Who Has a Bank Account? Exploring Changes Over Time, 1989–2001

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ABSTRACT: The decade of the 1990s was a time of substantial economic and public policy changes. We explore factors affecting bank account ownership, with a special emphasis on the effects that changes over time may have had in bringing low-to-moderate income families into the financial mainstream. Data are from the 1989, 1992, 1995, 1998, and 2001 Surveys of Consumer Finances. Results indicate that holding socioeconomic characteristics as well as households' need for an account, abilities to manage the account, access to accounts, and previous experiences constant, account ownership increased over time, with the biggest gains between 1995 and 1998. Increases over time were experienced across the spectrum of income, net worth, education, race, and age characteristics.

KEY WORDS: bank accounts; financial services; low-income; poverty; unbanked.

The financial marketplace of the early part of the 21st century bears little resemblance to that of 20, or even 10 years ago. Evolution in the banking and financial services industry has resulted in expanded product lines and distribution channels, while mergers and product portfolio management strategies have changed the institutional framework and pricing structures that consumers deal with. Develop-

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ments in the public policy arena have affected the environment of the financial marketplace. The changing policy landscape combined with economic growth in the decade of the 1990s raise the question of how these policies and the economic environment affected low-to-moderate income households in the financial services arena.

Once consumers have a basic transaction account, they can begin to acquire other credit, savings, investment, and insurance products to help them manage their money and build wealth, enabling economic self-sufficiency. In this paper, we focus on factors affecting account ownership, with a particular emphasis on looking at the effects that changes over time may have had in bringing low-to-moderate income (LMI) families into the financial mainstream. This is among the few studies to look at this topic longitudinally.

Policy makers are interested in the banking relationships of LMI households for several reasons. Banks target some of their lending and banking services to these households as part of their Community Reinvestment Act (CRA) responsibilities; it may be helpful to know more about other banking relationships as well. Policies such as the move to electronic benefits transfers (EBT) and US Treasury's implementation of the EFT'99 initiative drew attention to those households without direct deposit, including households without transaction accounts. The more we know about these households, the better both financial institutions and policy makers can target policies and educational programs.

Reforms in the welfare system include a new emphasis on asset building for LMI households (Beeferman, 2002). Exposure of LMI households to savings instruments such as Individual Development Accounts (IDAs) could help households plan for human capital investments and longer term needs (Beverly, McBride, & Schreiner, 2003; Sherraden, 2000). Opening an account provides the opportunity to establish a positive banking relationship and a good credit history, which in turn can help an individual to obtain credit to purchase a house and build wealth.

To the extent that LMI households use alternative financial sector (AFS) firms (check cashers, pawn brokers, rent-to-own) to conduct their financial transactions, and to the extent that these firms are more costly and offer fewer consumer protections than conventional mainstream financial sector (MFS) institutions, some households may benefit by conducting more of their financial business with MFS firms.

It is important to recognize that not all households want, or even need or should have, a transaction account. Some households have developed alternative ways to handle their financial transactions, be

it through friends and family (Rhine & Toussaint, 1999) or other service providers (Caskey, 1997b; Dunham, 2001; Stegman & Farris, 2001). Others believe they do not need the benefits of building a financial identity or accessing improved consumer protections offered by the MFS. Nonetheless, for the vast majority of US households, having a transaction account is an important means to the ends of managing their household finances, building wealth, and enabling economic self-sufficiency.

Previous Research

Who Are the Unbanked?

Income, net worth, employment status, education, age, region, race/ethnicity, gender, and marital status are predictors of account ownership; propensity to save may also be a factor (Hogarth & O'Donnell, 1997, 2000; US Department of the Treasury, 1997; Xiao, Malroutu, & Olson, 1997). Households with lower incomes, lower levels of net worth, who are not employed, have less education, are younger, live in the south, are minority, and are headed by single females are less likely to have bank accounts than their counterparts.

Reasons given for not having an account also shed light on factors associated with account ownership. Data from the 2001 Survey of Consumer Finances (SCF) indicate that the primary reason for not having a checking account was "do not write enough checks," cited by 28.6% of the respondents without accounts (Aizcorbe, Kennickell, & Moore, 2003), followed by "do not like dealing with banks" (22.6%), and "do not have enough money" (14.0%). The lack of money is a common theme in other surveys as well. In Caskey's 1996 survey of low-income households, the most common response to the question about reasons for not having a deposit account was "don't need [an] account because we have no savings" (Caskey, 1997a). In the US Department of the Treasury's 1996 survey, the primary reason for not having an account also was "don't have enough money" (1997).

Hogarth, Anguelov, and Lee (2003) found that income was not significantly associated with households saying that they did not have an account because of product design reasons (reasons related to minimum balance, services, or writing enough checks). However, low-income households were more likely to give product motivation reasons (don't need or want an account, don't have enough money, haven't gotten around to it) for not having an account.

Many LMI households, who receive means-tested benefits such as Temporary Assistance for Needy Families (TANF), Food Stamps, and Supplemental Security Income (SSI), believe that account ownership will affect their eligibility for benefits. Much of this misinformation stems from incomplete or inaccurate knowledge regarding the true asset limits for means-tested benefits, which may be as much as a barrier to account ownership and asset accumulation as the limits themselves. Marlowe, Godwin, and Maddux (1996) report that only 13% of welfare recipients surveyed correctly identified the $1000 asset limit of their state's welfare program; 84% thought the asset limit was $500 and 3% thought it was $2000. Caskey (1997b) found similar misunderstandings in an ethnographic study in Mississippi and California.

