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**Who is Unbanked, and Why:
Results from a Large, New Survey of Low-and-Moderate Income Adults**

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Abstract

This paper uses data from a new, large survey to estimate the demand for financial services of low-and-moderate income households. We show that socio-economic characteristics have significant and importantly different effects on the choices about which bank accounts to have. In particular, racial and ethnic minorities were less likely to have checking accounts than whites were, but were more likely to have savings accounts. Our estimates could be used to support Caskey's recommendation that efforts to reach LMI individuals should focus on savings accounts. Caskey's view that managing a checking account is particularly difficult (and likely very costly) for the very poor is consonant with our findings that those with less income, education, and wealth are more likely to own a savings account than a checking account. We also provide evidence that, in addition to individuals' characteristics, neighborhood characteristics significantly affected whether individuals were unbanked. Our estimates showed that everyone living in neighborhoods with higher proportions of racial or ethnic minorities was less likely to have any bank account and that the likelihood of owning a checking account was particularly reduced by neighborhood effects.

I. Introduction

The breadth and depth of a country's financial sector can importantly affect its wealth. Access to a more efficient financial sector may improve the incentives that households have to work and save and, thereby, improve standards of living and prospects for longer-term economic growth. Research conducted over the past decade shows that access to more-developed financial sectors generally contributes to faster economic growth (Levine, 1997). Although the most economically advanced nations tend to have the most developed financial sectors, even in the United States, about 13 percent of all families do not have a checking account, while about 10 percent have no transaction account (Kennickell, et al., 2000). Thus, a substantial number of U.S. households remain “unbanked” in that they have no account in any depository institution.

Numerous reasons, some conflicting, to explain why so many families are unbanked have been suggested. For example, some in the banking industry suggest that a lack of skill in using checking accounts may deter households from having bank accounts. Neighborhood activists counter, however, that banks simply do not want to serve LMI communities. An intermediate view came from the respondents to the 1998 Survey of Consumer Finances, who gave their own reasons for not having bank accounts: high fees, dislike of banks, no need for check-writing, and low average balances. Survey respondents rarely mention inconvenience as a reason for not having a bank account.

Although millions of U.S. households do not have a bank account, they still conduct financial transactions—cashing income checks that come from various private and public sector entities, paying rent and utilities, and paying directly (as opposed to

indirectly by making periodic credit card payments) for goods and services.¹ To learn more about the banked and the unbanked, in the late 1990s, the U.S. Office of the Comptroller of the Currency (OCC) sponsored a large survey of individuals in low-and-moderate income (LMI) areas in New York and Los Angeles.

We use this survey data to investigate LMI individuals' choices about whether to open a bank account and what kind of account to have. The data allow us to separately estimate the effects of individuals' socio-economic characteristics as well as the effects of the characteristics of their neighborhoods on account ownership decisions. Specifically, we use the data to address the following questions: After allowing for individual and neighborhood differences, are there differences in the extent to which various racial groups are banked? To what extent do individual and neighborhood characteristics account for differences in the use of savings relative to checking accounts? To what extent does proximity to a bank branch affect the decision to be banked? To what extent do language barriers affect whether one is banked?

Our estimates suggest that individuals with lower average income, education, and wealth (for which we used the proxy variables of health insurance, home ownership, and car ownership) and individuals who are temporarily unemployed are less likely to own a bank account. We also show that when individuals with these characteristics own a bank account, on average, they prefer savings accounts to checking accounts. This result is consistent with LMI individuals being more attracted to accounts that have a lower likelihood of, and thus, lower expected costs associated with, bouncing checks.

We also find that minorities are more likely to be unbanked, and that when minorities do own a bank account, they are more likely to choose a savings account than

¹ We use the term 'bank' to refer to any depository institution, (e.g. commercial bank or thrift institution).

a checking account.² Furthermore, we show that the racial composition of one's neighborhood affects account ownership patterns. These racial effects, both at the individual and especially at the neighborhood levels, are not clearly linked to the difficulties of managing a checking account faced by LMI individuals. We tentatively propose an alternative explanation for these findings. Systematic differences in the usefulness of checking accounts both across minority status and across neighborhoods could explain these findings.

