Finance and Economics Discussion Series
Divisions of Research & Statistics and Monetary Affairs
Federal Reserve Board, Washington, D.C.

And Banking for All?

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2009-34

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August 2009

Abstract

This paper presents data from a new survey of low- and moderate-income households in Detroit to examine bank account usage and alternative financial service (AFS) products. We find that for the vast majority of households, annual outlays on financial services for transactional and credit products are relatively small, around 1% of annual income. This estimate is lower than those extrapolated by previous work using the posted fees of financial services alone, suggesting that LMI households do not always choose the most expensive financial services option. This evidence is also consistent with LMI households substituting among an array of financial services from the mainstream and alternative financial services sector. Households with bank accounts are more economically active and have access to more forms of credit than unbanked households, resulting in greater use of financial services and higher total outlays. Results from the DAHFS study show permeability in the financial services decisions of LMI households. Namely, having a bank account does not preclude the use of AFS, being unbanked does not exclude households from using mainstream financial services, and contrary to popular belief, being unbanked is not a permanent financial outcome. Generally, results from the DAHFS study suggest that policies designed to expand bank account access alone are unlikely to improve financial outcomes among LMI households unless accompanied by changes in the functionality of mainstream banking products.

[1] We thank Dario Borghesan, Maria Dooner, and Robyn Konkel for excellent research assistance. We are grateful to John Caskey and participants at the American Economic Association meetings for helpful comments. The views in this paper represent those of the authors and not of the Federal Reserve System. Contact: msbarr@umich.edu, Jane.K.Dokko@frb.gov, benkeys@umich.edu.

I. Introduction

Among many economists, the use of alternative financial services—such as check cashers, pawn shops and payday lenders—is viewed as a puzzle. That households choose these services, given that they are often expensive and given other alternatives in the banking services sector, presents numerous contradictions and challenges to policymakers interested in improving financial outcomes among LMI households. The preferred policy response among many observers is often to promote financial education explaining the benefits of bank account ownership to LMI households (Caskey 2006, Baker and Dylla 2007). With findings from a unique household-level dataset of LMI households, we investigate whether bank accounts, as they are currently designed, can potentially benefit roughly 20 million "unbanked" and "underbanked" households. We also provide evidence suggesting that changes are needed in the products offered by depository and non-depository institutions in order to improve financial outcomes among LMI households.

During the past two decades, there has been tremendous growth in the high-fee alternative financial services (AFS) sector in the United States.[2] The AFS sector plays a significant and controversial role in the provision of financial services to low- and moderate-income (LMI) households. Twenty-five percent of low-income American households do not have a either a checking or savings account (Bucks et al. 2006, 2009). These households often use high-fee AFS to convert their paychecks into cash, make payments, and obtain credit (Barr 2004, Bucks et al. 2006, 2009). A key policy concern is the extent to which LMI households' use of alternative financial services burdens them with excessive fees, reduces their access to lower cost credit, and diminishes their opportunities to save (Barr 2004). It is a widely held, though not universal, view that bank accounts may mitigate the costs of financial services for LMI households. Based on survey evidence, we propose that unless they are re-designed, bank accounts alone are unlikely to alleviate the economic burden of financial services for LMI households.

[2] For a detailed discussion of the AFS sector, see Caskey (1994) or Bradley et al. (2009).

Our analysis is based on a careful examination of financial service usage patterns and estimates of annual financial service outlays from new household-level survey data on financial services behavior. This survey, which we designed and implemented through the Survey Research Center at the University of Michigan, is the first dataset to measure households' financial service usage patterns, attitudes, demographics, socio-economic characteristics, and full balance sheet information. Broadly speaking, household-level survey data enables us to measure the portfolio of financial services used by LMI households to transact, save, and borrow, which previous work has not been able to do.

Using these data, we find that LMI households use a combination of mainstream and AFS products. Furthermore, we show that although a larger proportion of unbanked households use AFS products during the month (transactional services) or year (credit services) prior to the survey interview, the differences in AFS usage rates between banked and unbanked households are not substantial. In addition, a large majority of banked households use some type of AFS. Though AFS are associated with high fees, both banked and unbanked respondents describe AFS as "convenient" and "easy to use." These results suggest that expanding bank account access alone, without changing the relative functionality of bank accounts, is unlikely to reduce unbanked LMI households' use of AFS (Barr 2004). Similarly, banked households are unlikely to reduce their use of AFS without changes to the functionality of their accounts.

Estimates of the annual outlays on financial services among LMI households living in the Detroit metropolitan area suggest that for the vast majority of households, annual outlays on financial services for transactional and credit products are relatively small. However, a small fraction of LMI households incur high outlays relative to annual household income. This finding contrasts with previous research which extrapolates the burden of financial services based on the posted fees of AFS and mainstream services (Caskey 1994, Barr 2004, Seidman and Tescher 2005, Fellowes and Mabanta 2008). More specifically, in earlier work, a common calculation to illustrate the high burden of fees entails calculating the hypothetical fees an unbanked household faces to convert $20,000 of income annually at a check cashing outlet. Based on the posted fees of check cashers,

this household pays between $400 and $600 annually, or 2-3% of annual income and a non-trivial charge for a service that for many households is free.[3] In contrast, survey evidence from the Detroit area suggests much smaller expenditures, as the median annual outlays for transactional and credit services are $98 and $41, respectively.[4] While we acknowledge that these figures may be lower than actually incurred because of respondents' recall problems or other factors, a comparison of respondents' answers to pricing questions with actual pricing information obtain from financial service providers suggests that these factors, on average, do not substantially bias reported fees. Consistent with their usage patterns, LMI households allocate their spending to both AFS and mainstream products.

We find that the pattern of annual outlays on transactional and credit services differ for the banked and unbanked (Appendix Table (A1) categorizes the main financial services we analyze in this paper). As we show, banked households are more economically active than unbanked households and therefore have higher financial service usage and total outlays. This result has two important implications. First, it suggests that financial services fees—in both the AFS and mainstream sectors--are likely to reduce the benefits of policies designed to encourage the economic activity of unbanked LMI households. Second, diminished economic activity among LMI households may contribute to the low level of annual financial services usage and outlays among most LMI households.

We find that households incur substantial non-pecuniary costs to obtain financial services. The non-pecuniary costs incurred by LMI households mostly include time and distance costs.[5] For instance, 37% of households use a bill payment center to pay their

[3] In 2004, 70% of American households used direct deposit according to the Survey of Consumer Finances (Federal Reserve Board, 2004).