Barriers to Being Banked

One potential barrier to account ownership is the households' ability to manage their bank accounts. In fact, financial management requires a significant amount of cognitive processing. For example, balancing a checkbook requires basic arithmetic skills as well as record-keeping activities. The high correlation between cognitive ability and educational attainment has been well established (Capon & Davis, 1984; Carneiro & Heckman, 2003; Cawley, Conneely, Heckman, & Vytlacil, 1996), so that educational attainment often serves as a proxy for cognition.

Households without accounts may also overestimate the cost of owning an account, or conversely underestimate the cost of using the AFS. According to some estimates, consumers relying on check cashers pay from $68 to $500 per year to cash checks and pay bills, compared with $30 to $60 if they had used a bank where they had an account (Consumer Federation of America, 1997; Dunham, 2001; Green & Leichter, 1998; Organization for a New Equality, 1998). Small-scale surveys have found that consumers are aware of price differences and understand that the fees charged depend on the size of the transaction (Lewis, Swagler, & Burton, 1996). Others have shown that consumers simultaneously make the decision to be unbanked and use currency exchange or check cashing services (Dunham, 2001; Rhine, Toussaint, Hogarth, & Greene, 2001).

The other side of the cost argument, however, is that there are other fees in addition to monthly service fees. Fees for using foreign ATMs (an ATM not owned by the bank where the consumer has an account) averaged $1.14, and 69% of financial institutions charged such a fee in 2002 (Board of Governors of the Federal Reserve System, 2003). There

are also fees for overdrafts (checks written against insufficient funds but honored by the bank) and for non-sufficient funds (checks written against insufficient funds and returned, or bounced, by the bank); these averaged about $21 each in 2002. While these fees are avoidable, they can add substantially to the cost of an account in the MFS.

Some studies suggest that increasing bank fees and branch closings have discouraged low-income households from holding transaction accounts (Holland, 1994; Shields, 1996). Although data from the Federal Reserve confirm that there has been a reduction in the number of bank offices in low-income neighborhoods, other factors such as the degree to which areas are residential (as opposed to commercial) and the decline of the population in low-income neighborhoods may be confounding the measurement (Avery, Bostic, Calem, & Canner, 1997; Bostic & Canner, 2000).

The ever-increasing technological orientation of the MFS may also affect account ownership and use of MFS institutions by LMI households. Fontana (1997) suggested anecdotally that the lack of knowledge and education on the part of LMI individuals regarding ATM, phone, and personal computers for banking transactions may be driving these individuals toward the AFS. Also, the types of personal interaction with AFS employees compared with an increasingly automated MFS may account for the attractiveness of the high touch AFS for LMI households (Swanson, Hogarth, & Segelken, 1993). On the other hand, some have suggested that EBT programs for TANF and Food Stamps helped introduce low-income households to electronic transactions and increased their comfort levels with ATM-type cards (Anguelov, Hilgert, & Hogarth, 2004; Leyser, 1998; Stegman, 1999).

Handling Financial Transactions

Consumers who do not have bank accounts must find other ways to cash checks, pay bills, and handle other aspects of their personal financial business. While a majority of unbanked households still use banks for cashing checks and getting money orders (Caskey, 1997a; US Department of the Treasury, 1997), a significant proportion use other sources such as grocery stores or check cashers.

In the 2000 Metro Chicago Information Center Survey, 72% of unbanked households used check cashers for both financial and non-financial services (e.g. buying bus passes), while only 4% of banked households used check cashers (Rhine et al., 2001). Dunham's 1998–1999 Survey of Financial Activities and Attitudes, conducted in New York City and Los Angeles, found that 70% of

unbanked households used check cashers for cashing checks; in contrast to the Rhine et al. study however, Dunham found that 28% of banked households also used check cashers (Dunham, 2001). Dunham reported that 41% of unbanked households pay bills with cash, while another 42% use money orders.

These studies may overstate the use of check cashers overall and in rural areas in particular. Stegman and Farris (2001) report that among low-income households in North Carolina, most used banks or grocery stores; only 1.4% of the unbanked used check cashers, and 0.2% of the banked used check cashers. The use of money orders also seems to differ by area of residence; 60% of the North Carolina respondents used money orders, but they were most likely to buy these at a bank (36%) or grocery store (29%).

In summary, there are both supply side and demand side factors that affect account ownership. These factors include the consumers' perceived need for accounts and products; their ability to use and manage accounts; access to appropriate accounts, products, and institutions; and attitudes and previous experiences with financial institutions. In this study, we focus on bank account ownership with a special emphasis on how changes over time have affected the account ownership of poor and low-income households.

Methodology

Data

The data for this study are from the Federal Reserve Board's 1989, 1992, 1995, 1998, and 2001 Survey of Consumer Finances (SCF). The SCF is a triennial survey of US families' financial portfolios sponsored by the Federal Reserve with the cooperation of the Statistics of Income Division of the Internal Revenue Service (Kennickell, McManus, & Woodburn, 1996). It is designed to provide detailed information on US families' balance sheets, their use of financial services, demographics, and labor participation. In 1989, 3143 households were surveyed in face-to-face personal interviews by staff from the Survey Research Center of the University of Michigan. The 1992, 1995, 1998, and 2001 data were collected by the National Opinion Research Center at the University of Chicago. In 1992, 3906 households were interviewed; in 1995, 4299 households were interviewed; in 1998, 4309 households were interviewed; and in 2001, 4449 households were interviewed. Respondents were encouraged to consult their records as necessary during the interviews.

