budget they've kept or the budget they think they would keep if they don't currently budget. They were also informed that they could list fewer than five categories if they do not have five categories that they track.

of respondents who budget simply distinguish necessities from discretionary spending, roughly 23 percent maintain budget categories at the most detailed level of categorization.

We find similar heterogeneity when asking respondents to identify the level of detail that most closely aligns with the budget they think they should keep instead of their actual budget. Panel B of Figure 3 is directly analogous to Panel A and plots the frequency of each level of categorization for respondents' desired budgets. While the distribution of responses shifts slightly towards more detailed budget categorization when comparing the budgets respondents think they should keep to their actual budgets, there remains wide variation in the granularity of budget categories.

3.4 Responses to Changes in Budgetary Slack

We have focused our discussion thus far on which individuals budget and how they set their budgets. In this subsection, we examine some of the ways individuals adjust their budgets or spending behavior in response to changes in their financial circumstances. We focus on changes in slack in respondents' budgets, for example due to overspending or underspending their budget. We define budgetary slack as the difference between the amount budgeted and the amount actually spent. Prior research has shown that a lack of financial slack can have serious economic and psychological consequences for household wellbeing (Zauberman and Lynch Jr 2005; Lusardi et al. 2011; Shafir and Mullainathan 2013;). Using a series of hypothetical scenarios, we show that individuals respond asymmetrically when faced with more versus less slack in their budgets. Specifically, people appear to update their budgets conservatively, with a greater propensity to make adjustments when faced with a decrease in their budgetary slack in comparison to an increase in slack. We discuss each of these scenarios in turn below.

To understand how individuals would respond to a decrease in the slack in their budgets, we asked survey respondents who currently budget to consider their behavior under two different scenarios: 1) if they were to exceed the spending limit for one of their budget categories and 2) if they were unable to stay within their overall budget in a particular week or month.[9] For each scenario, respondents were presented with several potential alternatives as well as an option to indicate "Other." As Panels A and B of Figure 4 show, over 87 percent of respondents in the first scenario and roughly 90 percent of respondents in the second scenario would make adjustments, either by formally updating their category or overall budget spending limits or by informally adjusting their behavior to compensate (e.g., by decreasing their spending in another category or working more to have more money to spend).

In contrast, we find little adjustment by the same respondents when faced with an increase in the slack in their budgets. To understand how individuals would respond to an increase in the slack in their budgets, we once again asked survey respondents who currently budget to consider their behavior under two different scenarios: 1) if they were to underspend their overall budget in the current period and 2) if they were to make more money in a particular week or month. As

[9] Roughly 85 percent of respondents report budgeting over a weekly or monthly time horizon. See Appendix Table A.4.

Panels C and D of Figure 4 show, over 64 percent of respondents in the first scenario and nearly 55 percent of respondents in the second scenario indicated that they would make no changes to their spending behavior or overall budget. Twenty-three percent of respondents in the second scenario would make no formal changes but would informally allow themselves to spend more than they have listed in their budget.

Taken together, these findings suggest that people update their budgets conservatively. In particular, the asymmetry we observe in how people respond to changes in budgetary slack suggests that households budget in order to constrain (often category-specific) spending rather than simply as a means of tracking spending over time. While the scenarios in our survey do not allow us to explore more nuanced changes in slack, one promising area for future research would be to examine the extent to which households adjust their budgets in response to temporary versus permanent changes or expected versus unexpected changes in budgetary slack.

4 Supplementary Evidence from Administrative Bank Data

In this section, we supplement our findings from the survey data using detailed administrative data from 2019 for nearly 200,000 customers of the Commonwealth Bank of Australia (CBA), the largest bank in Australia. These data allow us to examine the extent to which real-world financial behavior reflects the empirical patterns identified from the survey data in the previous section. Because we are not able to directly observe the intended budgets of CBA's customers, we focus our attention on the two findings for which we are most able to observe direct analogues within the administrative data: the negative correlation between attention and financial wellbeing, conditional on budgeting, and the tendency to segregate spending by category. We describe the CBA data we use below and then explore these two findings.

4.1 Sample Restrictions and Descriptive Statistics

Starting with the full universe of CBA customers, we impose two key restrictions in the course of selecting our final sample for analysis. First, we include only those customers for whom CBA was likely to be their main financial institution during the sample period.[10] Second, we include only customers who are "digitally active," which we define as having interacted at least once with CBA's mobile application or web platform in each month of the sample period.

From the set of customers who satisfied these two restrictions, we drew two random samples. The first is a random sample of 100,000 customers, the "representative" sample. For the second sample, we further restrict the remaining customers to include only those who have at least two bank cards (credit or debit) with CBA and randomly select 100,000 customers from this pool. This sample, the "multiple cardholder" sample, allows us to examine how customers allocate spending across multiple bank cards. From these two samples, we drop any customers who held joint

[10] This assessment is based on an internal model that predicts the likelihood that CBA is the main financial institution for a given customer using observable characteristics, such as a customer's account inflows and their frequency of transactions.

accounts during the sample period, resulting in a final sample of 98,267 customers in the representative sample and 96,411 customers in the multiple cardholder sample. For each customer, we observe demographic characteristics, product holdings, account balances, transactions, and digital interactions with the bank's mobile app and web platform.[11]

Appendix Table A.5 presents summary statistics for both the representative sample (column (1)) and multiple cardholder sample (column (2)). The median customer in our representative sample is 36 years old, has been with CBA for 18 years, and earns an estimated annual income of A$45,305.50.[12] The sample is evenly split across genders. While approximately one-quarter of customers in the representative sample do not have a debit or credit card, most customers hold at least one bank card, with median monthly transaction outflows of A$769.98 for debit cards and A$1,558.48 for credit cards. Customers in the multiple cardholder sample look quite similar to those in the representative sample.

4.2 Attention to Finances and Financial Wellbeing

The evidence from our survey findings presented in Section 3.2 suggests that, conditional on budgeting, how frequently an individual checks their budget is negatively correlated with their perceived financial wellbeing. In this section, we examine whether there is a similar relationship within the administrative data from CBA.

As a proxy for a customer's attention to the current state of their finances, we construct a measure we refer to as "digital engagement." This measure is defined as the average number of days per month where a customer visited either an "Accounts View" or an "Account Details" page within the bank's mobile app or web platform. Accounts View pages provide an overview of the account balance and available funds for all accounts the customer holds, while Account Details pages provide detailed transactions information for a specific account.[13] Appendix Figure A.4 plots the distribution of digital engagement for customers in the representative sample along with its median, standard deviation, and interquartile range. As the figure shows, digital engagement varies significantly across customers, with an interquartile range of 8 to 21 days.

To capture a customer's financial wellbeing, we use two different proxy measures. As our first measure, we follow much of the academic literature in using a customer's (imputed) income. However, there are reasonable concerns that income may be limited in its ability to fully reflect financial wellbeing. For this reason, we also use as a second proxy measure an internal financial wellbeing score derived from customers' financial records.[14] The CBA financial wellbeing score ranges from 0 to 100 (with a higher score reflecting higher financial wellbeing) and is comprised of

[11] Product holdings include transaction accounts, savings accounts, investment accounts, debit cards, credit cards, personal loans, and home loans.

[12] For customers who are paid into their CBA account, income is estimated by annualising salary transactions and other identified income streams from the previous six months.

[13] See Appendix Figure A.3 for examples of an Accounts View page and an Account Details page.

[14] The specific financial wellbeing score we use is the CBA-MI Observed Financial Wellbeing Scale. See Haisken-DeNew et al. (2019) for additional details on the CBA-MI scale and how it is constructed from customers' financial records.

five underlying component measures:

1. Payment Problems: a measure of the extent to which a customer experienced difficulty making payment (e.g., insufficient funds or over-limit fees, late fees, payday loan usage, etc.) in the past year
2. Low Balance: the number of days in the past year with liquid balances below average weekly expenses
3. Net Spend: the number of months in the past year with spending exceeding 80 percent of inflows
4. Expenses Covered: the number of days in the past year where the customer had the ability to raise several months' expenses from savings or available credit
5. Relative Savings: a measure of a customer's savings balance relative to others their own age

By considering customers' savings and liquidity, spending, and any experiences of payment problems, the CBA financial wellbeing score provides a holistic overview of a customer's financial standing. Appendix Figure A.5 plots the distribution on financial wellbeing scores for customers in the representative sample along with its median, standard deviation, and interquartile range.

Consistent with our findings in the survey data, we find that engagement is negatively correlated with financial wellbeing (r = -0.34). Panel A of Figure 5 illustrates this relationship by plotting the distribution of digital engagement by quintiles of the CBA financial wellbeing score. As the figure shows, engagement decreases with financial wellbeing, with engagement falling from 18.4 days to 11 days per month on average when moving from the lowest to the highest quintile of financial wellbeing scores. In contrast, Panel B of Figure 5 plots the distribution of engagement by income quintiles and shows no meaningful relationship between engagement and income (r = -0.07). This finding underscores earlier concerns that income may not fully capture financial wellbeing.

We further explore the relationship between engagement and financial wellbeing by examining the relationship between digital engagement and each of the five component measures that combine to form the overall CBA financial wellbeing score. As Appendix Figure A.6 shows, while digital engagement is negatively correlated with each component measure, the relationship is strongest with the "Expenses Covered," "Low Balance," and "Payment Problems" measures. This finding suggests that the lack of a short-term liquidity buffer may be especially critical in driving engagement with one's finances.

4.3 Segregating Spending by Category

The evidence from our survey findings presented in Section 3.3 suggests that people allocate and track their spending within distinct budgetary categories. One important way in which the use of distinct budgetary categories may manifest in observed behavior is if people allocate their spending across financial accounts by category of expense (Shefrin and Nicols 2014). Among respondents in

our survey who currently budget, nearly one in five report using different credit cards for different types of expenses. In this section, we explore whether CBA customers similarly segregate their spending across their bank cards by category of expense.

We focus on the spending behavior of customers in our multiple cardholder sample, who hold at least two bank cards. For each transaction on a customer's card, we observe both the dollar amount of spending and the associated spending category assigned by CBA. Since we cannot directly observe budgetary categories, which may be determined endogenously, we instead use the spending categories assigned by CBA as a proxy.[15] Many financial institutions automatically categorize transactions based on the type of transaction or associated merchant, often with the stated purpose of helping consumers to better track their spending. The median customer in our sample holds two bank cards and spends A$1,943.27 on average per month across their cards.

We define the "top spending category" for a customer's card as the category that accounts for the largest share of total spending on that card over the sample period. Appendix Table A.6 lists each spending category along with the share of overall individual spending accounted for by that category (column (1)), the fraction of cards for which that category is the top spending category (column (2)), and the share of overall card spending accounted for by that category for the set cards where the given category is the top spending category (column (3)). Shopping (e.g., department stores) is the top spending category for roughly one-third (34.0 percent) of cards held by customers in our sample, followed by Transport (13.8 percent) and Groceries (11.0 percent).

We next define the "concentration" of a card as the share of total spending that is accounted for by the top spending category. For example, if a person spends $1,000 on a given card, with $600 spent on groceries and $400 on all other categories combined, the associated concentration would be 60 percent. Panel A of Figure 6 plots the cumulative distribution of the concentration metric for cards in the multiple cardholder sample. Panel B of Figure 6 plots the cumulative distribution of the concentration metric at the individual-level using the card with the highest concentration for each customer. As the figure shows, we find that a sizable number of cards have a high concentration of spending within a single category. For roughly one in ten cards, at least 80 percent of total spending is concentrated within a single category.

We next compare how spending concentration differs for customers with multiple bank cards relative to the average cardholder in our representative sample. Appendix Figure A.7 plots the cumulative distribution of the concentration metric at the card-level (Panel A) and the individual-level (Panel B) using our representative sample of customers and is analogous to Appendix Figure A.7. Across all thresholds, we observe a consistent trend where the prevalence of concentrated card spending is higher in our multiple cardholder sample compared to our representative sample. While over half of customers in our multiple cardholder sample hold at least one card with a concentration of 50 percent or higher, less than one-third (30.9 percent) of customers in the representative sample meet the same 50 percent concentration threshold. Similarly, we find that about one in ten (11.2

[15] Specifically, we consider the following categories assigned by CBA: Cash, Donations, Eating Out, Education, Entertainment, Groceries, Health, Home, Shopping, Tax Paid, Travel, and Utilities. We exclude from our analysis one additional category, Money Transfers, since these transactions are not representative of spending behavior.

percent) customers in our multiple cardholder sample meet the 95 percent concentration threshold—indicating that at least one of their cards is used almost exclusively for purchases of a single category—compared to only 4.8 percent of customers in the representative sample.