[4] As we discuss later in the paper, we exclude mortgage credit from our estimate of credit outlays because it is qualitatively different from credit products that enable short-term consumption-smoothing. The implications of this exclusion are also discussed later in the paper.

[5] We remain agnostic about whether to interpret these results as suggesting that the non-pecuniary costs of financial services are "high." On the one hand, LMI households face low wages and may have a low opportunity cost of time, suggesting that time and distance costs are lower for this group than for higher-income households. On the other hand, market wages may not fully capture the shadow costs of time and distance for LMI households, who are often constrained in the labor market and may thus face "high" non-pecuniary costs of financial services.

bills (typically in cash), rather than using more efficient and less-time consuming payment methods such as on-line bill payment, and 30% find a non-bank—rather than a bank—the most convenient location to obtain their financial services. In addition, the non-pecuniary costs for unbanked households are substantially higher than for banked households. These results suggest that part of the burden of the financial services system is borne through non-pecuniary channels.

Finally, we find that a large percentage of LMI households move from being banked to being unbanked, and that some banked households were previously involuntarily unbanked. Contrary to popular belief, being unbanked is not a fixed state: 70% of unbanked households have previously had a bank account while 12% of the banked report that a bank closed one of their prior accounts. In light of the permeability of the line between banking and AFS sectors, regulating the AFS sector independently of the banking sector is likely to have perverse consequences. For instance, reducing access to payday loans could lead to more bounced checks and NSF (not sufficient funds) fees, and more bank accounts being closed, while more payday borrowing could reduce creditworthiness and access to mainstream products. The results support the view that banking and alternative financial sector regulation needs to be examined as a system.

The remainder of this paper is organized as follows. The next section provides background details on the alternative financial services sector and discusses the relevant literature. Section III describes the data and defines the categories of financial services discussed in this paper. Section IV presents our results on financial service usage patterns and annual outlays on transactional and credit services. Section V concludes and discusses policy implications.

II. Background on Alternative Financial Services and Related Literature

The alternative financial services (AFS) sector in the United States has grown tremendously during the past two decades. Not only have the number of outlets providing check cashing services, payday loans, and pawnshop loans increased, but also

the dollar volume of transactions occurring in the AFS sector has increased (Caskey 1994, Bair 2005, Stegman 2007, Fellowes and Mabanta 2008). Today, around $75 billion of money orders, the largest transactional AFS, are purchased from outlets other than banks or post offices while check cashers convert approximately $60 billion of checks each year (Federal Reserve 2007, Moneygram Form 10-K 2007, Fellowes and Mabanta 2008). Payday lenders provide $40 billion of short-term loans annually, and paid tax preparers disburse $25 billion of tax refunds through refund anticipation loans (RALs; Stephens, Inc. 2007, Internal Revenue Service 2007).

Greater visibility of AFS has prompted increased attention to these services among researchers, policymakers, and consumer advocates. Though relatively small in the aggregate, the AFS sector plays a significant role in the provision of financial services to low- and moderate-income (LMI) households. These households, a quarter of which have no formal banking relationship, use high-fee AFS to convert their paychecks into cash, make payments, and obtain credit (Barr 2004, Bucks et al. 2006). At the same time, households with bank accounts face annual fees, minimum balance requirements, and bounced check fees, all of which may complicate the rules of bank account ownership and render bank services costly to use. A key policy concern is the extent to which LMI households' use of financial services burdens them with excessive fees, reduces access to or increases the costs of credit, or minimizes opportunities for ready mechanisms to save (Barr 2004).

Since John Caskey's (1994) seminal work on "fringe banking," the research on financial services for the poor has emphasized the inefficiencies and inequities in the financial services system (Barr 2004, Seidman and Tescher 2005, Center for Responsible Lending 2006, Fellowes and Mabanta 2008). Because the financial services system is ill-suited to serving LMI households, as earlier studies argue, their financial needs are unmet by the alternative and mainstream sectors. Consequently, LMI households face higher pecuniary and non-pecuniary costs than they otherwise would under a system re-designed

to better suit their needs (Barr 2004).[6] The economic benefits of such a system potentially include fewer numbers of unbanked households, greater ability among LMI households to smooth their consumption via lower cost saving and borrowing instruments, and fewer economic and material hardships among those least able to pay. For instance, having an account with direct deposit and automatic savings features may increase the ability of LMI households to develop savings that can serve to buffer shocks and increase financial stability.

The potential gains from re-designing the financial services system for LMI households depend (though not exclusively) on these households' usage patterns and annual outlays. The benefit to households from more functional and lower-fee products have the potential to be large if they are very likely to use high-fee financial services and credit, if their outlays are onerous, or if they have little opportunity to develop savings. On the other hand, lower usage of high-fee services or outlays suggest that the scope for substantially improving the financial lives of LMI households through financial services innovation is likely to be more limited and nuanced.

While other studies use household-level data to provide estimates of usage and outlays and to address the burden of financial services for LMI households (Dunham et al. 1998, OCC 2000, Vermilyea and Wilcox 2002, Berry 2004, Seidman et al. 2005), these earlier papers lack comprehensive information on demographics, socio-economic characteristics, financial service and credit usage patterns, and full balance sheet information in order to quantify more precisely the burden of financial services for LMI households. Without these important measures of economic and financial services activity, previous studies have been unable to comprehensively measure the financial services portfolios of LMI households.

III. Data and Sample

[6] See Caskey (1994) or Barr (2004), who document that fees for financial services in the AFS sector are high relative to the mainstream financial products of banks or credit unions.

The data for this paper are from the Detroit Area Household Financial Services (DAHFS) study, a unique and proprietary dataset that we designed. The Survey Research Center (SRC) at the University of Michigan administered the survey. The survey focuses on LMI households' alternative and mainstream financial services use, along with their demographics, socio-economic characteristics, financial service usage patterns, and full balance sheet information. The final survey was programmed for computer-assisted, in-person interviewing. The final survey instrument is, on average, 76 minutes in length.

The sample members were selected based on a stratified random sample of the Detroit metropolitan area (Wayne, Oakland, and Macomb counties). We drew households from census tracts with median incomes that are 0-60 percent ("low"), 61-80 percent ("moderate"), and 81-120 percent ("middle") of the Detroit area's median household income of $49,057. We over-sampled low- and moderate-income strata and under-sampled the middle one. Hence, households are more likely to be drawn from the low- and moderate-income strata. Stratum definitions do not, however, restrict the income levels of the households to fall within these ranges.[7] Once we selected a household, the SRC randomly selected an adult to interview from that household (Kish 1949). Our dataset thus generalizes to both the adult individuals and households living in census tracts with median incomes less than 120% of the Detroit area's median, and is therefore not intended to be representative of the overall U.S. population.[8]

The dataset consists of individuals who completed the interview between July 2005 and March 2006. We interviewed 1,003 households and attained a 65% response rate. Upon completion of the data collection, SRC constructed sampling weights that are inversely proportional to the probability of selection.[9] All estimates reported in this paper are weighted, and all standard errors, where provided, are "clustered" at the segment level to account for the intra-segment correlation across individuals.