To provide information that is both representative of the total population and reliable for those assets concentrated in affluent households, the SCF employs a dual-frame sample design consisting of both a standard, geographically based random sample and an over-sample of affluent households.

Weights are used to combine information from two samples. The dual sampling frame employed in the survey requires that data be weighted in descriptive analyses (see Kennickell et al., 1996; Kennickell & Woodburn, 1997 for detailed discussion of weight design).

The SCF also uses multiple imputation techniques to deal with missing data. This procedure creates five data sets (called implicate data sets) that require special handling in any multivariate analyses (see Kennickell, 1997). In this study, we used all five implicates for descriptive analyses and the first implicate for the multivariate analysis.

Dependent Variable

The dependent variable was whether the household had a transaction account. Since a number of households use other accounts besides a checking account for transaction purposes, transaction accounts in this analysis were broadly defined, including checking, savings, money market accounts at depository institution and brokerage firms, and call accounts, consistent with other analysis using the SCF data (see, for example, Aizcorbe et al., 2003).

Income Groups

Income was treated as a categorical variable. We converted all household income values into 2001 dollars using the current methods version of the Consumer Price Index for Urban consumers (CPI-U, consistent with Aizcorbe et al., 2003). We then categorized the values based on income quintiles. A review of the distributions revealed some interesting differences between the bottom 10% and the rest of that quintile (11–20%). We therefore split this quintile in half to capture the effects of being in the very lowest income group. The same review revealed virtually no differences in account ownership in the upper two quintiles (61–80% and 81–100%), so we treated these as one group in our analysis (see Table 1).

This method of using income categories has several advantages over using income as a continuous variable. First, measuring income directly is problematic due to heteroscadasticity (unequal variances) problems. The usual correction is to use the natural log of income to reduce this problem with variances, but this still leaves a continuous variable. A categorical income variable allows us to explore differences that may not be evident in a continuous measure.

Model and Other Independent Variables Studied

We model account ownership as a function of households' perceived need for accounts and products; their ability to use and manage accounts; access to appropriate accounts, products, and institutions; and attitudes and previous experiences with financial institutions. Because we are interested in changes in account ownership over time, we include the year of the survey as a variable.

TABLE 1

Descriptive Statistics for Sample

Variable	Full sample[a]	Banked	Unbanked
Number of observations	20,089[b]	18,353	1736
Have transaction account	88.2[c]	100	N/A
Time (Year)[d]			
1989	18.7	85.4	14.6*
1992	19.3	86.9	13.1
1995	19.9	87.0	13.0
1998	20.6	90.3	9.7
2001	21.4	91.0	9.0
Need for account			
Income (in 2001 $)			
Mean[e]	*$56,615*	$62,011	$16,270*
Median	*35,884*	*40,453*	*11,384*
0–10th percentile	9.6	6.0	36.7*
11–20th percentile	9.7	7.9	23.2
21–40th percentile	19.6	19.2	22.6
41–60th percentile	19.8	21.0	10.5
61–100th percentile	39.9	44.6	4.5
Net worth (in 2001 $)			
Mean	*$292,367*	*$328,776*	*$20,171**
Median	*72,254*	*92,192*	*1295*
Less than $0	7.3	6.0	17.3*
$0–$4999	12.5	7.9	47.0
$5000–$19,999	11.0	10.8	13.1
$20,000–$74,999	20.0	20.6	15.8
$75,000 or more	49.1	54.8	6.8
Spend all income	52.1	48.6	78.3*
Ability to manage account			
Household size			
1	24.7	24.3	28.1*
2	32.9	33.9	25.1
3 or more	42.4	41.8	46.8
Children under 18 present	37.3	36.0	46.5*
Marital status			
Married	58.7	61.5	37.2*
Single Male	13.9	13.4	18.2
Single Female	27.4	25.1	44.6
Education			
Mean (in years)	*12.9*	*13.2*	*10.3**
Median	*12.0*	*13.0*	*11.0*
Less than high school	19.0	15.1	48.2*
High school grad /GED	31.5	30.9	36.1
Some college	17.8	18.7	11.1
Bachelor's degree or more	31.6	35.3	4.6
Access to financial services			
Race/ethnicity			
White	76.4	81.0	41.7*
Black	12.6	9.8	33.8