One potential concern is that some of the concentration in spending that we observe is driven by the use of credit cards with category-specific promotions (e.g., 2% cash back for spending at restaurants). We find similar results when we exclude rewards credit cards from the set of cards held by customers in our sample. We also observe no meaningful difference in our findings when we restrict the cards in our sample to only debit cards, which do not have category-specific promotions for spending.

Together these findings provide support for the evidence in our survey that a meaningful number of people use different cards for different categories of expenses, potentially as a way of organizing their spending. While the findings outlined above should not be taken as more than suggestive, they nonetheless indicate potential avenues for exploration in future research. For example, when we look at customers who have a card with at least 95 percent concentration, the two most common top spending categories are Shopping and Entertainment, which may reflect the use of a separate card for discretionary purchases. The next three most common categories are Transport, Utilities, and Groceries, which may instead reflect the use of a separate card for bill payments or everyday living expenses. Evidence from our survey findings suggests that there is significant heterogeneity in the granularity of budgetary categories. For individuals who use different cards for different types of expenses, there may be similar heterogeneity in the way they do so. One person may use one card for travel expenses and a second card for all other expenses, while another person may use one card for discretionary purchases and another card for necessities.

5 Concluding Remarks

This paper provides new descriptive evidence on the drivers and correlates of household budgeting behavior. Our findings suggest two important theoretical considerations for future refinements of economic models of consumption and savings. First, the near ubiquitous use of distinct budgetary categories for tracking consumption that we find in combination with prior evidence from the literature on the non-fungibility of such categories highlights the need for future models to more explicitly account for this behavior. In addition, these models will need to be able to reconcile the apparent heterogeneity in the granularity of these categories across individuals. While there is some recent work attempting these refinements (see, for example, Kőszegi and Matějka 2020), further development of such models is a promising area of future research. Second, our findings underscore both the importance and challenges of incorporating more realistic assumptions about consumer inattention into consumption-savings models.[16] In particular, we find suggestive evidence of both motivated attention (Shah et al. 2012; Shah et al. 2018) and rational inattention (Sicherman et al. 2016; Reis 2006). Individuals with lower financial wellbeing have a lower propensity to budget;

[16]See Gabaix (2019) for a review of the large literature exploring how to model inattention.

however, conditional on budgeting, individuals with lower financial wellbeing check their budgets more frequently. The potential complexity in how inattention affects financial engagement will need to be grappled with in future models.

Our findings also suggest a number of promising avenues of future empirical research, including: (1) investigating the formation and persistence of budgetary categories, (2) examining how budget categories affect consumption responses to both income and expense shocks, and (3) exploring further the relationship between attention and financial engagement. For instance, while we observe heterogeneity in the granularity of budget categories, the choice of categories is not arbitrary. The welfare effects of using budget categories at various levels of granularity are also unclear. If individuals create such categories to simplify the complexity of consumption-savings decisions, the use of budget categories may be welfare improving.

Our research is not without limitations. First, our findings are based on self-report and may therefore not accurately reflect our respondents' actual budgeting behaviors. We sought to allay these concerns by supplementing our findings with supporting evidence from the Commonwealth Bank of Australia. However, future work would benefit from more directly linking budgeting practices to observed behavior. Second, while we hope that the behavioral patterns and relationships that we document shed light on the budgeting process, we are necessarily limited in our ability to make causal claims. Further investigating budgeting behaviors by linking survey data to administrative data at the individual level in a way that allows for more direct causal inference remains a fruitful area for future research. For example, there is, to our knowledge, no existing research identifying a causal effect of budgeting on financial outcomes. Our hope is that the findings we have reported in this paper will help to spark discussion and foster future research on budgeting.

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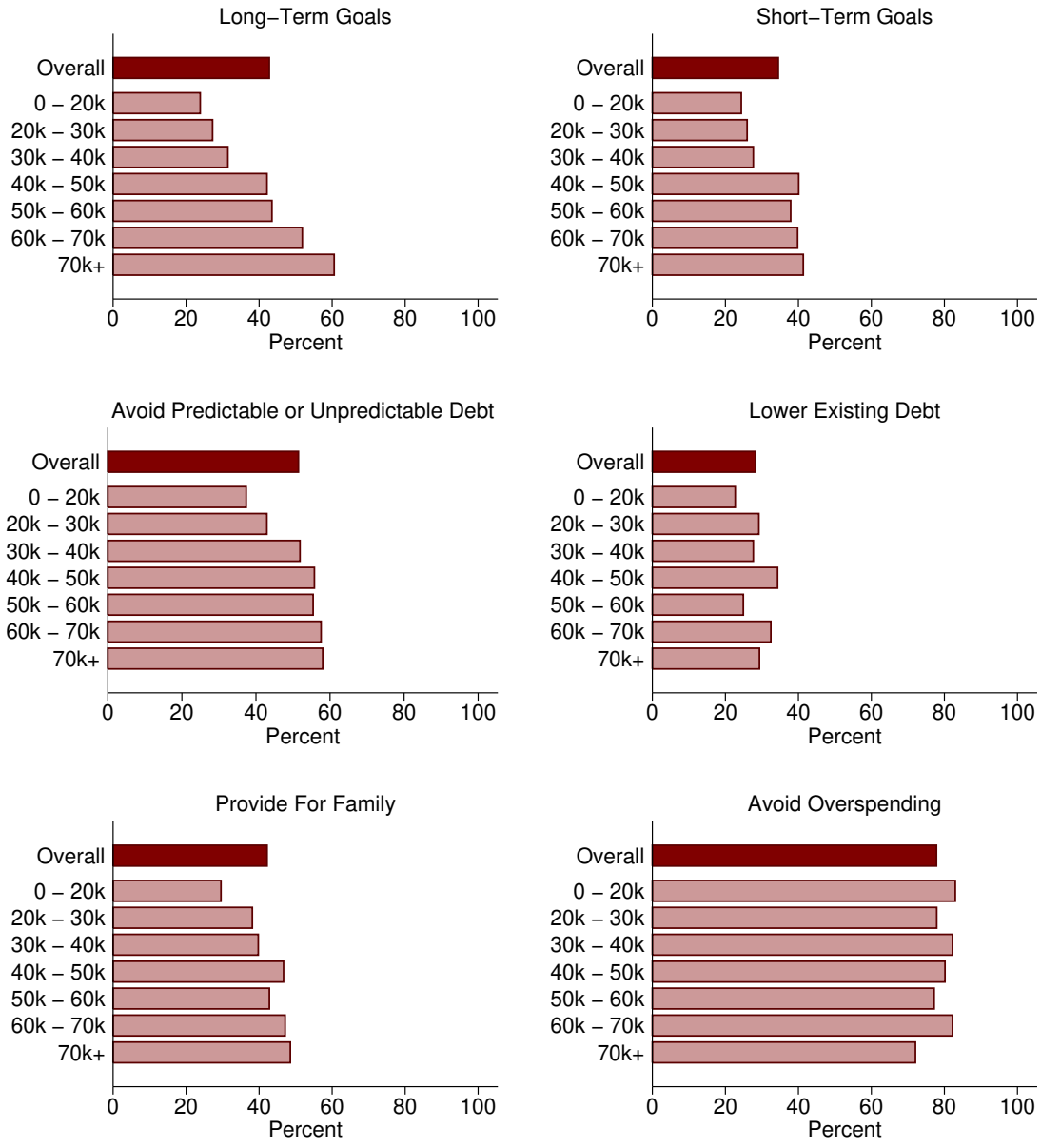
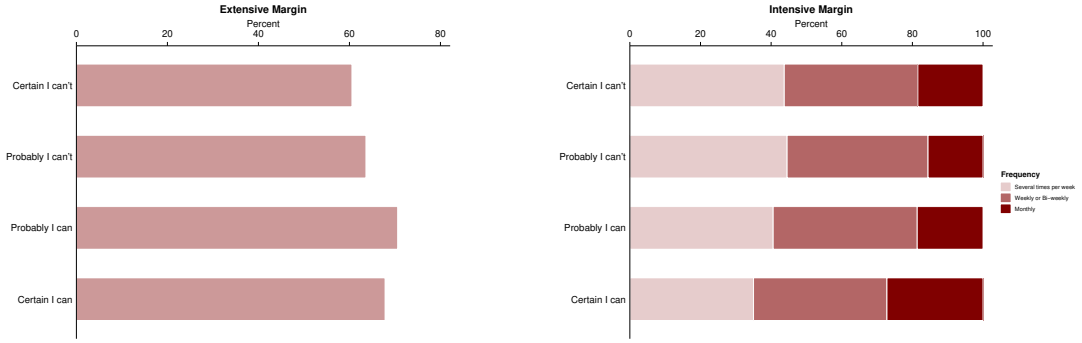
FIG. 1.—Reasons for Budgeting by Household Income ($)

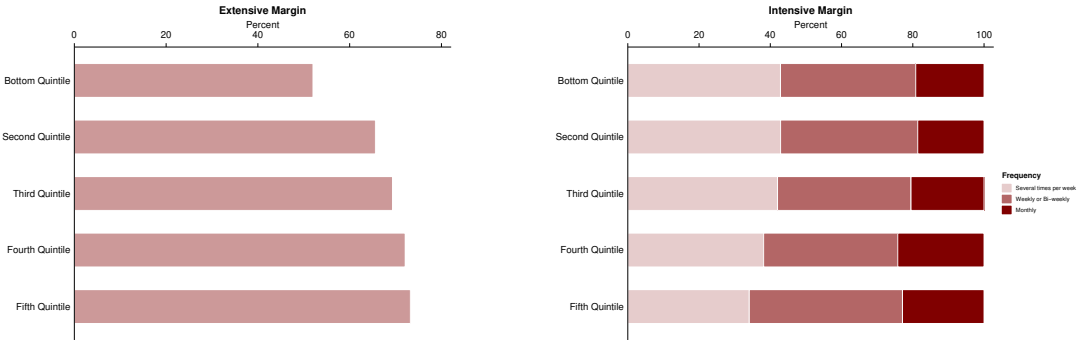


NOTE.—This figure plots, by level of household income within the sample of those currently budgeting, the share of respondents who indicate a particular motivation as a main reason for budgeting for each of the following set of potential motivations: savings for long-term goals, saving for short-term goals, to avoid debt from predictable overspending or from unforeseen expenses, to get out of debt, to provide for one's family, and to avoid overspending one's income. The overall share of respondents who indicate a particular motivation is shown in the dark red bar. The share of respondents disaggregated by level of household income is shown in pink.