The remainder of the paper is outlined as follows: Section II below briefly notes some of the empirical patterns about the unbanked that have been documented elsewhere in the literature. Section II also discusses some of the costs and benefits of bank accounts. Section III describes the data that we used from the OCC's Survey of Financial Activities and Attitudes. Section IV shows what the banked and unbanked liked and disliked about banks and bank accounts. Section V presents the statistical connections between individuals' bank accounts and both their personal characteristics and the characteristics of their neighborhood. Section VI summarizes our findings and offers some tentative implications for banking and public policies.

II. Previous Literature on the Unbanked

Who are the unbanked?

Although the overwhelming majority of higher-income families in the U.S. have one or more bank accounts, many low-and-moderate-income (LMI) families have none. The Federal Reserve's 1998 Survey of Consumer Finances reported that more than 99 percent of families with annual incomes over \$50,000 had checking accounts. The

² We use the term minority to refer to blacks and Hispanics.

survey also found, however, that 83 percent of families without a checking account had annual incomes of less than \$25,000.

There is general consensus as to many of the individual characteristics that are associated with not having a bank account. Caskey (1994, 1997a) concluded that the unbanked are likely to be lower income, less educated, non-white, younger, and living paycheck-to-paycheck. He used data from the Survey of Consumer Finances to estimate a dichotomous probit model of account ownership. Bond and Townsend (1997) confirmed many of Caskey's findings. Hogarth and O'Donnell (2000) applied a dichotomous logit model to pooled data from five consecutive (1983, 1986, 1989, 1992 and 1995) Surveys of Consumer Finances. They reported that income, net worth, home ownership, spending all one's income each month, race, ethnicity, age, educational level, and employment status (i.e., white collar relative to unemployed) each were significantly associated with being unbanked.

The Role of Proximity

Popular reports have sometimes attributed being unbanked and using check-cashing operations and payday lenders to the absence of nearby bank branches in LMI neighborhoods. Sentiment within neighborhood organizations seems split between those that disapprove of the prices and practices of check-cashing operations and those that view their neighborhoods as benefiting from the availability of the services offered by such operations.

The role of bank location in determining whether LMI households have bank accounts is unsettled. Caskey (1997b) called it a "myth" that people do not use banks because they are too far away. Data from the Survey of Consumer Finances supports that

view. Conversely, neighborhood activists (e.g. Juarez (1997)) and executives from the check-cashing industry (e.g. Lieberman (1997)) have asserted that banks' distant branches and inconvenient hours have been important deterrents to ownership bank accounts by LMI households.

Costs and benefits of various means of receiving and sending payments

Often, banks are regarded as providing the lower-cost transactions, savings, and lending services. Nonbank providers of financial services, such as pawnshops and check-cashing outlets, typically charge fees per transaction that are far higher than those charged by banks. Given these disparities in cost, why is it that so many LMI households have no bank accounts?

Caskey (1997a) suggested that the true costs of being banked were greater than the cost of establishing an account. He stressed that account fees such as bounced-check charges and "environmental" factors (e.g., banks might be viewed as "uncomfortable") deterred LMI families from becoming banked. Caskey also identified financial privacy as a major reason for being unbanked. Nondepository providers of check-cashing and payment services may have been viewed as making it relatively easy for individuals to avoid, for example, child support payments, debt collectors, immigration officials, and taxation.

Hawke (2002) noted that the total costs of having and using bank accounts are probably sufficiently high to encourage many of the unbanked to satisfy their payments needs via less-formal channels. Prescott and Tatar (1999) and Dunham (2001) showed that the unbanked often do not incur high explicit costs for financial services normally

associated with owning a deposit account. For example, most of the unbanked do not typically pay a fee for cashing their paychecks.