TABLE 1 *(Continued)*

Variable	Full sample[a]	Banked	Unbanked
Hispanic	7.3	5.5	20.5
Other	3.8	3.8	3.9
Working status			
Working	68.4	71.1	48.5*
Retired	18.1	19.0	11.6
Unemployed-looking for a job	4.0	2.6	14.0
Unemployed-not looking	9.2	7.1	25.7
Credit history-rejected for credit	20.6	20.4	21.8*
Experience & future mindedness			
Age (in years)			
Mean	*48.5*	*49.2*	*43.6**
Median	*46.0*	*47.0*	*40.0*
18–34	24.8	23.2	37.2*
35–49	32.3	32.5	31.0
50–64	21.3	21.9	16.5
65 and over	21.6	22.4	15.3
Home ownership	65.4	70.6	26.2
Vehicle ownership			
No car	16.0	11.7	48.3*
Older car	38.5	38.1	41.6
Newer car	45.5	50.2	10.1
Major expense	51.3	52.2	44.3*
Time horizon			
Short term (1–12 months)	35.9	33.1	56.3*
Medium term(1–10 years)	49.7	51.6	35.8
Long term(more than 10 years)	14.4	15.3	7.7
Region (for 1992–1998 only)[f]			
New England	*6.0*	*6.0*	*6.1**
Mid-Atlantic	*13.4*	*13.7*	*11.6*
South Atlantic	*18.7*	*18.6*	*19.6*
East S. Central	*7.3*	*6.8*	*10.6*
West S. Central	*9.2*	*8.6*	*14.0*
East N. Central	*16.9*	*17.1*	*14.7*
West N. Central	*7.5*	*8.0*	*4.3*
Mountain	*6.7*	*7.0*	*4.3*
Pacific	*14.4*	*14.3*	*14.9*

[a]Except where noted as dollars or years, proportion of households in full sample reported in column; column sums to 100%.
[b]Unweighted.
[c]Based on weighted frequencies; all other data in table are weighted.
[d]Row for banked and unbanked sum to 100%; elsewhere, columns sum to 100%.
[e]Numbers in italics for information only, not used in regressions.
[f]New England (CT, ME, MA, NH, RI, VT), Mid- Atlantic (NJ, NY, PA), South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV), East South Central (AL, KY, MS, TN), West South Central (AR, LA, OK, TX), East North Central (IL, IN, MI, OH, WI), West North Central (IA, KS, MN, MO, NE, ND, SD), Mountain (AZ, CO, ID, MT, NV, UT, WY, NM), Pacific (AK, CA, HI, OR, WA).
*$p < .0001$, Chi-square or t-tests as appropriate.

Time. Our year of survey variables capture the effects of changes over time and serve, in part, as proxies for change in the policy and economic environment. We anticipate increases in ownership over time, in part due to the policy and economic changes noted earlier.

Need for an account. Income, net worth, and spending patterns were our measures of need for an account. Income has been discussed above. Net worth is measured in current dollars in each survey; we converted all net worth numbers into 2001 dollars, using the current methods version of the CPI-U. After adjusting net worth to constant dollars, we categorized the values to use in our analysis (see Table 1 for the categories). Based on previous research, we expect that lower income and lower net worth households will be less likely to have a bank account. With regard to spending patterns, households who spend less than their income may need a place for their savings and thus should be more likely to have an account.

Ability to manage an account. Household size, presence of children, marital status, and education were included as measures of the households' ability to use and manage an account. Household size and marital status are proxies for human capital resources in the household; we expect that larger households and married households will have more human capital to use and manage an account, and thus have a higher likelihood of having an account. The presence of children is a proxy for the time constraints faced by the household; more time-constrained households may be less able to manage accounts and less likely to have an account. Education is a direct measure of human capital and cognitive abilities; more educated households should be more likely to have an account.

Access to financial accounts, products, and services. Our measures of access were race/ethnicity, work status, and credit history. We would have liked to include region as a proxy for access to basic banking (given that several states have basic banking laws). The 1992–1998 SCF surveys include region variables; unfortunately, the 1989 and 2001 surveys have no information on region in the public data set. We report region for 1992–1998 in our descriptive statistics but cannot use this variable in our multivariate analysis.

As with other studies, we expect minorities to be less likely to have an account. We expect households with some present or past labor force attachment, either working or retired, to have access to direct deposit and thus should be more likely to have an account.

Our measure of credit history is whether households experienced either being rejected for a loan or obtaining a smaller loan than they applied for. In the 1995–2001 SCF, the data include a measure of whether or not a household applied for a loan over the past 5 years, and then, if so, whether they were rejected or received a lesser loan amount. However, in 1989–1992, the only variable available is whether or not the household was rejected for a loan. Those not rejected could fall into three groups: those who never applied for a loan because they did not need one, those who never applied for a loan because they thought they would be rejected due to poor credit records, and those who received their loans. Obviously these three groups of non-rejected are quite dissimilar and may cause some confounding in our

results. The expected effects of credit history are ambiguous. Credit history could indicate prior access to financial services and could be positively associated with having an account. However, a poor credit history could also indicate problematic relationships with the MFS, either with consumers closing their accounts or with banks closing accounts for them.

Attitudes and experiences with financial institutions. Our measures of experience include age, home ownership, and vehicle ownership; our measures of attitudes focus on how future-minded the household is: we include whether the household expects a major expense in the next 5 years and the planning horizon the household reports. While home ownership is in part accounted for in net worth (especially for lower income households), we use it here as a proxy for experience with financial institutions in obtaining loans. Similarly, we use vehicle ownership as a proxy for experience; however we distinguish between newer cars (that may be financed through financial institutions or vehicle finance companies) and older cars (that may be financed through less formal lending markets). We expect that homeowners and owners of newer cars are more likely to have accounts. Age is a direct measure of experience; we expect older persons to be more likely to have an account. Households that are more future-minded, those that expect a major expense in the next 5 years or those that have a long-term planning horizon (more than 10 years), should be more likely to have an account.