[7] With sampling weights, our sample represents the population of Detroit metropolitan area residents living in low-, moderate-, and middle-income census tracts.
[8] Additional details about the development of the survey instrument are available from the authors upon request.
[9] Details on the construction of sampling weights are available from the authors upon request.

The sub-sample studied in this paper consists of 938 respondents from the "low"- and "moderate"-income strata. As seen in the top half of Table (1), many households in our sample belong to socially disadvantaged groups. Sixty-nine percent self-identify as black or African-American, and 30% have less education than a high school degree. Over two-thirds of the sample is female, which reflects that single female-headed households are more common than single-male headed households in the LMI neighborhoods of the Detroit metropolitan area.

Table (1) compares the DAHFS sample to the U.S. Census's characteristics of the households from the "low"- and "moderate"-income census tracts in the Detroit metropolitan area. Broadly speaking, the demographics of the DAHFS sample matches the Census data of low- and moderate-income tracts quite well.[10] For sex, education, and marital status distributions, the DAHFS sample differs somewhat from the Census data but in ways that are consistent with the sampling design, which is sensitive to the greater presence of single female-headed households.

IV. Results

A. Accounts and Transaction Services

The bottom half of Table (1) describes the economic activity of the sample. LMI households in the Detroit metropolitan area face low employment rates and high rates of poverty. Fifty-four percent of respondents are employed at the time of the survey interview and the median household income in 2004 was $20,000. Around one-third of the sample have incomes that are below the federal poverty line.

Twenty-seven percent of the sample does not have either a checking or savings account. Notably, unbanked respondents are less economically active: they are less likely to be employed than the banked (42% v. 59%), have lower median household income ($10,000

[10] Although immigrant households are a disproportionate share of LMI households and disproportionately likely to be unbanked (see Osili and Paulson 2009, e.g.), the Detroit metropolitan area, and therefore the DAHFS sample, do not have enough immigrants to make meaningful comparisons between immigrants and the native-born.

v. $25,000), and are more likely to live in poverty (51% v. 26%). Table (7) illustrates how the economically active are more likely to have bank accounts. Using a linear probability model, the regression results in Table (2) present relationships between bank account ownership and demographic characteristics. Those who are employed at the time of the survey interview are 12 percentage points more likely than the unemployed or those not in the labor force to have a bank account. In addition, those with higher incomes are more likely to be banked, although conditional on annual income, living below the poverty line is not correlated with bank account ownership.

Respondents who report they participate "a lot" or "some" in their households' financial decision-making are substantially more likely to have a bank account, suggesting that reported financial activity is correlated with reports of actual behavior. To proxy for households' opportunity costs of time, we include indicator variable for whether the household usually shops around "a lot" or "a little" for financial services (the omitted category is "some"). Those that shop around "a little," which may indicate a higher opportunity cost of time, are slightly less likely to have a bank account than those who shop around "a lot" or "some."

Notably, even when providing a full set of controls for income, education, and employment status in Column (3), African-American respondents are twelve percentage points less likely to have a bank account than their non-black counterparts in the survey. In fact, including the additional covariates has no impact on the estimated relationship between race and bank account ownership. This striking racial difference persists even in the presence of better measures of financial activity and financial management than those previously available.

Despite relatively low levels of economic activity, LMI households regularly use financial services, as seen in Tables (2) and (3). Table (2) describes the usage patterns for transactional services among all, banked, and unbanked respondents. Striking in this table is that the use of mainstream transactional services is not large and AFS use is as nearly widespread as mainstream use ("All" column). Furthermore, having a bank

account does not preclude the use of AFS, while not having a bank account does not preclude using banks (for example, to cash checks).

While 70% of Americans use direct deposit nationally (Federal Reserve Board 2004), only 44% of LMI households in our study receive their income through direct deposit. Other common methods include checks (54%), cash (21%), and Bridge cards (22%), which is Michigan's electronic benefit transfer (EBT) card for the disbursement of welfare and food stamp benefits. On average, 41% of respondents cash 2.6 checks per month, with banks being the dominant institution cashing checks, followed by grocery/liquor stores and check cashers. Money orders (52%) and personal checks (44%) are the most common methods of bill payment. More generally, 68% use money orders for both bills and other purposes. Finally, nearly one-quarter of the sample transfer money within the United States through wire transfer outlets, such as Western Union or Moneygram.

Banked and unbanked respondents differ in their use of transactional services: generally speaking, the unbanked are less likely to use mainstream services and more likely to use AFS. The unbanked are more likely to receive their income through checks (64% v. 51%) or cash (30% v. 17%); they are also more likely to receive public assistance on the Bridge card (41% v. 14%), reflecting their relatively lower levels of self-sufficiency. Although the unbanked are more likely to cash checks, on average, those who cash checks convert about the same number of checks per month as the banked.[11] Although banks are the modal institution cashing unbanked respondents' checks, the unbanked are less likely to frequent banks (83% v. 96%) and more likely to use check cashers (31% v. 16%) and grocery/liquor stores (55% v. 21%) to cash checks. The unbanked also are more likely to rely on friends or family to cash their checks on their behalf than are the banked (15% v. 5%). The unbanked are more likely than the banked to use money orders to pay bills or for other purposes. Interestingly, the banked and unbanked are equally

[11] Though the point estimate for the average number of checks cashed is lower than for the banked, this difference is not statistically significant.

likely to use domestic wire transfers, suggesting that the use of these services may depend on the bank account status of the receiving party rather than the sending party.

B. Short-term Credit

LMI respondents' use of credit products largely mirrors their use of transactional services: mainstream and AFS products are about equally used. Table (3) presents the usage patterns for credit products among all, banked, and unbanked respondents. Refund anticipation loans (RALs) are the most common form of short-term borrowing (28%), followed by taking an overdraft from an account (20%). Pawn shops and taking credit card cash advances are other commonly used borrowing methods (11% and 8%, respectively). Few respondents take out payday loans (3%). Because a bank account and proof of employment are required, most DAHFS respondents may be too disadvantaged to qualify for such loans.[12] Overall, half of LMI households do not use any short-term credit products.