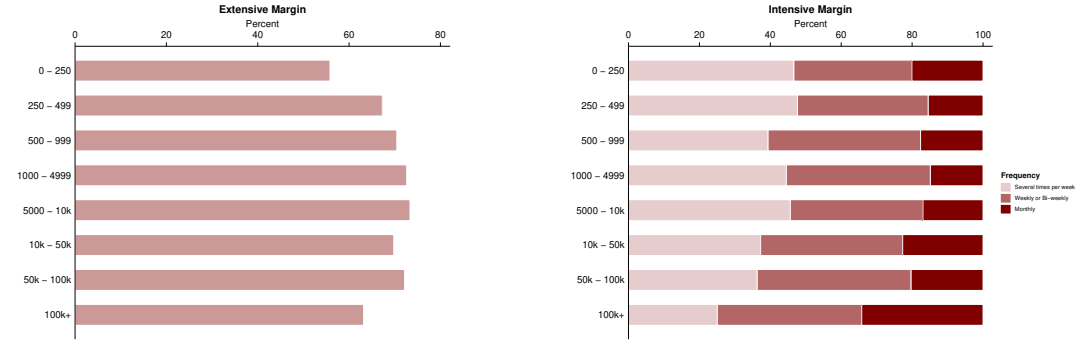
FIG. 2.—Attention to Finances by Measures of Financial Wellbeing



(A) CONFIDENCE IN ABILITY TO COME UP WITH $500



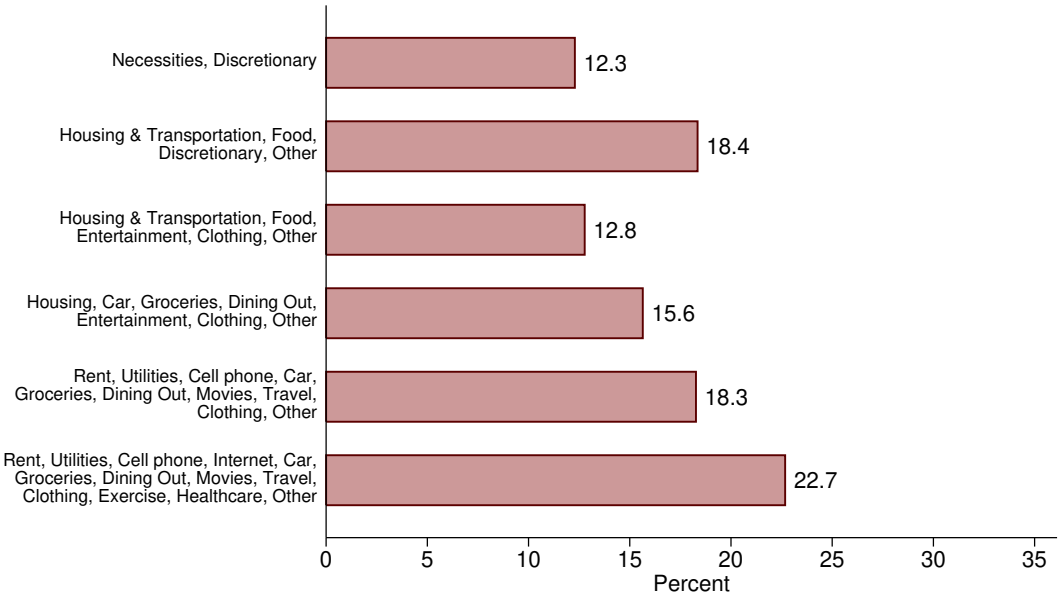
(B) PERCEIVED WELLBEING INDEX



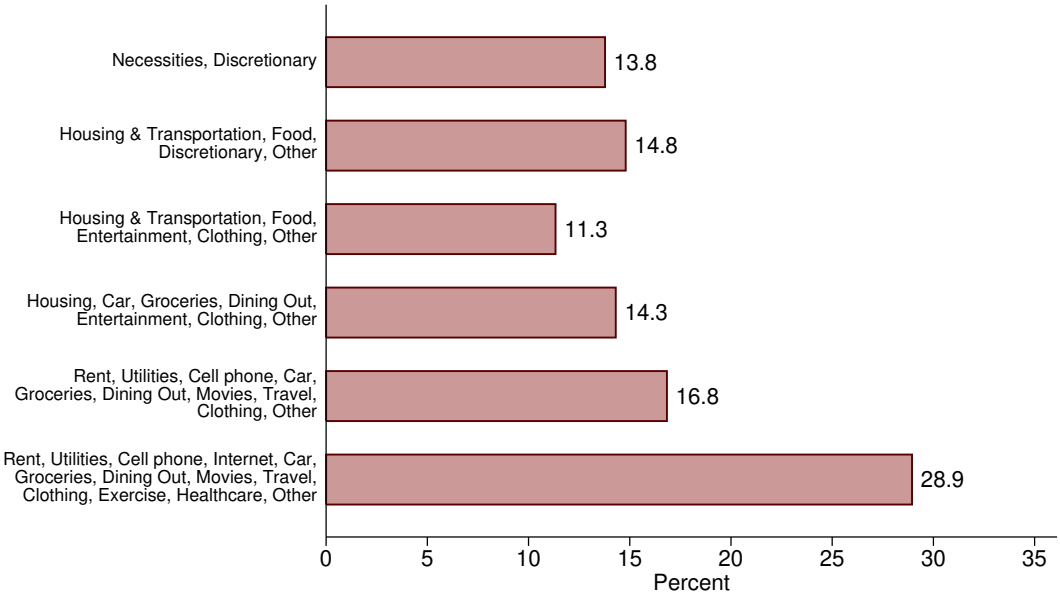
(C) AMOUNT OF ASSETS ($)

NOTE.—This figure plots the share of respondents who currently budget (extensive margin) and, conditional on budgeting, the frequency at which respondents check their budgets (intensive margin) across three measures of financial wellbeing. Panel A shows this distribution using a respondent's confidence in their ability to come up with $500 if an unexpected need rose as a measure of financial wellbeing. Panel B shows this distribution using an index of resopndents' perceived wellbeing as a measure of financial wellbeing. Panel C shows this distribution using asset levels as a measure of financial wellbeing.

FIG. 3.—Level of Categorization



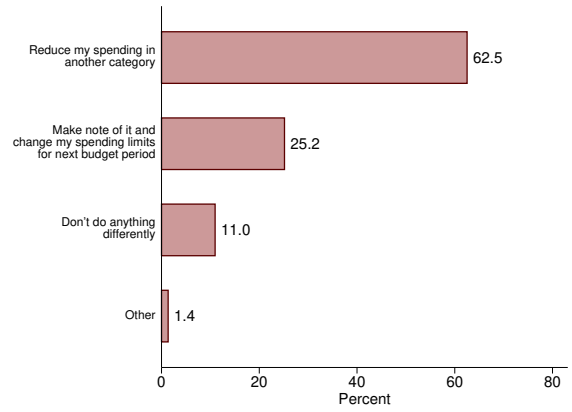
(A) ACTUAL BUDGET



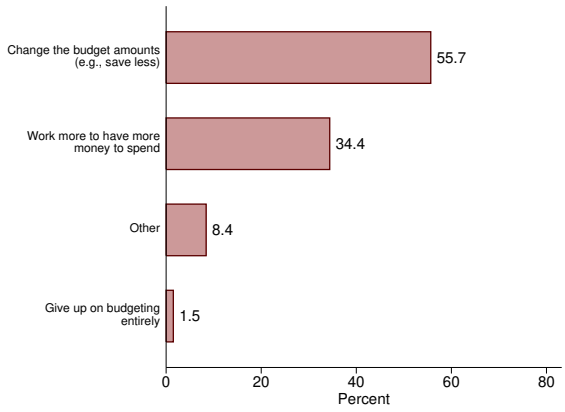
(B) DESIRED BUDGET

NOTE.— This figure plots the distribution of responses given regarding the level of detail that most closely aligns with their budget for the subset of respondents who currently budget. Panel A shows this distribution for respondents' actual budgets. Panel B shows this distribution for the budget that respondents think they should keep. Response options were mutually exclusive to one another. Possible responses are shown on the y-axis in increasing levels of detail.

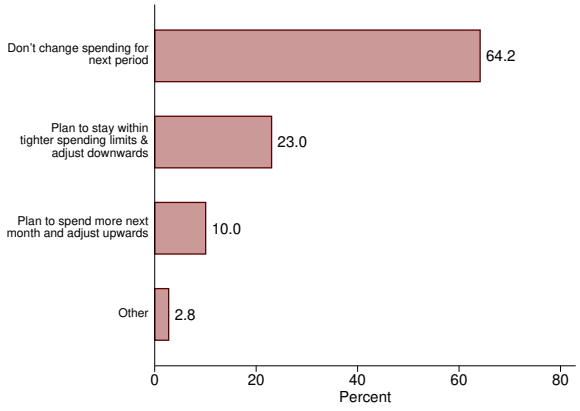
FIG. 4.—Responses to Changes in Budgetary Slack



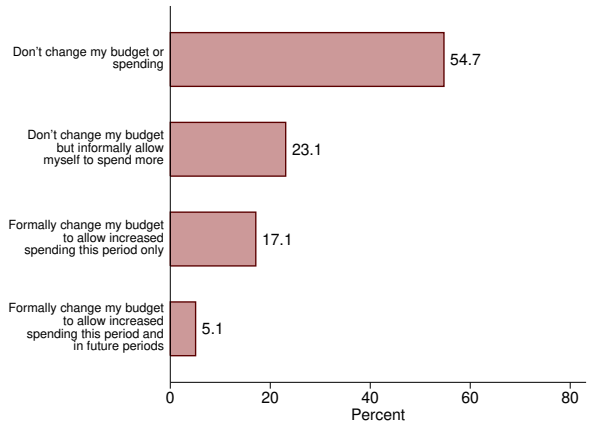
(A) EXCEEDED CATEGORY LIMIT



(B) EXCEEDED OVERALL BUDGET



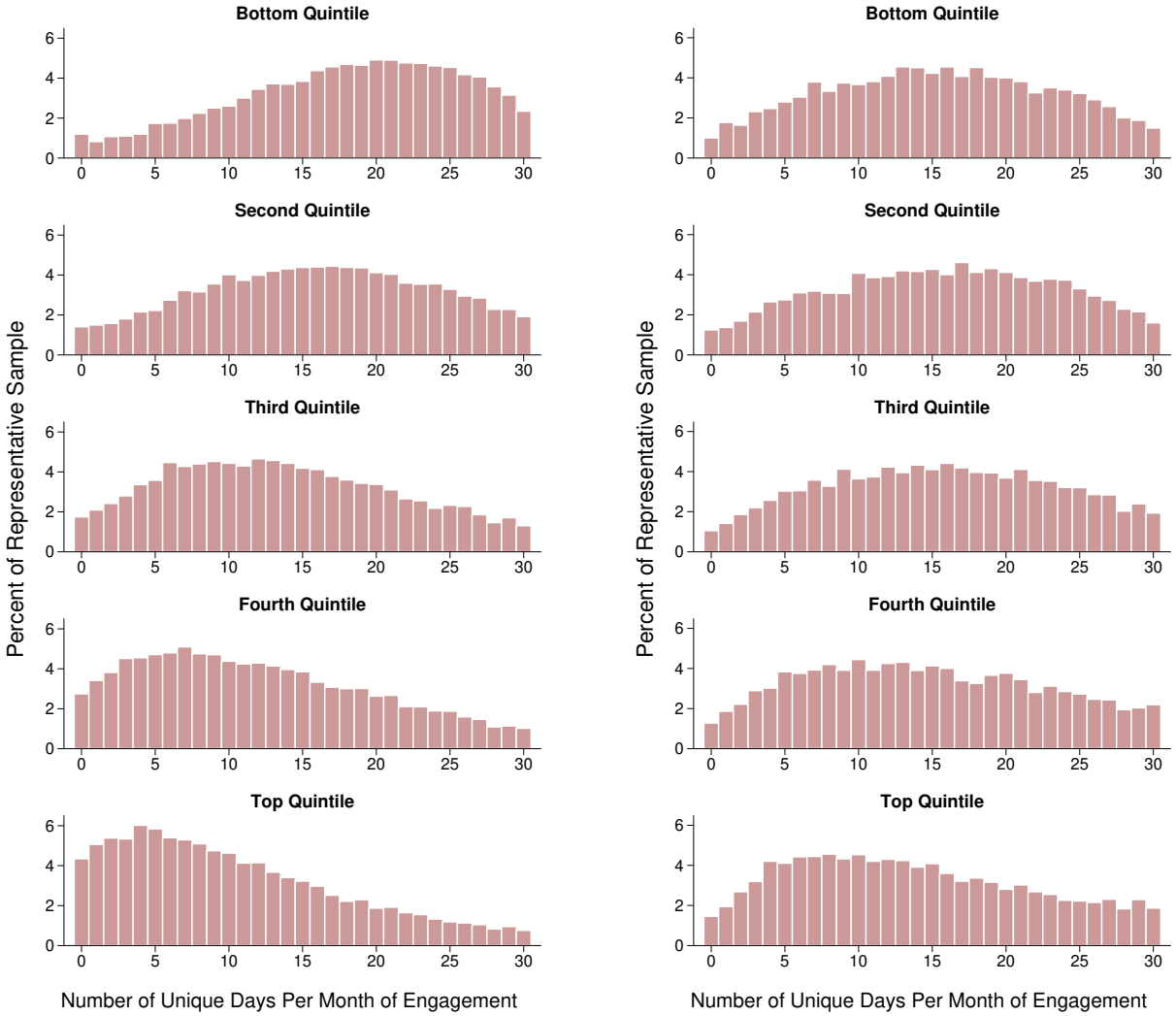
(C) UNDER-SPENT OVERALL BUDGET



(D) EARNED MORE MONEY

NOTE.—This figure plots the distribution of responses given in response to four hypothetical scenarios in which respondents face changes to their budgetary slack. Panel A shows the distribution of responses to exceeding the spending limit for one of their budget categories. Panel B shoes the distribution of responses to failing to stick to their budget in a particular week or month. Panel C shows the distribution of responses to under-spending their budget in the current period. Panel D shows the distribution of responses in a week or month where the respondent earned more money. For each hypothetical scenario, response options were mutually exclusive to one another. Possible responses are shown on the y-axis.