Analysis

We first provide a bivariate description of our sample, looking at those with and without accounts. Next, we turn to multivariate analysis using logistic regression. Specifically, we fit a logistic regression model using SAS. We report both the regression coefficients and the log-odds ratio, along with results of significance testing. We also calculate the probability of having an account (that is, the probability of being banked) related to each variable. The parameter estimates are multiplied by the variable values for each observation, summed, and then transformed into a probability. We then calculate the mean probability for subgroups within the data set. For example, we calculate the mean probability among all those in the lowest income category in the data set, those in the 11–20% category, those in the 21–40% category, and so forth. This technique allows researchers to answer the question: "What is the expected probability of having an account among all the poor households (or other variable of interest) in the data set?"

Results

Descriptive Analysis

The demographic profile of households in 1989–2001 is presented in Table 1 both for the full sample and by whether or not the

household had a bank account. Households in the 2001 SCF were more likely to have an account. Banked households had higher income and net worth (measured in 2001 dollars); were less likely to spend all their money; more likely to be 2-person households; less likely to have children present; more likely to be married; had higher levels of education; were more likely to be white; more likely to be employed or retired; were older; were more likely to be home owners and vehicle owners; were more likely to anticipate a major expense; and were more likely to use a medium or long-term planning horizon. All differences between the banked and unbanked groups were significant.

We were not able to study regional effects in a multivariate framework, but there are some intriguing differences in the bivariate statistics. Households living in the Mid-Atlantic, North-Central, and Mountain regions were more likely to be banked, while households living in the South-Central were less likely to be banked. The Mid-Atlantic and North-Central states include New York, New Jersey, Illinois, and Minnesota, all of which have basic banking laws. Future analysis is needed to show if these differences hold up in a multivariate framework, but it does seem that basic banking provisions at the state level may be having some effects.

Account ownership increased from 85% in 1989 to 91% in 2001, with the largest change in ownership noted between the 1995 and 1998 surveys. Looking at changes in account ownership over time by income, the biggest gains were made by households in the bottom 10% of the income distribution. Account ownership rates among this group grew from nearly 43% in 1989 to nearly 60% in 2001 (Table 2). The next largest gain was among households in the next highest income category (from 11 to 20% of the income distribution), with ownership rates rising from 65 to 77% over the 13-year period.

Interestingly, the greatest growth in account ownership among the lowest income households was in having a savings account. In 1989, only about one out of seven (14%) low income households had a savings account. By 2001, one out of three (34%) held savings accounts. It is important to note, however, that even with increased rates of account ownership, the balances held in these accounts were generally low. Aizcorbe et al. (2003) show that the median balances held in transaction accounts for the 71% in the lowest income quintile who had such accounts was $900; among those in the 21–40% quintile, 89% held transaction accounts and the median value was $1900.

TABLE 2

Account Ownership Rates by Selected Characteristics over Time

Characteristic	1989	1992	1995	1998	2001
Income					
0–10% – own any account	42.7*	56.0	55.8*	59.8	59.7
Own checking	33.6*	46.5*	49.3*	47.6	46.3
Own saving	13.5*	19.0*	14.9*	31.5*	34.1
Unbanked	57.3*	44.0	44.2*	40.2	40.3
11–20% – own any account	65.6*	70.6	70.7*	74.9*	77.0
Own checking	56.5*	60.4*	64.1*	62.8*	66.8
Own saving	29.3*	31.0*	21.1*	34.4	33.0
Unbanked	34.4*	29.4	29.3*	25.1*	23.0
21–40% – own any account	83.6*	86.3	85.3*	89.9*	86.8
Own checking	70.7*	76.4	77.8	77.9*	75.6
Own saving	40.5	41.1*	31.0*	49.3	48.6
Unbanked	16.4*	13.7	14.7*	10.1*	13.2
41–60% – own any account	92.6	92.6	93.5*	95.1	94.8
Own checking	81.3	81.3*	87.8	86.4	86.8
Own saving	47.0	47.2*	39.5*	59.1	58.0
Unbanked	7.4	7.4	6.5*	4.9	5.2
61–100% – own any account	98.1	98.6	98.5	99.1	98.9
Own checking	89.2	88.7*	91.8	91.5*	88.9
Own saving	53.7*	55.8*	42.3*	68.2*	64.9
Unbanked	1.9	1.4	1.5	0.9	1.1
Net worth – own any account					
Less than $0	62.3*	68.2	68.2*	80.1	79.7
$0–$4,999	50.3*	56.8*	50.1*	60.7	60.8
$5000–$19,999	88.0	86.0	82.8*	86.4	87.3
$20000–$74,999	88.7	89.0	90.7	91.5*	93.5
$75,000 or more	98.4	97.9	97.8	98.9	98.7
Household size – own any account					
1	78.9*	86.6	87.2	88.7*	90.7
2	91.4	89.3	88.1*	92.8	93.0
3 or more	85.0	85.3	86.0*	89.3	89.3
Marital status – own any account					
Married	91.8	91.7	91.2	93.6	94.1
Single male	78.4*	83.5	84.8*	87.4	88.7
Single female	75.8	78.7	79.4*	84.7	84.9
Education – own any account					
Less than high school	70.6*	67.7	69.7	69.5*	72.9
High school graduates	82.1*	85.7	85.1*	89.5	89.5
Some college	91.2	91.7	89.2*	95.3	95.3
Bachelor's or more	98.7	97.6	98.1	98.6	98.4
Race/Ethnicity – own any account					
White	92.4	93.2	92.5	94.5	94.9
Black	56.5*	68.6*	61.0*	73.0*	81.0
Hispanic	63.0*	55.8*	69.7*	74.2*	70.3
Other race	89.3*	85.8*	88.6	87.4	87.6