Banked and unbanked respondents use short-term credit products to differing degrees: broadly, the unbanked are more likely to use products from the AFS sector and less likely to use mainstream products. However, because banked respondents also use AFS, the usage patterns in Table (3) suggest that merely having a bank account does not translate into exclusive participation in the financial mainstream. Usage of RALs and pawn shops is significantly higher among the unbanked (37% v. 24% and 21% and 7%, respectively) while bank overdrafts and credit card cash advances are used less by the currently unbanked (11% v. 24% and 2% and 10%, respectively). Notably, however, the unbanked are less likely to have access to a credit card (12% v. 53%), and this lack of access may contribute to their use of other types of credit.

Across all products in the mainstream and alternative sectors, however, banked and unbanked respondents borrow at the same rate. This finding is somewhat striking in that the unbanked are not as economically active as the banked. Lack of employment

[12] Consistent with this finding, Elliehausen (2006) and Fellowes and Mabanta (2008) also note that generally speaking, payday customers earn more income than pawnshop borrowers.

corresponds to lower usage of transactional services but not to lower usage of short-term credit products. Also, in the DAHFS sample, the unbanked are more likely to experience hardships such as food insufficiency and eviction (not shown), and may borrow to cope with these hardships (or may be unable to economically cope other than through borrowing).

In addition to these usage patterns, we estimate annual outlays on transactional and credit services in Table (4) for all, banked, and unbanked respondents. Appendix Table (A1) categorizes the financial services that we include in our measures of outlays. These outlays represent the fees that *households* incur annually for the financial services they consume. The DAHFS study measures the fees that households report they face in their most recent transaction or borrowing. We annualize these fees and assume that the cross-sectional variation in fees roughly mirrors the time (month-to-month) variation so that taking the cross-sectional average over the sample yields a good approximation of what we report if we could have measured spending on financial services every month. Fees that households incur from the mainstream sector include annual bank account fees, check-writing and cashing fees, NSF fees, bank overdraft charges, annual credit card fees, and cash advance fees. AFS fees include those from using money orders, check cashers, domestic remittances, payday loans, refund anticipation loans, pawnshops, and title loans.

As many researchers and policymakers have noted, LMI households face a vast array of high-fee services in both the mainstream and alternative sectors (Caskey 1994, Barr 2004, Fellowes and Mabanta 2008). In addition, these fees are often complicated and confusing. Posted fees of financial services, however, do not fully depict how much households spend on financial services; the quantity of services consumed also matters. Our estimates of annual outlays incorporate both the respondents' reporting of incurred fees of financial services and the quantity of services consumed.

Overall, as seen in Table (4), median annual outlays on transactions and short-term credit are $179 and are low. Table (4) also contextualizes the outlays as a percent of annual

income *for households at the 50th percentile of the outlay distribution*, which is estimated at around 1%. Table (4) also reports the share of outlays spent in the AFS sector. We hold fixed the "median household" when contextualizing the outlays because, for example, households at the 50th percentile of the outlay distribution may be (and are) different from the households at the median of the annual income distribution. Because computing the median is not a linear operator, the figures in the "All" column of Table (4) are generally not weighted averages of equivalent the "Banked" and "Unbanked" estimates.

The median outlay for transactions is $98, or under 1% of the annual income of the households at the 50th percentile of the transactional outlay distribution.[13] Households at the median allocate roughly half of this amount to services obtained in the AFS sector. In addition, the share of outlays going to the AFS sector is roughly constant across the distribution of transactional outlays (not shown). As the distribution of transactional outlays is very right-skewed, 10% of households spend more than $307 annually on transactional services (or 1.5% of the annual income of these households). Put somewhat differently, 35% of all households' annual transactional outlays are concentrated among the top 10% of households.

Table (4) also shows that the median outlay for credit is $41, which is a small share of annual income among the households at the 50th percentile of the credit outlay distribution. Less than half of this amount is for AFS products, and this share is roughly constant across the credit outlay distribution (not shown). Similar to the distribution for transactional outlays, the credit distribution is also very right-skewed: 10% of households spend more than $398 to obtain credit (or between 3% and 15% of annual income).[14] Fifty seven percent of all households' annual credit outlays are concentrated among the top 10% of households.

[13] The appendix details the methods used to estimate these fees.
[14] The average among these households is around 5%.

Banked and unbanked differences in annual outlays are presented in Table (4). Interestingly, median outlays on transactional and credit services for the banked respondents are higher than for the unbanked ($97 v. $85 and $58 v. $0, respectively).[15] This is also true at the 90th percentile of the two distributions of outlays. In spite of having access to (arguably) lower-fee financial services, the banked spend more than the unbanked. Looking first at transactional services, despite spending more, the banked spend a slightly smaller share of their income than the unbanked (0.5% v. 1.0%), although overall, the levels of spending are quite low. As a share of income, the median banked household spends more on credit services, and this is entirely a byproduct of having access to more mainstream forms of credit. That the banked spend for financial services and credit contrasts with a model suggesting that bank account ownership reduces financial services outlays.

Not surprisingly, the banked and unbanked allocate their outlays differently between the mainstream and alternative sectors. For the median banked household, 45% of their transactional outlays go toward AFS (and this share is relatively constant across the transactional outlays distribution). In contrast, 100% of the median unbanked household's transactional outlays are spent in the AFS sector (largely reflecting the fact that the unbanked, by definition, are not a part of the financial mainstream). Higher up in the fee distribution, this fraction is lower but still high at around 85-90%. The median banked household allocates 44% of its annual credit outlays to AFS products while the median unbanked household, by not borrowing, does not allocate any of its credit outlays to the AFS sector.

The finding that the banked spend more than the unbanked is further supported by Table (8), which reports coefficients from Ordinary Least Squares (OLS) and Least Absolute Deviations (LAD or median) regressions of annual outlays on a dummy for bank account ownership and a vector of characteristics. In addition to the OLS coefficients, we report results from fitting the conditional median because the distribution of outlays is very

[15] Even when looking at the fees per transaction, the banked spend more than the unbanked because of their greater use of transactions requiring a non-trivial, one-time payment (e.g. bank account annual fees, tax preparation fees). These results are available upon request.

right-skewed and applying OLS may thus over-state the banked/unbanked differences in outlays. The control variables in Columns (1) and (2) include age, an indicator variable equal to one if the respondent is black, a female dummy, a married dummy, and a citizenship dummy. Not surprisingly, the coefficient on "Has Bank Account" is about as half as large ($76 v. $148) when estimating the conditional median function rather than the conditional mean.[16] The inclusion of additional covariates (education, employment status, income, and financial participation) reduces the OLS and LAD coefficients on banked status to $98 and $32, respectively, in Columns (5) and (6). These coefficients remain significantly higher than for those individuals without bank accounts with the inclusion of additional covariates.