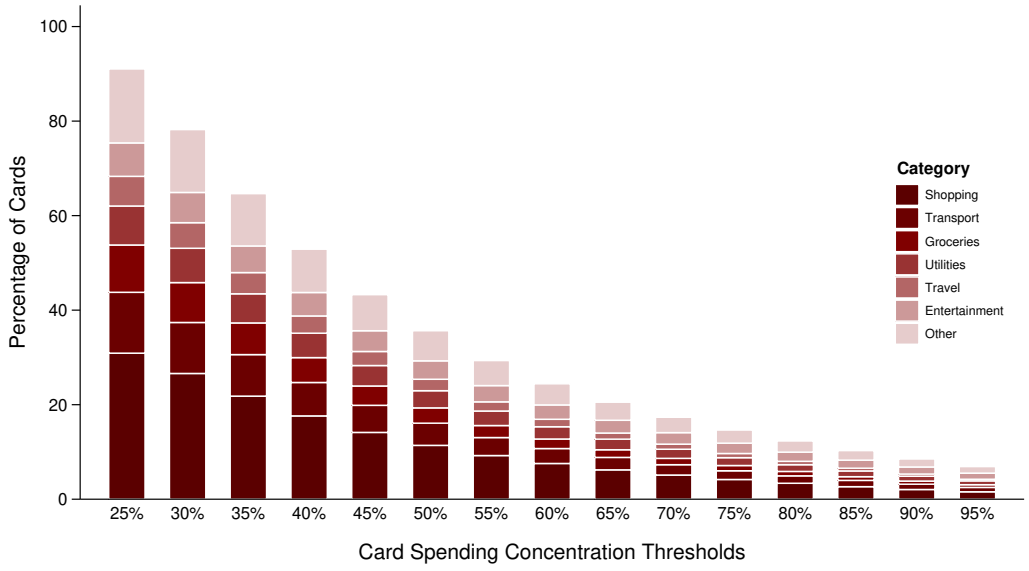
FIG. 5.—Distribution of Digital Engagement by Financial Wellbeing Score and Income Quintiles



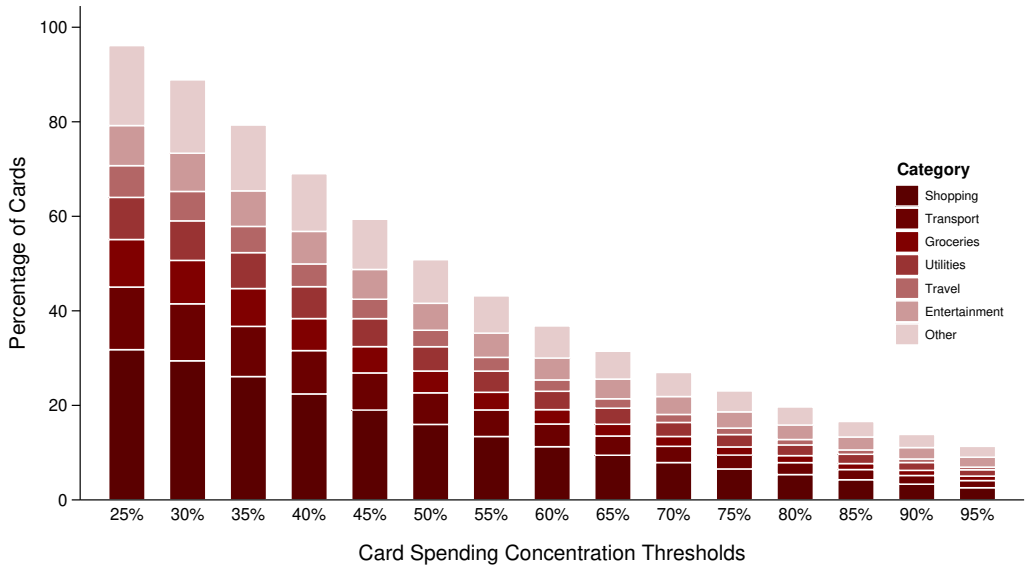
(A) FWB SCORE (B) INCOME (A$)

NOTE.— This figure plots the the distribution of digital engagement for CBA customers in the representative sample by quintiles of customer financial wellbeing scores (panel A) and income (panel B). Digital engagement is defined as the average number of days per month where they visited either the Accounts View or Account Details page within the bank's mobile app or web platform. Financial wellbeing scores are derived internally from customers' financial records and are comprised of five underlying component measures that capture a customer's savings and liquidity, spending, and any experiences of payment problems (Haisken-DeNew et al. 2019).

FIG. 6.—Cumulative Distribution of Card Spending Concentration in the Multiple Cardholder Sample



(A) CARD-LEVEL



(B) INDIVIDUAL-LEVEL

NOTE.— This figure plots the cumulative distribution of the concentration metric for cards in the multiple cardholder sample at the card-level (panel A) and the individual-level (panel B). The concentration of a card is defined as the share of total spending that is accounted for by the top spending category. The top spending category for a card is the category that accounts for the largest share of total spending on that card over the sample period. The individual-level distribution in panel B is calculated based on the card with the highest card spending concentration for each customer in the multiple cardholder sample.

TABLE 1
SURVEY SUMMARY STATISTICS

	Full Sample	Currently Budgets	Budgeted in Past	Never Budgeted
Panel A. Demographic Characteristics				
Age Brackets				
18-24 yrs	10.2	9.4	9.4	13.5
25-34 yrs	20.9	23.6	18.2	14.0
35-44 yrs	19.8	21.1	20.3	15.0
45-54 yrs	17.7	16.8	20.3	19.0
55+ yrs	31.4	29.1	31.8	38.5
Female	53.5	52.6	56.3	54.5
Employment Status				
Student	4.2	3.7	3.4	6.4
Part-time	14.2	13.9	15.6	14.0
Full-time	42.1	46.6	37.4	30.6
Work at home w/o pay	5.7	5.7	5.9	5.6
Not currently employed	33.7	29.9	37.6	43.0
Education				
High-school degree or less	24.8	22.8	25.0	30.8
Some college	25.7	24.5	29.3	27.0
Associate's degree	12.6	13.6	11.5	10.4
Bachelor's degree or more	36.9	39.1	34.2	31.8
Lives with spouse/partner	57.1	58.3	58.5	52.2
Number of children	0.7	0.8	0.7	0.5
	(1.1)	(1.1)	(1.1)	(1.0)
Panel B. Household Balance Sheet Information				
Household Income Brackets				
< 20K	17.7	16.9	17.1	20.9
20K - 30K	12.8	12.4	12.4	14.2
30K - 40K	11.4	10.5	15.3	11.3
40K - 50K	9.7	9.6	11.9	8.3
50K - 60K	10.5	11.4	9.2	8.4
60K - 70K	7.3	7.6	5.4	7.9
> 70K	30.7	31.5	28.8	29.1
Amount of Assets				
< $250	27.4	23.3	35.3	35.0
$250 - $499	5.8	6.0	6.5	4.9
$500 - $999	7.2	7.7	4.9	7.1
$1000 - $4999	13.9	15.4	11.5	10.8
$5000 - $9999	8.2	9.2	7.7	5.4
$10,000 - $49,999	12.1	12.9	10.1	11.0
$50,000 - $99,999	7.8	8.6	6.1	6.4
> $100K	17.5	16.8	18.0	19.2
Amount of Debt				
< $250	24.8	23.2	21.6	32.2
$250 - $499	3.0	3.5	2.0	2.1
$500 - $999	5.1	5.3	5.8	4.3
$1000 - $4999	14.4	14.7	16.0	12.3
$5000 - $9999	10.6	10.6	12.2	9.3
$10,000 - $49,999	19.8	19.9	18.3	20.5
$50,000 - $99,999	8.0	7.8	9.5	7.3
> $100K	12.9	13.6	13.1	10.8
Number of Participants	3,826	2,508	556	762

NOTE.—This table presents descriptive statistics for the full sample of survey respondents (column (1)) as well as restricted samples of respondents who report currently budgeting (column (2)), having budgeted in the past (column (3)), and having never budgeted (column (4)). All table entries represent sample means or standard deviations (in parentheses). The count of respondents are listed in the final row.

TABLE 2
PROPENSITY TO BUDGET BY SAMPLE CHARACTERISTICS

	Overall	Formally Budgets	Informally Budgets
Panel A. Demographic Characteristics			
Age Brackets			
18-24 yrs	60.3	34.6	25.6
25-34 yrs	74.0	46.8	27.2
35-44 yrs	70.0	43.0	27.0
45-54 yrs	62.0	37.8	24.2
55+ yrs	60.9	32.1	28.7
Gender			
Female	64.5	37.3	27.2
Male	66.8	40.2	26.7
Employment Status			
Student	57.5	28.8	28.8
Part-time	64.2	37.1	27.1
Full-time	72.6	48.3	24.3
Work at home w/o pay	65.1	35.3	29.8
Not currently employed	58.3	28.9	29.4
Education			
High-school degree or less	60.5	32.1	28.4
Some college	62.5	34.7	27.8
Associate's degree	70.4	42.0	28.4
Bachelor's degree or more	69.4	44.5	24.9
Lives with spouse/partner			
Yes	66.9	41.5	25.4
No	63.7	34.7	29.0
Panel B. Household Income and Wealth			
Household Income Brackets			
< 20K	62.5	29.5	32.9
20K - 30K	63.8	34.2	29.7
30K - 40K	60.7	33.6	27.1
40K - 50K	65.2	38.5	26.7
50K - 60K	71.2	44.8	26.5
60K - 70K	68.0	46.6	21.4
> 70K	67.4	43.6	23.9
Amount of Assets			
< $250	55.8	27.4	28.4
$250 - $499	67.3	37.7	29.6
$500 - $999	70.4	41.2	29.2
$1000 - $4999	72.6	45.6	27.0
$5000 - $9999	73.3	49.2	24.1
$10,000 - $49,999	69.8	44.7	25.1
$50,000 - $99,999	72.1	44.3	27.9
> $100K	63.2	38.2	25.0
Full Sample	65.6	38.6	26.9

NOTE.—This table presents statistics on the percentage of survey respondents in the full sample who report currently budgeting by demographic characteristics (Panel A) and income and wealth (Panel B). Column (1) presents these statistics in aggregate while Columns (2) and (3) presents these statistics for those who report budgeting formally and informally, respectively. The overall percentage of survey respondents for the full sample is listed in the final row.