TABLE 2 *(Continued)*

Characteristic	1989	1992	1995	1998	2001
Working status – own any account					
Working	90.5	91.2	90.2	92.9	93.0
Retired	92.7	90.1	92.4	93.3	93.5
Unemployed-looking for a job	44.0*	59.7	56.2*	65.1*	72.4
Unemployed-not looking	59.0*	70.6	69.1	68.2	70.5
Age – own any account					
18–34	80.2	81.3	80.3*	84.0	86.0
35–49	85.9	86.6	87.8*	91.0	91.0
50–64	86.8*	90.9	88.2*	94.2	93.3
65 and over	90.1	90.1	92.1	92.0	93.7
Home ownership – own any account					
Home owner	94.4	94.0	95.0	96.2	96.5
Non-owner	69.4	74.3	72.4*	78.8	79.3
Vehicle ownership – own any account					
No car	53.8*	58.7*	65.7*	70.8	70.4
Older car (6+ years old)	82.0*	85.0	85.6*	90.5	91.3
Newer car (5 years or less)	97.4	97.1	96.4	98.3	97.8

*$p < .05$ or better; * is on the first of the pair of years with a significant difference. For example, the proportion of checking account holders for the 0-10th percentile was different between 1989 and 1992 (33.6% vs. 46.5%), but not between 1998 and 2001 (47.6% vs. 46.3%).

Multivariate Analysis

Among the explanatory variables, income, net worth, spending all income, household size, marital status and gender, education, race/ethnicity, employment status, credit history, age, home ownership, vehicle ownership, expectations, and survey year were significantly associated with being banked, while presence of young children and planning horizon were not (Table 3). We first discuss the effects of time followed by the effects of other explanatory variables.

Testing the effects of time. Households who were in the 2001 survey were more likely than their 1989, 1992, and 1995 counterparts to have an account. There was no statistical difference between the 2001 and 1998 households in the survey. Even though this was a period of substantial policy change and economic growth that, in theory, should have lead to substantial increases in account ownership, the softening of the economy and rising unemployment in the late 1990s and early 2000s seem to have ameliorated these effects. None-

TABLE 3

Results of Logistic Regression: Probability of Having a Bank Account

	Parameter estimate	Odds ratio	*p*-value	Calculated probability of having an account
Intercept	1.24		.01	
Time (year)				
1989	−.59	.6	.01	.857
1992	−.38	.7	.04	.868
1995	−.52	.6	.01	.869
1998	−.07	.9	.51	.901
2001	Base			.911
Need for account				
Income				
0–10%	Base			.559
11–20%	.30	1.3	.01	.724
21–40%	.83	2.3	.01	.865
41–60%	1.36	3.9	.01	.942
61–100%	1.96	7.1	.01	.995
Net worth				
Less than $0	.07	1.1	.48	.716
$0–$4999	Base			.558
$5000– $19999	.61	1.8	.01	.856
$20000– $74999	.75	2.1	.01	.910
$75000 or more	1.59	4.9	.01	.983
Spending income				
Spend all income	−.57	.6	.01	.823
Save some income	Base			.947
Ability to manage account				
Household size				
1	.30	1.3	.01	.869
2	Base			.910
3 or more	−.04	.9	.69	.869
Presence of children under 18				
Children under 18 present	−.07	.9	.50	.853
No children under 18 present	Base			.900
Marital status				
Married	Base			.926
Single male	−.12	.9	.30	.848
Single female	.19	1.2	.05	.808
Education				
Less than high school	−.64	.5	.01	.702
High school graduates	Base			.866
Some college	.57	1.8	.01	.929
Bachelor's or more	1.27	3.6	.01	.981

TABLE 3 *(Continued)*

	Parameter estimate	Odds ratio	*p*-value	Calculated probability of having an account
Access to financial services				
Race/Ethnicity				
White	Base			.935
Black	−.80	.4	.01	.689
Hispanic	−.87	.4	.01	.669
Other race	−.35	.7	.04	.865
Working Status				
Working	.30	1.3	.01	.917
Retired	.32	1.4	.02	.926
Unemployed-looking for a job	−.48	.6	.01	.582
Unemployed-not looking	Base			.671
Credit history				
Rejected or obtained lesser amount	.22	1.2	.01	.877
Not rejected	Base			.884
Experience and Future-mindedness				
Age				
18–34	Base			.821
35–49	−.07	.9	.43	.889
50–64	.38	1.5	.01	.909
65 and over	1.02	2.8	.01	.917
Home ownership				
Home owner	.23	1.3	.02	.953
Non-owner	Base			.749
Vehicle ownership				
No car	−1.17	.3	.01	.646
Older car (6+ years old)	−.74	.5	.01	.874
Newer car (5 years or less)	Base			.973
Major expense				
Expect mj. expense in 5 years	.30	1.3	.01	.898
No major expense in 5 years	Base			.866
Time horizon				
Short term (1 year or less)	−.15	.9	.20	.813
Med. term (2–10 years)	.02	1.0	.87	.916
Long term (over 10 years)	Base			.939

Note: Mean estimated probability of account ownership = .882 (actual proportion of account ownership in data set = .882). R^2 = .24; Max re-scaled R^2 = .53; 93.4% concordant.

theless, the estimated probability of having an account for households rose steadily, from 0.86 in 1989 to 0.91 in 2001.