The robustness of greater spending among the banked on financial services to factors such as income and financial participation further corroborates that posted fees alone do not indicate the burden of financial services for LMI households. In addition, bank accounts may not necessarily mitigate the cost of financial services, particularly if the quantity of services consumed increases proportionally more than the costs of financial services upon becoming banked. On a final note, an important omitted variable in Table (8) is a household's demand for transactional financial services and short-term credit, which is likely to differ among banked and unbanked households. This omission, along with many other unobserved differences between the banked and unbanked, as well as issues with specifying the conditional expectations or median functions, may account for the higher outlays among the banked.

To test the robustness of the finding that the banked spend more on both transactional services and short-term credit, Tables (9) and (10) repeat the analysis in Table (8) for these two types of outlays separately. Looking at both tables, the most saturated specifications in Columns (5) and (6) suggest that outlays are higher among the banked only for short-term credit. Controlling for education, income, employment status,

[16] With quantile regression, estimated coefficients indicate how the conditional median, for example, changes with a marginal change in the independent variable. However, although discrete changes in the independent variable may correspond to a shift into a different quantile, the 50th percentile of the distribution of outlays has both banked and unbanked respondents.

financial participation, and economic activity, broadly speaking, attenuates the coefficient on "Has Bank Account" for both the OLS and LAD specifications in Table (9) (annual transactional outlays). However, for short-term credit outlays, the banked/unbanked OLS and LAD differences remain statistically and economically significant at $83 and $16, respectively. It may be the case that bank account ownership increases access to, and therefore spending on, short-term credit. Also, the contrast between the results for transactional outlays and short-term credit lends further support to the unobserved selection issue, namely that households with bank accounts may have a higher demand for borrowing.

Although annual outlays are low for the majority of LMI households, Table (5) shows that the non-pecuniary costs of financial services are non-trivial. For 30% of respondents, a check casher or grocery/liquor store, which typically do not provide low-fee services, is the most convenient location for financial services. In other words, 30% may incur the "cost of inconvenience" to physically access a bank or ATM. The unbanked are more likely to report that a check casher or grocery/liquor store is the most convenient location (62% v. 17.3%), which is consistent with their decision to not have a bank account. Among the renters, 55% have landlords that accept checks, which, by restricting their payment options, (weakly) adds to the cost of paying their rent. A smaller fraction of the unbanked has landlords that accept checks relative to those with bank accounts (38% v. 65%). Table (5) also shows that 37% of respondents (33% of banked, 45% of unbanked) use bill payment centers, which are typically associated with long lines, to pay their bills.[17] Estimates of annual outlays exclude these non-pecuniary costs even though they may be non-trivial.

The estimates in Table (6) suggest that having a bank account is not a permanent condition.[18] Seventy percent of unbanked respondents have previously had a bank account while 54% of the banked have closed an account (other than when they have moved). Common reasons for closing an account include having bounced checks or

[17] Fewer respondents (23%) use automated payment methods to pay their bills.
[18] The wording of the questions related to prior bank account experiences in the survey instrument does not enable us to construct transition matrixes.

committed fraud (13%), finding the minimum balance requirement too high (12%), and preferring a different institution (12%). These results reiterate the view that having a bank account is not necessarily a means of permanently entering the financial mainstream. In addition, both banked and unbanked respondents are equally likely to have grown up in households where the adults had bank accounts (73% v. 71%), suggesting that one's attachment to the financial mainstream is unlikely to be driven by purely inter-generational factors.

V. Discussion and Policy Implications

Overall, we find that while LMI households are active users of mainstream and alternative financial services, annual outlays on these services are relatively low at around 1% of annual income. This estimate is lower than those implied by previous work using the posted fees of financial services alone, suggesting that LMI households do not always choose the most expensive financial services option. This evidence is also consistent with LMI households substituting among an array of financial services from the mainstream and alternative financial services sector. Results from the DAHFS study also show that having a bank account does not preclude the use of AFS and that being unbanked does not exclude households from using mainstream financial services.

Based on these results, we argue that bank account ownership may not alleviate the economic burden of financial services for LMI households unless those accounts are significantly redesigned. Because the use of AFS is prevalent among LMI households, even those with bank accounts, the products the mainstream sector provides are currently either insufficient or costly (for these households), so as to perhaps discourage use on the extensive and intensive margins. Hence regulating the AFS sector is likely to have consequences in the mainstream sector (and vice versa), as households optimize among the choices they face.

We find that, overall, annual outlays as a percent of income are low for most LMI households with and without bank accounts. However, in spite of measuring a modest

annual pecuniary burden of financial services, we believe that this measure is not a sufficient statistic for the economic burden of the financial services system for LMI households. Notably, these households may curtail their use of financial services in response to the high posted fees they face. One reason why outlays may be low is that LMI households, by definition, are not as economically active as their higher-income counterparts. Policies to lower fees for financial services may thus encourage the use of financial services, and it remains unclear whether lowering prices would also lead to reduced outlays. Furthermore, if households shop around in order to avoid the most expensive option, annual outlays do not include these search costs.

There are other reasons to believe that annual outlays on financial services do not provide an adequate measure of LMI households' well-being. Annual outlays alone do not capture whether households have been victims of predatory practices or poor disclosure practices regarding the fees they face. Our estimates of annual outlays do not capture the costs that LMI households incur over a lifetime as they open and close bank accounts. Many LMI households face limited access to credit, which both limits the fees they can incur and their ability to smooth consumption in the event of negative income shocks. Moreover, many LMI households may benefit from a better mechanism through which to accumulate savings, both to buffer temporary shocks and for longer-term goals.

From the perspective of supply, the administrative costs of collecting small-value deposits are high in relation to banks' potential earnings on the relatively small amounts saved, unless the bank can charge high fees; with sufficiently high fees, however, it is not clear that utilizing a bank account makes economic sense for many LMI households. Indeed, the current structure of bank accounts is likely one of the primary reasons why LMI households do not have or use them. With respect to transaction accounts, high minimum balance requirements, high fees for overdraft protection or bounced checks, and delays in check clearance dissuade LMI households from opening or retaining bank accounts. Moreover, banks use the private ChexSystems to screen out households who have had difficulty with accounts in the past. These supply-side considerations suggest that a goal of policy ought to be to increase the scale and offset costs for the private

sector, in light of redistributive concerns and any economies of scale associated with expanded bank account ownership.