How Consumers Budget

Online Appendix

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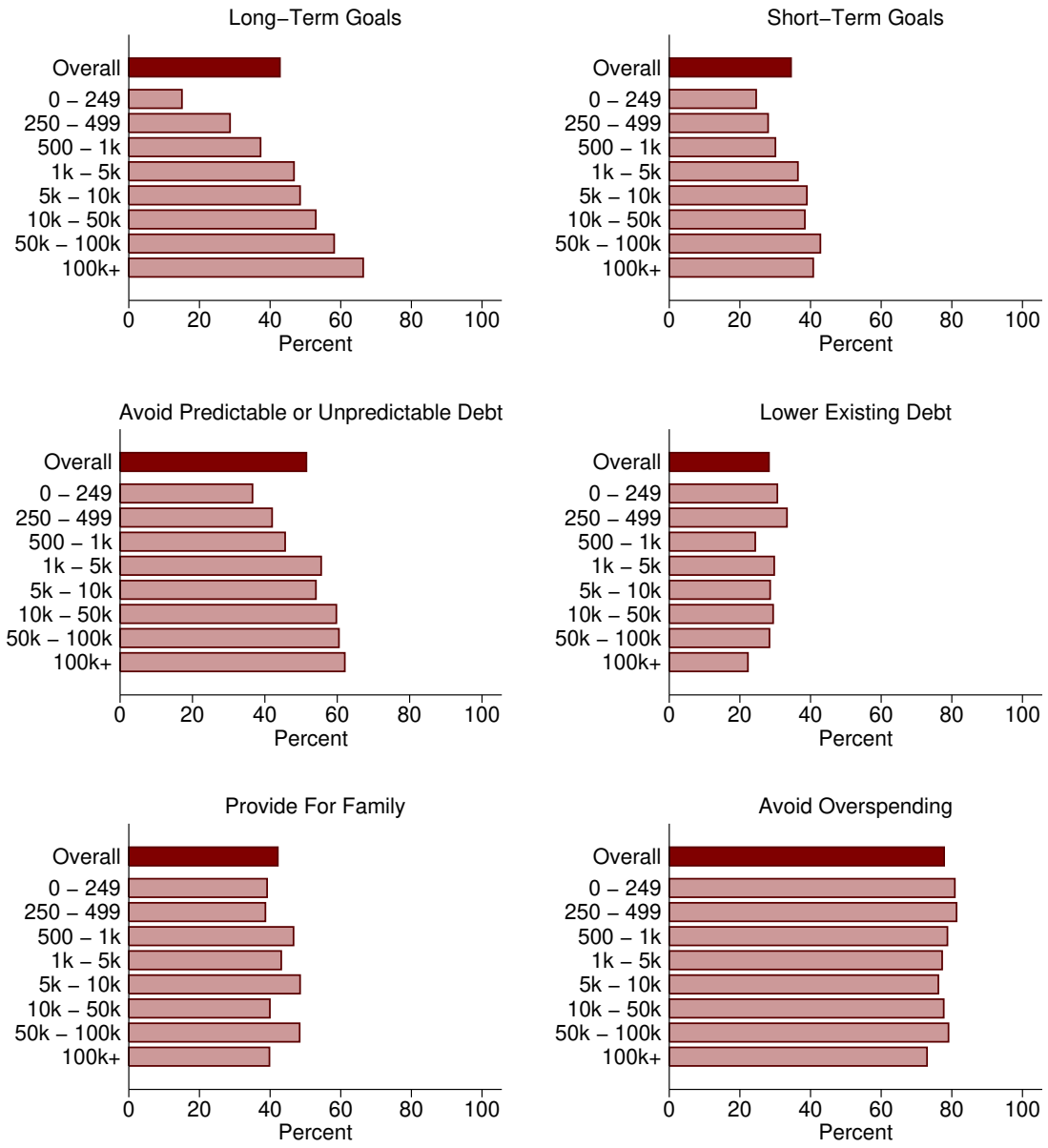
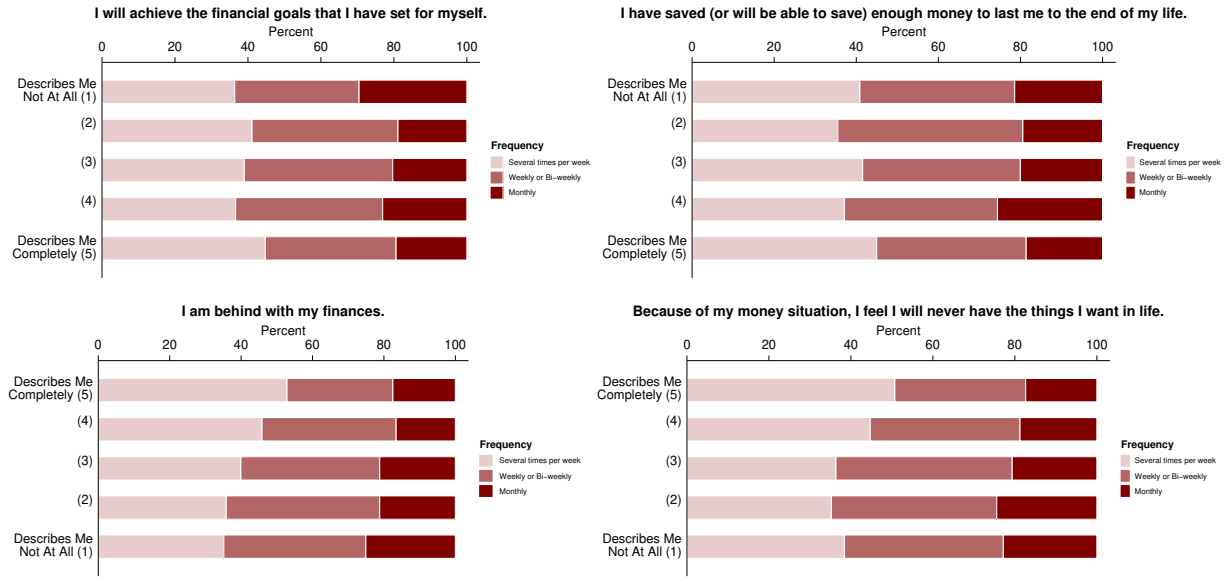
A Appendix Figures and Tables



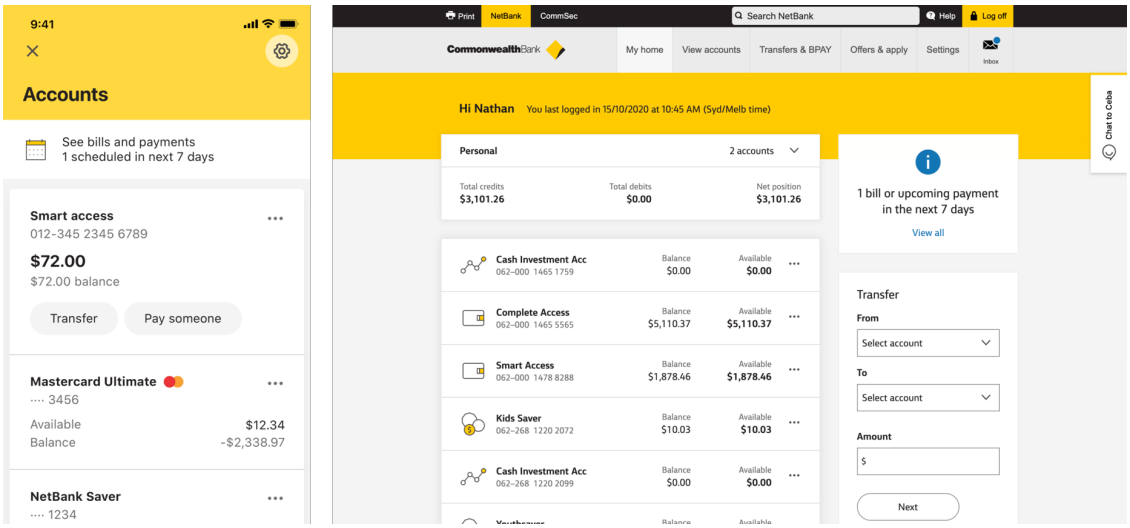
NOTE.—This figure plots, by amount of assets within the sample of those currently budgeting, the share of respondents who indicate a particular motivation as a main reason for budgeting for each of the following set of potential motivations: savings for long-term goals, saving for short-term goals, to avoid debt from predictable overspending or from unforeseen expenses, to get out of debt, to provide for one's family, and to avoid overspending one's income. The overall share of respondents who indicate a particular motivation is shown in the dark red bar. The share of respondents disaggregated by the amount of assets is shown in pink.

FIG. A.1.—Reasons for Budgeting by Amount of Assets ($)

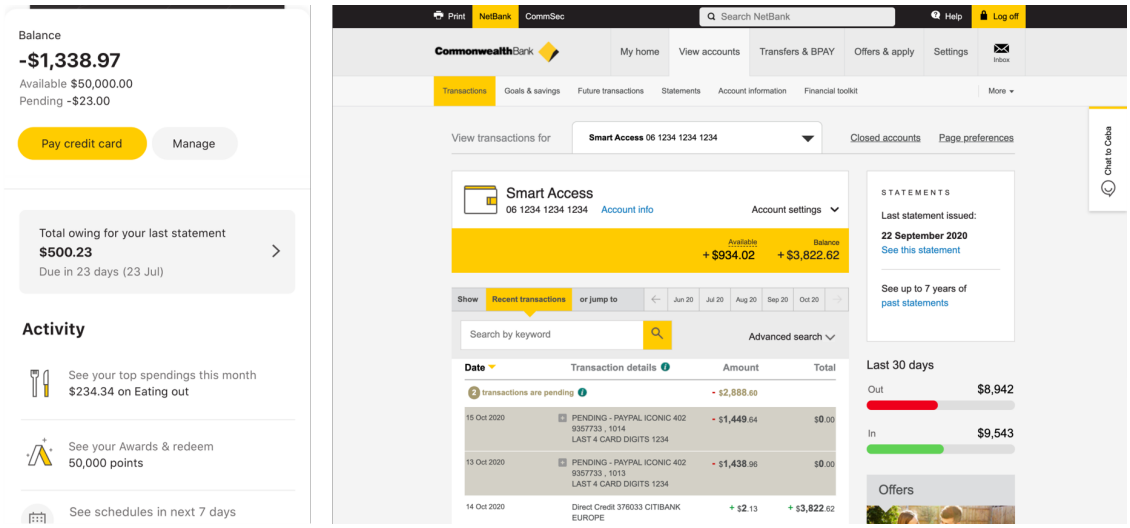


NOTE.—This figure shows the distribution of frequencies at which individuals check their budget by responses to four questions designed to capture respondents' expectations about their future financial security and stress about their current money management: I will achieve the financial goals that I have set for myself (top left); I have saved (or will be able to save) enough money to last me to the end of my life (top right); I am behind on my finances (bottom left); and Because of my money situation, I feel I will never have the things I want in life (bottom right). Responses for each question are measured using a five-point scale that ranges from "Describes me not at all" to "Describes me completely." Scores from the four questions were combined to create a composite perceived wellbeing index ranging from -8 to 8 (the negative of scores were used for the two questions about current money management stress so that higher values represent more positive outcomes).

FIG. A.2.—Attention to Finances by Individual Perceived Wellbeing Component



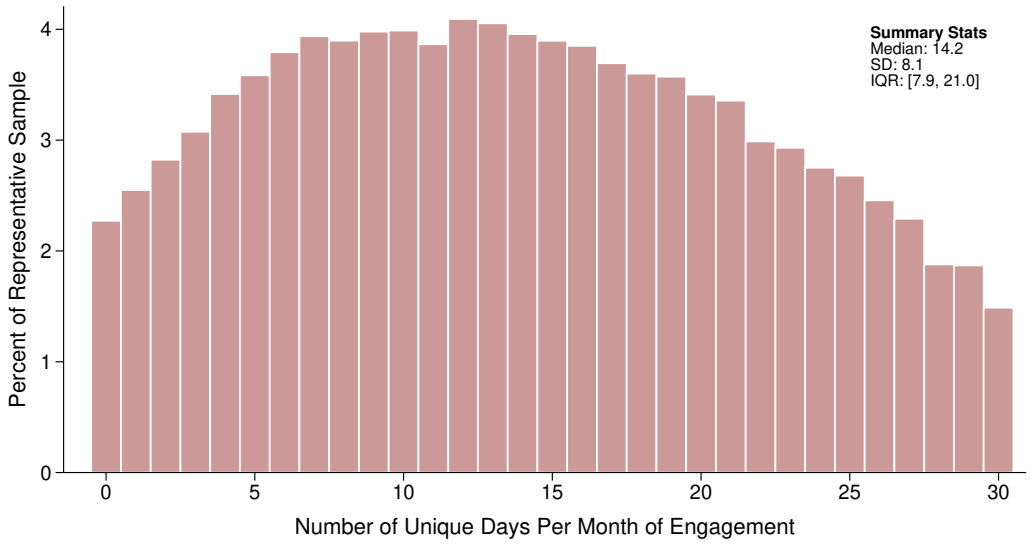
(A) Accounts View



(B) Account Details

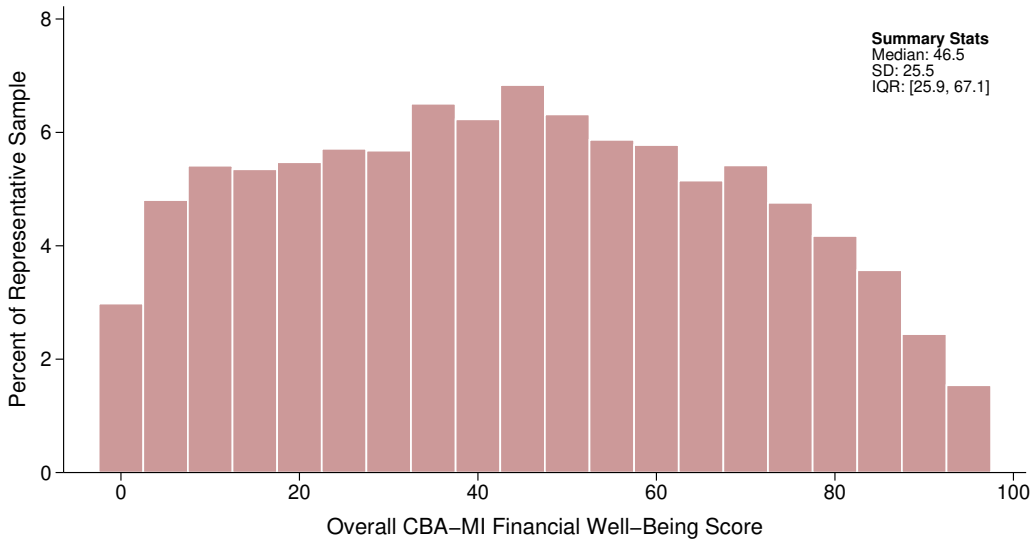
Note.— This figure presents sample screenshots of an Accounts View page (panel A) and Account Details page (panel B) within the CBA's mobile app and web platform.