The unbanked sometimes rely on friends and family who do have accounts to convert checks to cash, occasionally use check-cashing operations, cash checks at banks-- even though they don't have accounts, and often send payments via money orders for a fee of less than one dollar. Many banks will cash checks for non-customers, particularly when the check is drawn on one of the bank's accounts. Check-cashing operations and some retail outlets also cash checks. Bills can often be paid with cash or money orders, which are widely available at banks, post offices, grocery stores, drug stores, and check-cashing operations. Perhaps surprisingly, therefore, many of the important payment services typically associated with bank accounts can be obtained without having bank accounts, though banks might still provide the services.

Policy Prescriptions

Caskey (2001) points out that managing a checking account is particularly difficult, and thus expensive, for the very poor. When an account's average balance is quite low, the expected costs associated with bouncing checks and thereby incurring pecuniary and nonpecuniary costs are correspondingly high. Caskey has laid out a policy prescription for reaching the unbanked. An important part of his prescription is an account design that does not include check-writing privileges.³

FleetBoston Financial Corporation recently announced an account designed to appeal to unbanked customers (see Agosta 2002). In line with Caskey's recommendation, the account does not include check writing, but does allow access to

cash through ATMs and/or a debit card. This account has no minimum balance or monthly fee and allows for the direct deposit of paychecks by employers.

IV. New data on the unbanked

The source of the data used in this paper is the *Survey of Financial Activities and Attitudes*. The Office of the Comptroller of the Currency (OCC) commissioned this survey. The survey was administered between October 1998 and March 1999. Our data consists of answers to the survey provided by approximately one thousand LMI individuals in New York City (NY) and another one thousand in Los Angeles (LA). The respondents were asked about their usage of and attitudes about various bank and nonbank financial services, products, and institutions.

The survey targeted populations with a high likelihood of having many persons without bank accounts. By contrast, Hogarth and O'Donnell (1999) used data from the Survey of Consumer Finances, a national survey that over-samples, not LMI, but rather wealthy individuals. Second, both Hogarth and O'Donnell (1999) and Caskey (1999) take the household as the basic unit, while the OCC survey data pertain to individuals. In addition, in order to provide a more detailed and accurate portrait of LMI individuals' banking attitudes and activities, the OCC survey was constructed to provide a generous assortment of control variables.

Survey Design

The survey employed a multistage stratified random sample design. Census tracts were the primary sampling unit. The survey was administered in 42 LMI census tracts-- 21 each in NY and LA. Stratification of the census tracts was based on income and race

³ Caskey's main policy recommendations are: (1) Fee-based check-cashing services, (2) Basic savings accounts with access to low cost money orders for transactions, (3) "Christmas Club" type accounts to

and ethnicity. Table 1 shows that the sampled census tracts quite uniformly covered low and moderate incomes and racial and ethnic groups.

Both telephone and personal interviews were used to obtain the survey data. The overall response rate was about 73 percent. Because the interviewers were bilingual, the survey was administered in either English or Spanish, depending on the native language of the respondent.

We note two technical aspects of the survey sample design that are relevant to our estimates. First, an exogenous stratification scheme was employed. This scheme can increase the variance of the sample relative to the population and thereby increase estimation precision. Exogenous stratification, however, does not bias multivariate regression estimates.⁴ Second, the survey used cluster sampling, as opposed to random sampling, across entire census tracts. Cluster sampling targeted relatively small areas (e.g. a block, or an apartment building) within census tracts. The benefits of cluster sampling include both lower overall survey costs and higher response rates.

Both exogenous stratification and cluster sampling imply that all members of the population did not have equal probabilities of being sampled. Therefore, weighted means provide a better estimate population parameters than simple means do. Cluster sampling also implies that the common econometric assumption that disturbance terms have zero covariance across survey respondents may be violated. We use robust standard errors to account for the potential non-zero covariance of disturbance terms across survey respondents within clusters.⁵

accumulate savings, (4) Deposit-secured loans, and (5) Partnerships with community based organizations.