In this paper, we can only speculate that high cost financial services increase the economic challenges faced by LMI households. Further research is needed to rigorously assess the how the financial services system compounds the difficulties these households face as they cope with fluctuations in income that occur because of job changes, instability in hours worked, medical illnesses or emergencies, changes in family composition, or other factors that can unexpectedly change income and needs. At low income levels, small income fluctuations may create serious problems for financial management.

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TABLE I: Characteristics of Sample Members by Banked Status
(Standard Errors in Parentheses)

	Census	All	Banked	Unbanked
Black	70.5%	69.1%	65.3%	78.3%
White	21.8	20.4	23.1	13.6
Arab	NA	1.9	2.0	1.5
Other	7.7	8.6	9.5	6.5
Female	52.3%	66.3% (1.6)	66.5% (2.3)	65.6% (3.4)
Less than HS Diploma	35.8%	29.6%	26.6%	37.1%
HS Diploma or GED	31.0	23.0	19.1	32.7
Greater than HS Diploma	33.2	47.4	54.3	30.2
Employed at Interview	44.5%[19]	54.3%	59.3%	41.9%
Unemployed at Interview	8.2	5.8	3.9	10.7
Not in Labor Force at Intv.	47.0	39.9	36.8	47.5
Age	NA	43.5 (1.0)	44.9 (1.1)	40.0 (1.2)
Born in the US	92.7%	92.1% (1.9)	90.5% (2.4)	95.9 (1.4)
Single/Never Married	44.1%	45.6%	37.7%	65.1%
Married and Living with Spouse	24.5	19.7	24.0	9.1
Living with Partner		4.1	3.7	5.0
Separated/Widowed/Divorced	31.3	30.6	34.6	20.9
% HHs with no Children	NA	67.2% (2.2)	70.6% (2.5)	58.9% (4.3)
Total HH Monthly Income	NA	2,248 (334)	2,703 (439)	1,156 (399)
Annual HH Income in 2004	NA	28,435 (2,118)	33,224 (2,573)	17,078 (1,467)
Median HH Income in 2004	24,146	20,000	25,000	10,000
% Below the Poverty Line	31.5%	33.2% (2.4)	26.2% (2.5)	50.5% (3.9)
Sample Size	626[20]	938	668	270

Source: Detroit Area Household Financial Services study.
Notes: Not in labor force includes respondents who said they were retired, homemakers, students, did not have the required documentation, or chose not to work. Unemployed is the percentage of people currently unemployed who are in the labor market. Poverty guidelines come from the Department of Health and Human Services, obtained from http://aspe.hhs.gov/poverty/04poverty.shtml.

[19] Is based on civilian employment rate.
[20] Sample in "Census" column consists of census tracts in the Detroit metropolitan area (Wayne, Oakland, and Macomb counties) with median income under $36,073 (80% of the Detroit metropolitan area's median $49,051).

TABLE II: Use of Transactional Financial Services in Month Prior to Survey Interview by Banked Status
(Standard Errors in Parentheses)

	All	Banked	Unbanked
How Receive Income			
Direct Deposit[21]	44.7%	62.9%	0%
Check	54.3	50.5	63.6
Cash	20.7	17.1	29.5
Bridge Card	21.6	14.0	40.5
Receives income at Check Casher	5.0	5.9	2.7
Cashes checks	41.2%	50.0%	19.5%
# of checks cashed (conditional)[22]	2.6	2.8	2.1
Converting Income:			
Cashed checks[23]:			
At a bank	93.4%	96.1%	83.1%
At a check casher	21.4	16.3	30.7
At Work Place	5.2	5.1	5.5
Sign over to family/friend	8.5	4.6	15.4
At Grocery/Liquor Store	33.3	20.7	55.7
Pays bills with:			
Personal checks	44.2%	62.1%	0%
Automated payment	23.0	32.3	0
Money order	52.1	47.6	63.2
Uses money orders	68%	64%	77%
Uses non-bank wire transfers	23%	22%	26%
Sample Size	938	668	270

Source: Detroit Area Household Financial Services study.

[21] Only asked of banked respondents.
[22] Conditional on receiving income by check.
[23] Conditional on having cashed at least once in the month prior to interview: n(all)=404; n(banked)=265; n(unbanked)=139.

Table III: Use of Credit Products in Three Years Prior to Survey Interview by Banked Status

	All	Banked	Unbanked
Short-term Borrowing:			
RAL	27.7%	23.7%	37.1%
Pawn shop	11.2	7.2	21.1
Overdraft from account	20.3	24.1	10.9
Cash Advance from CC	7.9	10.1	2.3
Pension/retirement	6.9	8.4	3.1
Rent-to-own	5.3	5.4	5.2
Payday loan	3.4	3.9	1.9
Title loan	1.1	1.3	0.7
Any short-term loan	***49.3***	***50.7***	***48.8***
Has credit card	41%	53%	12%
Sample Size	938	668	270

Source: Detroit Area Household Financial Services study.

Table IV: Annual Outlays on Transactional and Credit Services by Banked Status

	All	Banked	Unbanked
Median Transactional Outlays	$98	$105	$71
(% of Annual Income)	(0.4%)	(0.8%)	(1.5%)
[% of Outlays on AFS]	[51%]	[47%]	[100%]
Transactional Outlays – 90th Percentile	$307	$320	$287
Median Credit Outlays	$41	$57	$0
(% of Annual Income)	(0.1%)	(0.3%)	(0)
[% of Outlays on AFS]	[39%]	[44%]	[0]
Credit Outlays – 90th Percentile	$398	$441	$202
Median (Total) Annual Outlays	$179	$203	$115
(% of Annual Income)	(1.0%)	(1.3%)	(1.0%)
[% of Outlays on AFS]	[50%]	[30%]	[86%]
Annual Outlays – 90th Percentile	$614	$683	$377
Sample Size	938	668	270

Source: Detroit Area Household Financial Services study.

TABLE V: Non-pecuniary Costs of Financial Services
(Standard Errors in Parentheses)

	All	Banked	Unbanked
Most Convenient Location for Financial Service:			
Bank office	44.0%	54.8%	17.2%
ATM	25.8	27.9	20.7
Check casher	4.8	1.7	12.5
Grocery/liquor store	25.4	15.6	49.6
Landlord accepts checks[24]	54.6%	64.9%	38.4%
Uses bill payment center to pay bills	36.6%	33.2%	45.2%
Sample Size	938	668	270

Source: Detroit Area Household Financial Services study.

[24] Asked only of renters.