Fig. A.3.—CBA "Accounts View" and "Account Details" Pages



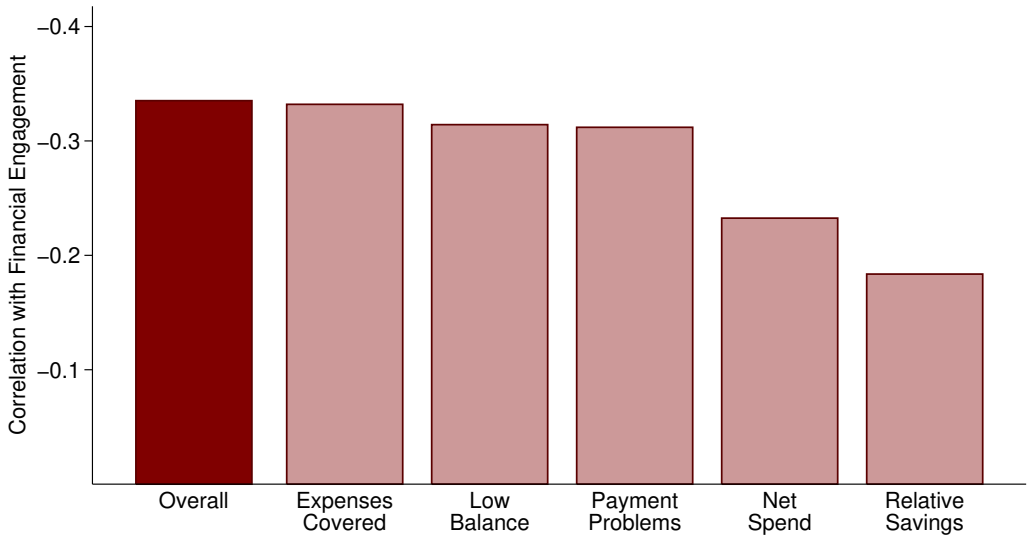
NOTE.—This figure plots the distribution of digital engagement for CBA customers in the representative sample. For each customer, we define digital engagement as the average number of days per month where they visited either the Accounts View or Account Details page within the bank's mobile app or web platform. The median, standard deviation, and interquartile range of this distribution are also reported in the top right corner for reference.

FIG. A.4.—Distribution of Digital Engagement



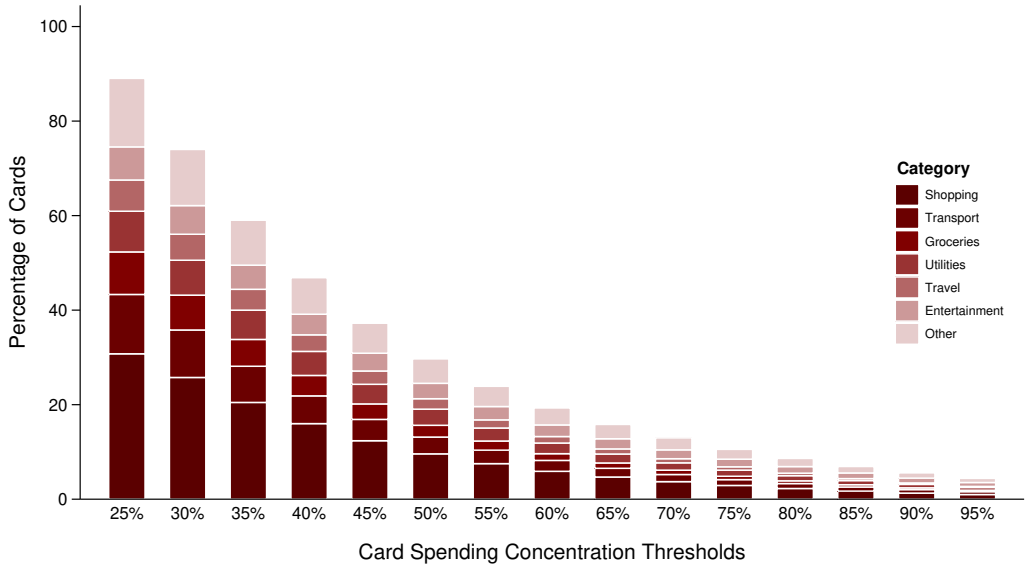
NOTE.— This figure plots the distribution of CBA-MI Observed Financial Wellbeing Scale scores for CBA customers in the representative sample. This score is derived internally from customers' financial records and is comprised of five underlying component measures that capture a customer's savings and liquidity, spending, and any experiences of payment problems. See Haisken-DeNew et al. (2019) for additional details on the CBA-MI scale. The median, standard deviation, and interquartile range of this distribution are also reported in the top right corner for reference.

FIG. A.5.—Distribution of Financial Wellbeing Scores

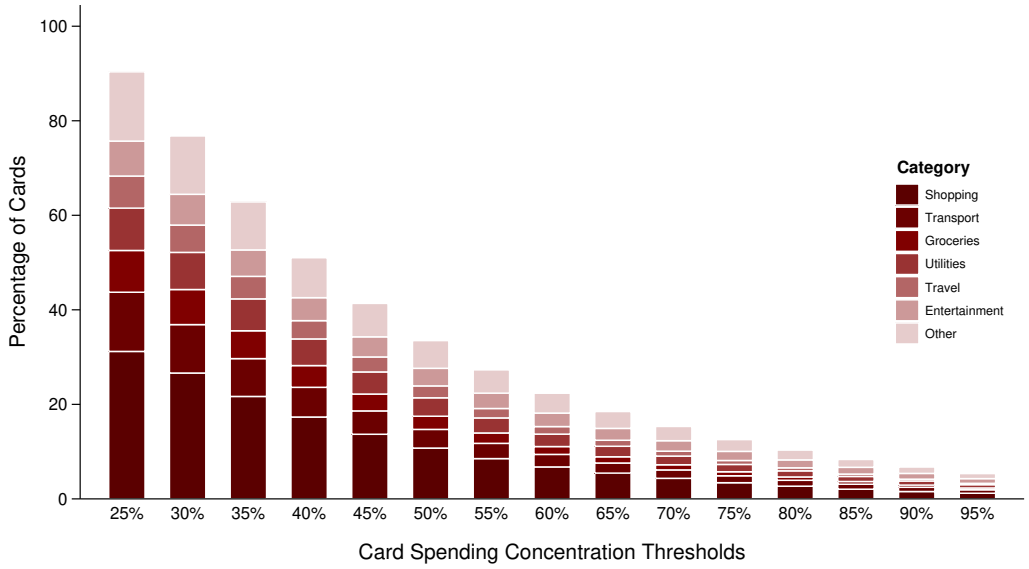


NOTE.— This figure reports the correlation between customer digital engagement and each of five component measures of the financial wellbeing score (Haisken-DeNew et al. 2019): payment problems, low balance, net spend, expenses covered, and relative savings. The overall correlation between digital engagement and financial wellbeing scores is shown in the dark red bar.

FIG. A.6.—Correlation between Digital Engagement and Financial Wellbeing Score Components



(A) CARD-LEVEL



(B) INDIVIDUAL-LEVEL

NOTE.— This figure plots the cumulative distribution of the concentration metric for cards in the representative sample at the card-level (panel A) and the indivdiual-level (panel B). The concentration of a card is defined as the share of total spending that is accounted for by the top spending category. The top spending category for a card is the category that accounts for the largest share of total spending on that card over the sample period. The individual-level distribution in panel B is calculated based on the card with the highest card spending concentration for each customer in the representative sample.

FIG. A.7.—Cumulative Distribution of Card Spending Concentration in the Representative Sample

APPENDIX TABLE A.1
BENCHMARKING EXERCISE

	Survey Data	ACS	CES
Age Brackets			
18-24 yrs	10.2	12.4	—
25-34 yrs	20.9	17.9	—
35-44 yrs	19.8	16.3	—
45-54 yrs	17.7	17.1	—
55+ yrs	31.4	36.3	—
Female	53.5	51.3	—
Employment Status			
Employed	56.3	59.3	—
Unemployed or Not in Labor Force	43.6	42.6	—
Education			
High-school degree or less	24.8	40.0	—
Some college or Associate's degree	38.3	31.0	—
Bachelor's degree or more	36.9	29.0	—
Household Income Brackets			
< 20K	17.7	15.5	—
20K - 50K	33.9	26.6	—
50K - 70/75K	17.8	17.5	—
> 70/75K	30.7	40.4	—
Pay Frequency			
Weekly	25.4	—	33.8
Semi-Monthly	18.5	—	18.6
Bi-weekly	36.2	—	42.2
Monthly	14.2	—	5.4
Irregular Pay or Other	5.7	—	—

NOTE.—This table compares the distribution of individuals in the survey data (column (1)) along key characteristics to the 2018 American Community Survey (ACS) 5-Year Estimates (column (2)) and the February 2019 U.S. Bureau of Labor Statistics Current Employment Statistics (CES) survey (column (3)). ACS estimates for employment status are based on the population of U.S. residents 16 and older, not 18 and older as in the survey data. The top two household income brackets for the survey data represent those with incomes between $50,000 to $70,000 and $70,000 or more. The top two household income brackets for the ACS data represent those with incomes between $50,000 to $75,000 and $75,000 or more.

APPENDIX TABLE A.2

REASONS KEEPING A BUDGET IS UNPLEASANT BY MEASURES OF FINANCIAL WELLBEING

	(1) Takes Too Much Time	(2) Hard to Follow Long-Term	(3) Makes Me Feel Poor	(4) Doesn't Help With Goals
	Panel A. Confidence in Ability to Come up with $500			
Certain I can't	32.1	42.0	49.0	16.0
Probably I can't	33.3	43.9	64.9	9.6
Probably I can	42.6	53.2	51.1	7.4
Certain I can	50.7	23.7	34.9	21.4
	Panel B. Perceived Wellbeing Index			
Bottom Quintile	28.3	44.4	54.5	18.2
Second Quintile	42.1	39.3	57.9	10.3
Third Quintile	41.2	40.3	54.6	7.6
Fourth Quintile	39.8	42.3	45.5	12.2
Fifth Quintile	53.1	21.5	23.8	26.2
	Panel C. Amount of Assets ($)			
0 - 250	30.9	43.6	50.4	14.0
250 - 499	30.8	53.8	50.0	0.0
500 - 999	44.7	44.7	55.3	7.9
1000 - 4999	49.3	28.2	57.7	14.1
5000 - 10k	39.6	45.8	47.9	16.7
10k - 50k	44.0	36.0	50.7	17.3
50k - 100k	46.2	28.2	56.4	17.9
100k+	47.3	29.0	29.8	21.4
Overall	39.8	38.0	47.4	15.5

NOTE.—This table presents statistics on the share of respondents who indicate they find budgeting unpleasant because it takes too much time (column (1)), it's too hard to follow long-term (column (2)), it makes them feel like they have less money than they thought (column (3)), and it doesn't help them reach their financial goals (column(4)) within the sample of respondents who don't currently budget and who find budgeting unpleasant. Panel A presents these statistics by respondent's confidence in their ability to come up with $500 if an unexpected need arose. Panel B presents these statistics by quintiles of the composite perceived wellbeing index. Panel C presents these statistics by respondents' asset levels. The overall share of survey respondents in this sample who indicate a particular reason for finding budgeting unpleasant is listed in the last row.