Because four of the five year-of-survey variables were statistically significant, the question arises as to whether there are differential effects for the individual variables in the model by year – that is, does the year of survey variable function as an intercept-shifter or a slope-shifter for the independent variables? To test for these effects, we estimated a fully interactive model (a vector of the year of survey variables for 1989, 1992, 1995, and 1998 interacted with each independent variable, retaining 2001 as the base year) and tested the null hypothesis that the coefficients on all the interaction variables are equal to zero. The Chi-square statistic between the restricted (the model without the interactive terms) and unrestricted model (the model including all the interactive terms) was not significant, and the null hypothesis was not rejected.

By implication, the vector of year-of-survey variables acts as an intercept-shifter. Changes over time were experienced evenly by households in all income and net worth categories; by households with various levels of education; by whites, blacks, Hispanics, and others; or by younger, middle-aged, and older households – the rising tide lifted all boats.

For nearly every household characteristic, account ownership rates are higher in 2001 than in 1989, although there is some significant survey-to-survey variation (Table 2). For example, account ownership rates in the lowest income group rose from 1989 to 1992, remained steady between 1992 and 1995, rose again between 1995 and 1998, and remained steady between 1998 and 2001. Ownership rates among those in the second-lowest group (in the 11th to 20th percentile) rose between 1989 and 1992, remained steady from 1992 to 1995, and then rose in both the 1998 and 2001 surveys. Among black households, ownership rose from 1989 to 1992, fell between 1992 and 1995, and then rose steadily from 1995 to 2001. However, among Hispanic households, ownership rates fell between 1989 and 1992, rose between 1992 and 1998, and then fell between 1998 and 2001.

In looking at the year-to-year changes in the proportions, the years between 1995 and 1998 seem to have been the period with the most growth. This is as expected given the regression results (that is, a significant difference between 2001 and 1995 but not between 2001 and 1998).

Need for an account. The estimated probabilities of having an account rose steadily as income rose, ranging from 0.56 for those in the lowest income group to 0.99 for those in the upper two income

quintiles. Households with negative net worth (debts exceeding assets) were not significantly different from those households with a net worth of $0 to $4999. As with income, the probability of having an account rose across the levels of positive net worth, ranging from 0.56 for those with net worth between 0 and $4999, to 0.98 for those with net worth of $75,000 or more. Although households with negative net worth were not statistically different than those with $0 to $4999 in net worth, the calculated probability of having an account for the negative net worth group was higher, 0.72, compared with 0.56 for those with net worth of $0 to $4999. One possible explanation is that to have a negative net worth, households have debt, and in order to have qualified for credit, those households probably had some type of bank account. Households who reported spending all income were less likely to be banked than those who were able to save some, with estimated probabilities of 0.82 vs. 0.95, respectively.

Ability to use and manage an account. One-person households were 1.3 times as likely to have an account than two-person households, all else constant. However, the average probability of having an account among one-person households in the data set was 0.87 compared with 0.91 for two-person households. Single males were no different than married couples with respect to account ownership; however, single females were more likely to have bank accounts than their married counterparts, holding all else constant. The average calculated probabilities among single female and married households were 0.81 and 0.93, respectively. The odds ratio results reflect the all else constant nature of regressions whereas the probability calculation allows for the effects of other variables. Household size and marital status/gender are the only variables in which the probability calculations do not track the regression results, indicating that other variables are influencing the calculations. Following the pattern noted with income and net worth, the estimated probability of account ownership rose steadily with education, ranging from 0.70 to 0.98.

Access to financial accounts, products, and services. Compared with non-Hispanic Whites, Blacks and Hispanics were 40% as likely to be banked and other races were about 70% as likely to be banked. The estimated probability of account ownership for whites was 0.94; for other races, 0.87; for Blacks, 0.69; and for Hispanics, 0.67.

As expected, households with some labor force attachment were more likely to have accounts. The estimated probability of account

ownership for working and retired householders was around 0.92. On the other hand, for those unemployed and not looking for a job the estimated probability of account ownership was 0.67, while for those unemployed and looking for work, it was 0.58.

Households who were rejected for credit were 1.2 times as likely to be banked than those not rejected for credit. This result seems counter-intuitive, but it is important to keep in mind that the base group (not rejected) includes both households who were accepted for credit and those who never applied for credit. This later group may be confounding the effects of this variable. In fact, when analyzing only the 1995 and 1998 data, which allow for a more narrow focus on this variable, the results are as expected (see Hogarth & Lee, 2000). Alternatively, those with bank accounts may be more likely to apply for credit simply because they have established a banking relationship. Thus, if they are significantly more likely to apply for credit, they are also more likely to be rejected.