TABLE VI: Transitions into and out of Banking
(Standard Errors in Parentheses)

	All	Banked	Unbanked
Previously had bank account	91.5%	100%	70.3%
Have closed an account[25]	59.0%	54.4%	70.3%
Closed account because:			
Bounced checks/fraud	13.1%	8.5%	29.2%
Preferred check casher/other bank	11.7	14.9	0.5
Minimum balance high	11.9	9.5	20.1
Other	2.0	2.1	1.9
% who grew up with banked adults in home	72.2%	72.9%	70.7%
Sample Size	938	668	270

Source: Detroit Area Household Financial Services study.

[25] Other than when they have moved.

Table VII. Estimated Relationship Between Bank Account Ownership and Socio-Economic Outcomes Using Linear Probability Model (Standard Errors in Parentheses)

	Dependent Variable Is Individual Bank Account Ownership		
	(1)	(2)	(3)
Age	0.004***	0.005***	0.005***
	(0.001)	(0.001)	(0.001)
Black	-0.100***	-0.111***	-0.121***
	(0.037)	(0.035)	(0.036)
Female	0.037	0.059	0.045
	(0.044)	(0.043)	(0.043)
Married	0.136***	0.079**	0.076**
	(0.036)	(0.035)	(0.037)
Citizen	-0.062	0.035	0.041
	(0.132)	(0.119)	(0.115)
Education			
<HS		-0.115***	-0.103***
		(0.031)	(0.032)
HS/GED		-0.174***	-0.164***
		(0.048)	(0.049)
Income/$1,000		0.001**	0.001**
		(0.000)	(0.000)
Poverty		-0.090	-0.080
		(0.055)	(0.055)
Employment Status			
Employed		0.115***	0.119***
		(0.058)	(0.055)
Unemployed		-0.018	-0.002
		(0.051)	(0.049)
Financial Participation			
A lot			0.225***
			(0.060)
Some			0.169**
			(0.071)
Shopping Around			
A lot			-0.010
			(0.046)
A little			-0.059*
			(0.033)
Constant	0.615***	0.480***	0.298*
	(0.151)	(0.161)	(0.159)
R-Squared	0.052	0.153	0.169
Sample Size	930	925	921

Source. Detroit Area Household Financial Services study.
Note. All estimates are weighted. Clustered standard errors are reported to account for stratified sampling design. Reference category consists of individuals who are not black, male, not married, not a U.S. citizen, have some college or more, are not in poverty, are out of the labor force, participate in financial decision-making "a little", and shop around for financial services "some."
* Denotes statistical significance at the 10% level, two-tailed test.
** Denotes statistical significance at the 5% level, two-tailed test.
*** Denotes statistical significance at the 1% level, two-tailed test.

Table VIII. Regression-Adjusted Differences in Annual Outlays for Banked and Unbanked Respondents (Standard Errors in Parentheses)

	Dependent Variable Is Total Annual Outlays					
	(1) OLS	(2) LAD	(3) OLS	(4) LAD	(5) OLS	(6) LAD
Has Bank Account	148***	76.3***	105***	33.3**	98.3***	31.5**
	(25.8)	(17.9)	(24.1)	(15.0)	(23.9)	(14.9)
Age	-3.13***	-3.04***	-2.56***	-1.26**	-2.77***	-1.27**
	(0.504)	(0.496)	(.659)	(0.579)	(0.619)	(0.596)
Black	87.0***	44.1**	79.3**	26.7	74.2***	15.9
	(20.9)	(19.4)	(21.2)	(16.9)	(19.8)	(18.4)
Female	-16.4	18.1	-1.85	36.4**	-5.08	23.5
	(25.3)	(16.0)	(25.7)	(15.9)	(25.6)	(17.6)
Married	71.5***	68.4***	40.1	37.2	43.1	28.2
	(23.8)	(22.2)	(27.6)	(23.8)	(28.1)	(23.5)
Citizen	-30.9	58.7	-11.5	91.4	-18.3	78.9
	(158)	(108)	(180)	(135)	(182)	(139)
Education						
<HS			-55.8**	-24.3	-54.4*	-19.2
			(27.8)	(17.0)	(29.0)	(17.1)
HS/GED			-34.1	-21.1**	-33.1	-22.3
			(27.9)	(17.7)	(26.7)	(17.9)
Income/$1,000			1.55**	2.18***	1.63**	2.30***
			(0.590)	(0.678)	(0.606)	(0.703)
Poverty			-6.31	5.05	-4.05	18.4
			(30.9)	(24.6)	(30.5)	(24.6)
Employment Status						
Employed			18.9	78.6***	11.5	80.7***
			(32.2)	(24.3)	(32.8)	(25.3)
Unemployed			-21.2	-7.86	-22.3	-11.3
			(40.5)	(19.8)	(41.4)	(20.5)
Financial Participation						
A lot					101***	64.1***
					(28.5)	(23.1)
Some					55.2	47.2
					(34.5)	(31.7)
Shopping Around						
A lot					58.2*	9.18
					(33.2)	(24.5)
A little					35.2	-9.76
					(24.2)	(14.4)
Constant	270	119	238	-10.2	156	-42.7
	(166)	(199)	(183)	(135)	(187)	(142)
R-Squared	0.062	0.053	0.087	0.102	0.096	0.104
Sample Size	930	930	925	925	921	921

Source. Detroit Area Household Financial Services study.

Note. All estimates are weighted. For OLS regressions, clustered standard errors are reported to account for the stratified sampling design. For LAD regressions, bootstrap standard errors based on 1,000 replications are reported to account for the stratified sampling design. Pseudo-R^2 reported for LAD regressions. Reference category consists of individuals who are not black, male, not married, not a U.S. citizen, have some college or more, are not in poverty, are out of the labor force, participate in financial decision-making "a little", and shop around for financial services "some."

* Denotes statistical significance at the 10% level, two-tailed test.