APPENDIX TABLE A.3
MOST COMMON BUDGET CATEGORY DESCRIPTORS

	Fraction of Participants
Food	39.1
Bills	20.0
Utilities	19.6
Rent	19.4
Groceries	18.6
Gas	13.1
Mortgage	12.4
Savings	9.6
Entertainment	8.3
Insurance	8.0
Car	5.8
Car payment	4.1
Credit cards	4.1
Clothing	3.7
Clothes	3.7
Electric	3.5
Grocery	3.2
Medical	3.1
Transportation	2.9
Phone	2.8
Housing	2.7
Vacation	2.5
House	2.5
Car insurance	2.4
Cable	2.4

NOTE.—Respondents were asked to list (free response) the five categories in their budget in which they spend the most money. This table shows the twenty-five most common budget categories along with the share of respondents who listed each category for the set of respondents who currently budget.

APPENDIX TABLE A.4
BUDGETING PERIODS BY PAY FREQUENCY

	Budgeting Periods				
	Weekly	Twice a Month	Monthly	Annually	Greater than One Year
Weekly	**52.7**	13.8	45.5	7.7	5.3
Bi-weekly	18.4	**32.4**	55.7	8.1	7.2
Semi-monthly	20.8	**35.5**	51.7	8.2	5.1
Monthly	12.1	7.8	**80.2**	8.6	4.7
Irregular	24.7	12.3	59.6	14.4	8.2
Other/Unreported	31.4	17.8	60.2	8.5	6.8
Overall	24.6	20.3	60.7	8.5	5.5

NOTE.—This table shows the share of survey respondents that indicate budgeting over a given time horizon by their pay frequency. Respondents were able to indicate more than one budgeting period, so numbers may sum to greater than 100 across columns. The last row provides this same information in aggregate across all pay frequencies. Statistics in bold highlight the fraction of respondents whose budgeting period matches the frequency at which they are paid. This table includes only those respondents who report either currently budgeting or having budgeted in the past.

APPENDIX TABLE A.5
CBA CUSTOMER CHARACTERISTICS

	(1) Representative Sample	(2) Multiple Cardholder Sample
Demographics		
Age (yrs)	36.00	37.00
Female	0.50	0.49
Bank Tenure (yrs)	18.00	18.00
Income (A$)†	45,305.50	48,958.50
Financial Wellbeing Score	46.49	48.25
Product Holdings		
Number of Transaction Accounts	1.00	1.00
Number of Savings Accounts	1.00	1.00
Number of Debit Cards	1.00	1.00
Number of Credit Cards	0.00	1.00
Number of Personal Loans	0.00	0.00
Number of Home Loans	0.00	0.00
Monthly Transaction Outflows‡		
Debit Cards (A$)	769.98	674.60
Credit Cards (A$)	1558.48	1335.80
Number of Customers	98,267	96,411

NOTE.—This table presents descriptive statistics for the representative sample of CBA customers (column (1)) as well as a restricted sample of customers who hold multiple bank cards. All table entries are sample medians. The count of CBA customers is listed in the final row. †Income estimates could only be calculated for customers who were paid into their CBA accounts. As a result, the median estimate is based on approximately half of each sample (46,668 customers in the representative sample and 46,748 customers in the multiple cardholder sample). ‡Median estimates for monthly transaction outflows exclude customers who do not hold a debit or credit card.

APPENDIX TABLE A.6
CBA Card Spending by Category

	(1) Median Proportion of Individual Spend (%)	(2) Proportion of Cards with Top Spending Category (%)	(3) Median Proportion of Card Spend (%)
Shopping	20.57	33.95	38.74
Transport	11.74	13.76	38.22
Groceries	9.11	10.98	36.52
Utilities	7.37	9.54	40.82
Travel	3.94	7.97	38.98
Entertainment	5.55	6.77	49.80
Eating Out	6.35	5.84	34.77
Home	2.12	3.57	40.08
Health	3.86	3.08	39.93
Education	0.09	2.19	45.30
Cash	0.00	1.63	52.73
Donations	0.05	0.42	51.13
Tax Paid	0.00	0.31	45.73

Note.—This table presents statistics on card spending for CBA customers in the multiple cardholder sample. For each spending category, the table reports the median share of overall individual spending accounted for by that category (column (1)), the fraction of cards for which that category is the top spending category (column (2)), and the median share of overall card spending accounted for by that category for the subset of cards where the given category is the top spending category (column (3)). The top spending category for a card is the category that accounts for the largest share of total spending on that card over the sample period.

B Survey Questions

In this section, we present our survey questions. Participants were randomized into one of four conditions that differed in the order in which they presented the mental accounting questions. We present below one complete survey flow.

Introduction

In this survey, we are interested in learning about how people budget. We will be asking you a series of questions about your own budgeting process.

If you currently keep a budget, please answer these questions with that budgeting process in mind. If you have previously kept a budget but no longer do, think about your most recent budget when answering these questions. If you have never kept a budget, then reply based on what kind of budget you think you would be most likely to keep if you were to start budgeting.

Q1. Which of the following applies to you?

- ◯ I currently keep a budget. I will answer the following questions with my current budgeting process in mind.
- ◯ I have previously kept a budget but do not currently budget. I will answer the following questions with my previous budgeting process in mind.
- ◯ I have never kept a budget. I will answer the following questions based on the kind of budget I think I would keep if I were to start budgeting.

Display This Question:
If answer to Q1 is: I have previously kept a budget but do not currently budget. I will answer the following questions with my previous budgeting process in mind.
Or
If answer to Q1 is: I have never kept a budget. I will answer the following questions based on the kind of budget I think I would keep if I were to start budgeting.

Q2. You stated that you do not currently keep a budget. Do you think you should keep a budget?

- ◯ Yes
- ◯ No

Display This Question:
If answer to Q1 is: I have previously kept a budget but do not currently budget. I will answer the following questions with my previous budgeting process in mind.
Or
If answer to Q1 is: I have never kept a budget. I will answer the following questions based on the kind of budget I think I would keep if I were to start budgeting.

Q3. Why don't you keep a budget? Select all that apply.

- ☐ I think it's too difficult.
- ☐ I find budgeting unpleasant.
- ☐ I don't think budgeting is useful.
- ☐ I don't think I need to budget because I have enough money.
- ☐ Other (please specify) _____

Display This Statement:
If answer to Q1 is: I have previously kept a budget but do not currently budget. I will answer the following questions with my previous budgeting process in mind.

Remember to answer the following questions **thinking of your previous budget.**

Display This Statement:
If answer to Q1 is: I have never kept a budget. I will answer the following questions based on the kind of budget I think I would keep if I were to start budgeting.

Remember to answer the following questions thinking of the **budget you would keep if you were to start budgeting.**

Q4. Do you keep your budget formally (for example, written down or on a website) or informally (for example, keep it in your head)?

- ◯ Formally
- ◯ Informally

Q5. What are your main reasons for budgeting? Select all that apply.

- ☐ To make sure I don't spend more than my income
- ☐ To make sure that I can provide for my family
- ☐ To save for long-term goals (e.g., retirement)
- ☐ To save for short-term goals (e.g., a new computer)
- ☐ To avoid debt from predictable overspending (e.g., routine doctor visit)
- ☐ To avoid debt from unforeseen expenses (e.g., an unexpected hospital visit)
- ☐ To get myself out of debt (e.g., repaying credit card debt)
- ☐ Other (please specify) _____
- ☐ I don't think it's important to budget.

Display This Question:
If answer to Q4 is: Formally

Q6. Which websites or apps do you use to budget, if any?

_____

Q7. How many children are in your household?

_____

Next, you will be asked some questions about how you created your budget.

Q8. What resources did you use when creating a budget? Select all that apply.

- ☐ Family or friends
- ☐ Professional financial advisor
- ☐ Internet
- ☐ Books
- ☐ Personal finance seminars
- ☐ Other (please specify) _____
- ☐ Did not use any resources

Q9. When you first set your budget, how do you decide how much you should spend in each budget category? Select all that apply.

- ☐ Consider how much I've spent in the past
- ☐ Consider how much my friends and neighbors are spending
- ☐ Consider a financial goal (e.g., build savings or eliminate debt) and work backwards
- ☐ Other (please specify) _____

Q10. Do you intentionally separate your money into different formal financial accounts to help you organize your spending? Select all that apply.

- ☐ Yes, I save money for different goals in different bank accounts.
- ☐ Yes, I use different credit cards for different types of expenses.
- ☐ I don't separate my money into different financial accounts, but I do have strategies for physically separating my money (e.g., using different jars for different spending purposes).
- ☐ No, I don't separate my money into different financial accounts and I do not have strategies for physically separating my money.

Display This Question:
If answer to Q10 is: Yes, I save money for different goals in different bank accounts.

Q11. When using multiple bank accounts, what purpose do you have for each account? Please list a purpose for each account below. If you have an account with no specific purpose, you can state that too.

- ☐ Account 1 _____
- ☐ Account 2 _____
- ☐ Account 3 _____
- ☐ Account 4 _____
- ☐ Account 5 _____

Display This Question:
If answer to Q10 is: Yes, I use different credit cards for different types of expenses.

Q12. When using multiple credit cards for different types of expenses, what purpose do you have for each credit card? Please list the type of expense for each card below. If you have a card with no specific purpose, you can state that too.

- ☐ Card 1 _____
- ☐ Card 2 _____
- ☐ Card 3 _____
- ☐ Card 4 _____
- ☐ Card 5 _____

Display This Question:
If answer to Q10 is: I don't separate my money into different financial accounts, but I do have strategies for physically separating my money (e.g., using different jars for different spending purposes).

Q13. When physically separating your money, what purpose do you have for each group that you separate? Please list the purpose for each group below. If you have a group with no specific purpose, you can state that too.

- ☐ Group 1 _____
- ☐ Group 2 _____
- ☐ Group 3 _____
- ☐ Group 4 _____
- ☐ Group 5 _____

Q14. What time frame(s) do you keep a budget for? Select all that apply.

- ☐ Weekly
- ☐ Bimonthly (twice a month)
- ☐ Monthly
- ☐ Annual
- ☐ Longer than 1 year

Q15. Do you try to match the timing of at least one of your budgeting periods with your pay schedule?

- ◯ Yes
- ◯ No

Q16. When you think about setting your budget for the month, do you plan to spend all your income for the month, or do you plan to set aside money for savings?

- ◯ I plan to spend all of my income for the month.
- ◯ I plan to set aside some of my income for savings.

Display This Question:
If answer to Q16 is: I plan to set aside some of my income for savings.

Q17. When you set aside money for savings, do you set aside a general savings amount? Or do you set aside amounts for specific expenses, such as a vacation?

- ◯ General savings account
- ◯ Specific savings accounts
- ◯ Both
- ◯ Other (please describe) _____

Display This Question:
If answer to Q16 is: I plan to set aside some of my income for savings.

Q18. Last month, approximately how much did you save?

- ◯ $0
- ◯ $1-49
- ◯ $50-99
- ◯ $100-$499
- ◯ $500-$999
- ◯ $1000+

The next questions are going to be about the categories in your budget.

Q19. Please list the five categories in your budget that you spend the most money in. If you do not have five categories that you track, you can list fewer than five.

As a reminder, if you don't currently budget, think of the most recent budget that you've kept or the budget you think you would keep as you answer the following questions.