Experience and future mindedness. Middle-aged households, those ages 35–49, were not statistically different from younger households in terms of account ownership. The probability of account ownership rose consistently across all age categories, from 0.82 to 0.92. Homeowners were more likely to be banked relative to non-owners, with estimated probabilities of account ownership of 0.95 and 0.75, respectively. The estimated probability of having an account was 0.65 for those with no car, 0.87 for those with an older car, and 0.97 for those with a newer car. Households who expected a major expense in the next five years were more likely to have an account than those without such expectations; estimated probabilities of account ownership were 0.90 and 0.87, respectively.

Discussion, Implications, and Conclusions

The goal of this paper was to explore factors affecting account ownership between 1989 and 2001, a time of substantial economic growth as well as substantial public policy development relating to LMI families. During this time, rates of account ownership increased. Our results support and reinforce previous studies; if we want to move people into the MFS, as defined by having a transaction account, policy makers need to keep in mind that income matters, assets matter, spending patterns matter, education matters, race matters, attachment to the labor force matters, credit history

matters, and age matters. The largest effects were found for income, net worth, education, race/ethnicity, and vehicle ownership. It is also evident that changes over time matter.

Holding all else constant, households in 2001 and 1998 were more likely to have accounts than households in 1989, 1992, and 1995. Changes over time have led to fewer unbanked households and the effects of these changes appear to be across the board. However, our model does not provide any conclusive answers as to the sources of those changes. Possibly they can be attributed to the robust economy and employment growth, especially between 1995 and 1998, and to some policy initiatives such as the Debt Collection and Improvement Act of 1996 that resulted in the EFT '99 program and the Personal Responsibility and Work Opportunity Act of 1996 that led to changes in the method of delivery of welfare benefits via EBT.

The income effects in the multivariate model are particularly interesting. Differences in account ownership are substantial within the lowest income quintile; that is, between those in the bottom 10% of the income distribution and those in the next 10%, as well as those in the next quintile (21–40% of the income distribution). Thus, while poverty, welfare, and asset building programs may purport to be targeting LMI households, they may be capturing more families along the moderate end of that continuum than those along the low end. The definition of income we use to determine eligibility for means-tested social welfare programs may serve to either widen or close these differences.

Net worth, home ownership, vehicle ownership, and the tendency to spend all income are interrelated as they refer to households' levels of asset ownership and indebtedness. Households who are able to save and build assets are most likely to have a transaction account. Policies that foster asset accumulation among lower income households, such as IDAs and affordable housing initiatives, may also work to foster account ownership.

Community educators should note the role of education presented here. In part, education is a measure of the ability of households to handle the cognitive processes (arithmetic skills and record-keeping activities) required to manage financial accounts. Another challenge for educators is to assure that poor and low-income households understand the policies that enable them to build assets without losing benefits. While the absolute level of income may make it impossible for some households to save, the ability to save out of current income was a significant determinant of account ownership. Helping households find the motivation as well as the tools to help them save

could go a long way to moving people to the MFS. Note that the role of education in this context is different from that of creating awareness or simply providing information; rather, it invokes a change in behaviors (see, for example, materials from the Financial Services Education Coalition, 2000).

Minority households are still among the least privileged when it comes to having a transaction account. There may be cultural, attitudinal, and institutional factors at work here. In the case of attitudinal barriers to account ownership, education efforts may help both financial institutions and households understand the opportunities in establishing an account relationship with a bank. In the case where product features are the barrier to being banked, financial institutions can develop new products and services that better match the needs of these consumers, such as real-time all-electronic accounts that cannot be overdrawn.

Working status as a whole seems to be a significant factor in explaining whether a household has a transaction account or not. The least likely group to have a transaction account were those "unemployed-looking for a job;" this may be due to their lack of a steady source of income. Households that are unemployed and not looking for a job may have accounts related to TANF or Food Stamps. The finding that retirees are the most likely to be banked, all else equal, may be, in part, a reflection of the EFT '99 initiative, encouraging Social Security and federal benefit recipients to have direct deposit of their benefits.

Implications

Policies that enable families to maintain labor force attachment and earn a livable income have the potential to foster participation in the MFS. Policies that promote asset accumulation will also foster participation in the MFS, as will financial education that provides families with the tools to help them maintain solid credit records and help them save. There is some evidence that economic environment policies such as welfare reform and EFT'99 may have influenced LMI households to move into the financial mainstream.

Beyond the provision of basic banking services for LMI households, these results provide some interesting implications for MFS institutions. From the consumer's standpoint, availability of financial products that meet their needs at an affordable cost is paramount. While consumer advocates may bemoan the presence of check cashers and payday lenders in low-income communities, these

may be the only sources for the $300 loan a household needs to repair the car. Financial institutions may need to consider their array of product offerings and their pricing policies. Consider, for example, the low balances these households are likely to have in savings accounts. Although these low-balance accounts are not as profitable for financial institutions, access to accounts at reasonable fees may prove to be an important service to LMI communities. Other marketplace alternatives could include revolving loan funds sponsored by community development groups or other agencies. But until such alternatives are in place, consumers will continue to use what is available to them.

Our results suggest that public policy, whether focused on long-term economic growth or targeted programs, may make a difference in moving LMI households into the MFS. While it is impossible to disentangle the effects of economic growth (and thus growth in employment) from the effects of programs such as the electronic delivery of federal benefits (whether EBT or EFT) over time, both seem to be contributing to higher proportions of households being banked. The question now is how far will these policies take us and what else we can, or should, do to move households into the financial mainstream.

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