** Denotes statistical significance at the 5% level, two-tailed test.

*** Denotes statistical significance at the 1% level, two-tailed test.

Table IX. Regression-Adjusted Differences in Annual Transactional Outlays for Banked and Unbanked Respondents (Standard Errors in Parentheses)

	Dependent Variable Is Total Annual Transactional Outlays					
	(1) OLS	(2) LAD	(3) OLS	(4) LAD	(5) OLS	(6) LAD
Has Bank Account	45.7***	34.2***	21.1*	2.63	15.8	0.689
	(13.5)	(12.3)	(12.3)	(8.74)	(12.5)	(9.57)
Age	-2.33***	-1.82***	-2.02***	-1.25***	-2.02***	-1.43***
	(0.306)	(0.293)	(.408)	(0.302)	(0.395)	(0.326)
Black	34.5***	29.9***	29.5**	26.6***	26.6**	24.3**
	(12.1)	(10.6)	(12.0)	(9.57)	(11.7)	(9.72)
Female	2.65	-3.64	13.9	17.2*	10.0	11.2
	(12.0)	(11.2)	(11.6)	(9.17)	(11.5)	(9.27)
Married	20.5*	27.9**	-2.55	9.67	-3.44	6.56
	(12.2)	(13.7)	(13.4)	(11.4)	(13.4)	(10.9)
Citizen	-6.99	1.74	3.14	22.6	1.68	9.48
	(56.3)	(84.7)	(65.5)	(104)	(70.7)	(106)
Education						
<HS			-10.6	-11.6	-5.90	-3.97
			(15.1)	(10.4)	(15.8)	(11.6)
HS/GED			-5.9	-8.14	-2.22	-8.56
			(15.9)	(10.3)	(15.6)	(12.2)
Income/$1,000			1.07***	0.709**	1.07***	0.715*
			(0.316)	(0.358)	(0.318)	(0.410)
Poverty			-11.8	-20.0	-10.7	-22.3
			(14.6)	(12.4)	(14.7)	(14.2)
Employment Status						
Employed			17.2	33.5***	15.9	25.1*
			(20.0)	(13.0)	(20.9)	(14.0)
Unemployed			-18.1	-18.8	-17.2	-28.4**
			(20.8)	(12.5)	(21.6)	(13.3)
Financial Participation						
A lot					52.9***	29.8**
					(16.3)	(13.9)
Some					31.5	14.8
					(22.8)	(16.6)
Shopping Around						
A lot					14.1	-2.87
					(19.4)	(15.1)
A little					-16.0	-12.5
					(10.6)	(9.63)
Constant	200***	143*	170***	91.4	134*	107
	(52.9)	(81.9)	(63.2)	(102)	(70.1)	(107)
R-Squared	0.057	0.042	0.098	0.091	0.136	0.095
Sample Size	930	930	925	925	921	921

Source. Detroit Area Household Financial Services study.

Note. All estimates are weighted. For OLS regressions, clustered standard errors are reported to account for the stratified sampling design. For LAD regressions, bootstrap standard errors based on 1,000 replications are reported to account for the stratified sampling design. Pseudo-R^2 reported for LAD regressions. Reference category consists of individuals who are not black, male, not married, not a U.S. citizen, have some college or more, are not in poverty, are out of the labor force, participate in financial decision-making "a little", and shop around for financial services "some."

* Denotes statistical significance at the 10% level, two-tailed test.

** Denotes statistical significance at the 5% level, two-tailed test.

*** Denotes statistical significance at the 1% level, two-tailed test.

Table X. Regression-Adjusted Differences in Annual Short-Term Credit Outlays for Banked and Unbanked Respondents (Standard Errors in Parentheses)

	Dependent Variable Is Total Annual Short-Term Credit Outlays					
	(1) OLS	(2) LAD	(3) OLS	(4) LAD	(5) OLS	(6) LAD
Has Bank Account	99.0***	37.5***	84.0***	18.6**	82.5***	15.7**
	(17.6)	(9.61)	(16.9)	(7.34)	(16.7)	(6.39)
Age	-0.797**	0.00	-0.543	0.082	-0.750*	0.005
	(0.371)	(0.047)	(0.463)	(0.107)	(0.417)	(0.115)
Black	52.5***	-0.00	49.8***	8.37	47.6***	8.31
	(15.9)	(7.90)	(16.1)	(6.48)	(15.3)	(6.52)
Female	-19.0	0.00	-15.7	5.81	-15.1	4.77
	(22.5)	(1.09)	(22.7)	(4.70)	(23.1)	(4.92)
Married	51.0**	17.7	42.6*	25.4**	46.5**	28.5***
	(20.1)	(14.1)	(22.6)	(11.0)	(23.1)	(10.1)
Citizen	-23.9	20.7	-14.6	25.1	-20.0	28.7
	(121)	(28.1)	(135)	(19.3)	(133)	(18.6)
Education						
<HS			-45.3*	-13.4*	-48.5**	-13.3**
			(23.3)	(6.90)	(23.7)	(5.92)
HS/GED			-28.2	-10.6	-30.9	-11.7*
			(24.5)	(6.83)	(24.1)	(6.1)
Income/$1,000			0.482*	0.307	0.560**	0.359
			(0.493)	(0.283)	(0.506)	(0.295)
Poverty			5.51	21.23	6.69	3.15
			(28.5)	(7.04)	(27.8)	(7.47)
Employment Status						
Employed			1.69	11.1	-4.33	13.7**
			(26.2)	(6.26)	(26.0)	(6.21)
Unemployed			-3.11	2.62	-5.08	2.64
			(31.4)	(4.27)	(31.6)	(4.60)
Financial Participation						
A lot					48.2**	-1.49
					(19.8)	(7.41)
Some					23.6	-11.8
					(21.6)	(7.38)
Shopping Around						
A lot					44.1*	2.85
					(24.5)	(6.41)
A little					51.2**	3.41
					(21.3)	(4.95)
Constant	70.3	-20.7	67.2	-36.8	21.8	-37.3*
	(131)	(27.8)	(143)	(20.0)	(140)	(20.2)
R-Squared	0.034	0.034	0.041	0.039	0.049	0.040
Sample Size	930	930	925	925	921	921

Source. Detroit Area Household Financial Services study.

Note. All estimates are weighted. For OLS regressions, clustered standard errors are reported to account for the stratified sampling design. For LAD regressions, bootstrap standard errors based on 1,000 replications are reported to account for the stratified sampling design. Pseudo-R^2 reported for LAD regressions. Reference category consists of individuals who are not black, male, not married, not a U.S. citizen, have some college or more, are not in poverty, are out of the labor force, participate in financial decision-making "a little", and shop around for financial services "some."

* Denotes statistical significance at the 10% level, two-tailed test.

** Denotes statistical significance at the 5% level, two-tailed test.

*** Denotes statistical significance at the 1% level, two-tailed test.

Appendix Table A1: Categorizing Financial Services into Transactions/Credit and Alternative/Mainstream

	Type			
Financial Service	Mainstream	Alternative	Transaction	Credit
Direct deposit	X		X	
Check writing	X		X	
ATM	X		X	
Bank account ownership	X		X	
Money orders		X	X	
Check cashing at bank	X		X	
Check cashing at non-bank		X	X	
Tax preparation services	X		X	
Bank wire transfers	X		X	
Non-bank wire transfers		X	X	
Bank overdrafts	X			X
Credit card cash advances	X			X
Credit card	X			X
Payday loans		X		X
Refund anticipation loans		X		X
Pawnshop loans		X		X
Title loans		X		X