- ☐ Category 1: _____
- ☐ Category 2: _____
- ☐ Category 3: _____
- ☐ Category 4: _____
- ☐ Category 5: _____
- ☐ I have spending limits, but I don't track categories in my spending.

Q20. Some people create very general budget categories while others create very specific budget categories. When thinking about the level of detail in your budget, which of the following looks most similar to *your actual budget*?

The options below are listed from the least amount of detail at the top to the most amount of detail at the bottom.

- ☐ Necessities, Discretionary
- ☐ Housing & Transportation, Food , Discretionary, Other
- ☐ Housing & Transportation, Food, Entertainment, Clothing, Other
- ☐ Housing, Car, Groceries, Dining Out, Entertainment, Clothing, Other
- ☐ Rent, Utilities, Cell phone, Car, Groceries, Dining Out, Movies, Travel, Clothing, Other
- ☐ Rent, Utilities, Cell phone, Internet, Car, Groceries, Dining Out, Movies, Travel, Clothing, Exercise, Healthcare, Other

Q21. Some people create very general budget categories while others create very specific budget categories. When thinking about the level of detail in your budget, which of the following looks most similar to *the budget you think you should keep*?

The options below are listed from the least amount of detail at the top to the most amount of detail at the bottom.

- ☐ Necessities, Discretionary
- ☐ Housing & Transportation, Food , Discretionary, Other
- ☐ Housing & Transportation, Food, Entertainment, Clothing, Other
- ☐ Housing, Car, Groceries, Dining Out, Entertainment, Clothing, Other
- ☐ Rent, Utilities, Cell phone, Car, Groceries, Dining Out, Movies, Travel, Clothing, Other
- ☐ Rent, Utilities, Cell phone, Internet, Car, Groceries, Dining Out, Movies, Travel, Clothing, Exercise, Healthcare, Other

Q22. Do you change these categories from time to time, or do you keep the same budget over time?

- ◯ Change them from time to time
- ◯ Keep them the same

Q23. How often do you check in with your budget to see how you're doing?

- ◯ Every day
- ◯ 2-3 times per week
- ◯ Weekly
- ◯ Every other week
- ◯ Monthly
- ◯ Other (please specify) _____

On the next pages, you will be asked to imagine a few different possible financial situations, and to state what choices you would make.

Q24. Imagine that you are about to purchase a watch for $200 and a jacket for $25.

The watch salesman informs you that the watch you wish to buy is on sale for $190 at the other branch of the store, which is a 10 minute drive away.

Would you make the trip to the other store?

- ◯ Yes
- ◯ No

Q25. Imagine that you have decided to see a play and paid the admission price of $20 per ticket. As you enter the theater you discover that you have lost the ticket. The seat was not marked and the ticket cannot be recovered.

Would you pay $20 for another ticket?

- ◯ Yes
- ◯ No

On the next pages, you will be asked questions about meeting your budget.

Q26. How guilty do you feel if you don't meet your budget?

- ◯ 1 - Not guilty at all
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6
- ◯ 7 - Extremely guilty

Q27. On a scale of 1-10, how much effort do you put in to stay within your budget?

- ◯ 1 - No effort at all
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6
- ◯ 7
- ◯ 8
- ◯ 9 - A very large amount of effort

Q28. When you encounter an expense that doesn't quickly or easily fit into one of your budget categories, which of the following are you most likely to do?

- ◯ Don't log it
- ◯ Put it in the closest category in your budget
- ◯ Create a new category for it in your budget
- ◯ Stop budgeting for this period
- ◯ Other (please specify) _____

Q29. If I go over in one of my categories, I:

- ◯ Reduce my spending in another category in response
- ◯ Don't do anything differently
- ◯ Make note of it and change my category spending limits for the next budget period
- ◯ Other (please specify) _____

Q30. How often do you update your allowed spending limits under each category?

- ◯ Weekly
- ◯ Every other week
- ◯ About once a month
- ◯ About every other month
- ◯ A few times per year
- ◯ Never

Q31. What is the most common reason why you have updated your budget in the past?

- ◯ I spent more than the amount I set aside for a certain category **once**
- ◯ I spend more than the amount I set aside for a certain category **multiple times**
- ◯ I spend **less** than the amount I set aside for a certain category **once**
- ◯ I spend **less** than the amount I set aside for a certain category **multiple times**
- ◯ I spend on **one unusual expense** that doesn't clearly fall into any existing budget category
- ◯ I spend on **several different unusual expenses** that don't clearly fall into any existing budget category
- ◯ Other (please specify) _____

Q32. When you end up not sticking to your budget in a particular week/month, what do you do in response?

- ◯ Work more to have more money to spend
- ◯ Change the budget amounts (for example, save less)
- ◯ Give up on budgeting entirely
- ◯ Other (please specify) _____

Q33. In a week or month where I make more money, I:

- ◯ Don't change my budget or my spending
- ◯ Don't change my budget but informally allow myself to spend more than I have listed in my budget
- ◯ Formally change my budget to allow for increased spending in this period only
- ◯ Formally change my budget to allow for increased spending in this period and for future periods

Q34. If you underspend on your budget this period, do you adjust your budget for the following period?

- ◯ Yes, I plan to spend more next month and adjust upwards
- ◯ Yes, I plan to stay within tighter spending limits and adjust downwards
- ◯ I do not change my spending for the following period
- ◯ Other (please specify) _____

Q35. If I were to go five dollars over my budget:

- ◯ It would be a big deal
- ◯ It wouldn't be a big deal

Q36. If I were to go fifty dollars over my budget:

- ◯ It would be a big deal
- ◯ It wouldn't be a big deal

Q37. On a scale of 1 ("I find keeping a budget very unpleasant.") to 7 ("I find keeping a budget very fun."), how unpleasant do you find budgeting?

- ◯ 1 - I find keeping a budget very unpleasant
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6
- ◯ 7 - I find keeping a budget very fun

Display This Question:
If answer to Q37 is: 1
Or
If answer to Q37 is: 2
Or
If answer to Q37 is: 3

Q38. Why do you find it unpleasant to keep a budget? Select all that apply.

- ☐ It takes too much time
- ☐ It's too hard to follow a budget long-term
- ☐ Budgeting makes me feel like I have less money than I thought I did
- ☐ Budgeting doesn't help me reach my financial goals
- ☐ Other _____

Q39. Do you think budgeting helps you spend your money more wisely than if you didn't use a budget?

- ◯ Yes
- ◯ No

Please indicate on a scale of 1 - 5 how the following statements describe you, from (1) "does not describe me at all" to (5) "describes me completely."

Q40. I will achieve the financial goals that I have set for myself.

- ◯ 1 - Does not describe me at all
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 - Describes me completely

Q41. I have saved (or will be able to save) enough money to last me to the end of my life.

- ◯ 1 - Does not describe me at all
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 - Describes me completely

Q42. I am behind with my finances.

- ◯ 1 - Does not describe me at all
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 - Describes me completely

Q43. Because of my money situation, I feel I will never have the things I want in life.

- ◯ 1 - Does not describe me at all
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5 - Describes me completely

On the next pages, you will be asked some questions about your finances.

Q44. Do you live with a spouse or partner?

- ◯ Yes
- ◯ No

Display This Question:
If answer to Q44 is: Yes

Q45. Which of the following best describes you and your partner's finances?

- ◯ We set and manage our own (separate) budgets
- ◯ I set a budget for both of us and am responsible for managing it
- ◯ My partner sets a budget for both of us and is responsible for managing it

Display This Question: If answer to Q45 is: I set a budget for both of us and am responsible for managing it.
Or
If answer to Q45 is: My partner sets a budget for both of us and is responsible for managing it.

Q46. Which of the following best describes how you manage your bank accounts?

- ◯ We put all of our money in joint bank accounts
- ◯ We put some of our money in joint bank accounts and some of our money in our own individual bank accounts
- ◯ We keep all of our money in separate, individual bank accounts

Q47. Are your bills generally all due at the same time, or are they spread out across the month?

- ◯ Due at the same time
- ◯ Due dates spread out

Q48. Looking out over the upcoming year, how predictable is your income from month to month?

- ◯ 1 - Completely unpredictable
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6
- ◯ 7 - Completely predictable

Q49. How confident are you that you could come up with the following amounts of money if an unexpected need arose? Please answer for each amount.

For each of the following amounts, please choose the statement that best describes you, from "I am certain I could not come up with" to "I am certain I could come up with".

	I am certain I could not come up with	I could probably not come up with	I could probably come up with	I am certain I could come up with
$10	◯	◯	◯	◯
$25	◯	◯	◯	◯
$10	◯	◯	◯	◯
$50	◯	◯	◯	◯
$100	◯	◯	◯	◯
$200	◯	◯	◯	◯
$500	◯	◯	◯	◯
$1000	◯	◯	◯	◯
$2000	◯	◯	◯	◯
$5000	◯	◯	◯	◯

Q50. Do you depend on lumpy income, for example, tax refunds or work bonuses?

◯ Yes

◯ No

Q51. Do you spend your tax refund money before it arrives?

◯ Yes

◯ No

Q52. About how often do you get paid?

- ◯ Weekly
- ◯ Twice a month
- ◯ Monthly
- ◯ My paychecks do not arrive at regular time intervals
- ◯ Other _____

Q53. Which of the following is true?

- ◯ My paychecks always arrive on the same day of the week (e.g., Fridays)
- ◯ My paychecks always arrive on the same date of the month (e.g., the 15th or 30th)
- ◯ Neither (please describe) _____

Q54. How much money do you have in total in liquid savings, investments, and retirement accounts?

- ◯ $0 - $249
- ◯ $250 - $499
- ◯ $500 - $999
- ◯ $1000 - $4999
- ◯ $5000 - $9,999
- ◯ $10,000 - $49,999
- ◯ $50,000 - $99,999
- ◯ $100,000+

Q55. What kind of debt do you have? (select all that apply)

- ☐ Student loans
- ☐ Credit card debt
- ☐ Personal loan from bank or other institution
- ☐ Payday loan
- ☐ Debt to family or friends
- ☐ Auto loans
- ☐ Mortgage
- ☐ Other (please specify) _____
- ☐ I do not have any debt

Q56. How much debt do you have?

- ◯ $0 - $249
- ◯ $250 - $499
- ◯ $500 - $999
- ◯ $1000 - $4999
- ◯ $5000 - $9,999
- ◯ $10,000 - $49,999
- ◯ $50,000 - $99,999
- ◯ $100,000+

On the following pages, you will again be asked to imagine a few different possible financial situations, and to state what choices you would make. Although these questions are similar to questions you responded to earlier, the specific details are different, so please read them closely before responding.

Q57. Imagine that you are about to purchase a watch for $25 and a jacket for $200.

The watch salesman informs you that the watch you wish to buy is on sale for $15 at the other branch of the store, which is a 10 minute drive away.

Would you make the trip to the other store?

- ◯ Yes
- ◯ No

Q58. Imagine that you have decided to see a play where admission is $20 per ticket. As you enter the theater you discover that you have lost a $20 bill.

Would you still pay $20 for a ticket for the play?

- ◯ Yes
- ◯ No

Lastly, you will be asked some questions about yourself.

Q59. Which of the following best describes your age?

- ◯ 18-24 years
- ◯ 25-29 years
- ◯ 30-34 years
- ◯ 35-39 years
- ◯ 40-44 years
- ◯ 45-49 years
- ◯ 50-54 years
- ◯ 55 years or more

Q60. Which of the following best describes your gender?

- ◯ Male
- ◯ Female

Q61. Which of the following best describes your education?

- ◯ Some high school
- ◯ High School Diploma
- ◯ GED
- ◯ Some college
- ◯ Associates Degree
- ◯ Bachelors Degree
- ◯ Some graduate study
- ◯ Graduate Degree

Q62. What is your employment status? Choose the answer that best describes your current employment status.

- ◯ Student
- ◯ Employed part-time
- ◯ Employed full-time
- ◯ Work at home without pay
- ◯ Not currently employed

Q63. Which of the following best describes your annual household income?

- ◯ Less than $20,000
- ◯ $20,000 - $29,999
- ◯ $30,000 - $39,999
- ◯ $40,000 - $49,999
- ◯ $50,000 - $59,999
- ◯ $60,000 - $69,999
- ◯ $70,000 or more

Q64. How many children are in your household?

_____