⁴ See Maddala (1983) page 170.

⁵ For more details on the survey design and sampling techniques, see Dunham (1998).

For many questions in the survey, respondents were permitted to answer “don’t know” or “refused”. Respondents most often availed themselves of this option for questions regarding their incomes. The other questions where these answers appeared most commonly concerned race, ethnicity, and education. Respondents who answered “don’t know” or “refused” for any question about account ownership status were deleted from our sample. Respondents who answered ‘don’t know’ or ‘refused’ for two or more questions designed to yield information on independent variables were also deleted from our sample.

When such an answer appeared for only one question involving an independent variable, we used information the respondent provided about the other independent variables to estimate the respondent’s answer for the missing variable. To fill in the missing information, we used the jackknifing technique discussed in Greene (2000). The final sample that we used for all our estimates contained 1834 respondents--902 in NY and 932 in LA.

Survey Questions

The survey posed several personal finance questions, such as whether respondents had bank accounts and if so whether they were checking or savings accounts, where they cashed checks, how they made payments, whether they used banks or other nonbank companies, whether prices and proximity affected their choices, and whether they used credit cards. The survey respondents also answered several questions about their socio-economic demography, such as age, language proficiency, income, home ownership, education, sex, family size, and race.

Variable Definitions and Summary Statistics

Table 2 provides descriptive labels and definitions for the variables that we focused on. Categorical variables indicated whether each respondent had a checking account, a savings account, both, or neither. These are our dependent variables. Table 2 separates the explanatory variables into individual and neighborhood characteristics.

Table 3 shows the means (weighted to produce estimates of population parameters) of the explanatory variables that we used. Columns 1 and 2 show that, relative to those who were banked, the unbanked generally had lower incomes and less education; were more likely to be black, young, and recipients of government payments; and were less likely to own a car or home, have health insurance or be employed. By contrast, Table 3 shows that the average neighborhood characteristics of the unbanked differed little from those of the banked.

Table 4 shows the simple correlations between the categorical variables that indicate banking status and the independent variables. As is often the case with cross-section data for individuals, the correlations between the independent variables are not very high. The highest correlations were between whether an individual was Hispanic and whether the same individual was Black (-0.58), the percent of an individual's census tract that was Hispanic and the percent of an individual's census tract that was Black (-0.56), and whether an individual lived in Los Angeles and whether the same individual was Black (0.54). No other pair of variables had a correlation coefficient whose absolute value was as high as 0.50. Few independent variables were so strongly multicollinear with the other independent variables that confidence in their estimated effects was seriously eroded.

V. What did the banked say that they liked or disliked about bank accounts?

Tables 5 and 6 present (weighted) answers of the banked respondents and their ranks for the questions “What features of your bank account are most useful to you?” and “What are the things you dislike about your bank account(s)?” Responses for both of these questions are given by the four categories of banking status (had any bank account, checking only, savings only, or both). Table 7 presents weighted responses of the unbanked to the question, “What are the main reasons why you do not have a bank account?”

The thing that the banked most commonly liked about their bank accounts was that “it is easy.” We note that this is the most popular response from those that had savings accounts, while “it is easy” was only the fourth most popular response from those who had checking accounts. “Nothing in particular” was the most common response to the question, “What are the things you dislike about your bank account?” The second and third most common responses among the banked were that they disliked how expensive their accounts were, and they disliked the high minimum balances required to avoid fees. That the unbanked shared those sentiments is made clear by the fact that their most common reasons for not having a bank account were the high minimum balance requirements and fees. No other response was often cited.

VI. Statistical Findings

In this section, we report the statistical relationships between individuals’ banking status and their own and their neighborhoods’ characteristics. Tables 8, 9, and 10 present estimates of binomial logit models of banking status for the pooled NY and LA sample, for the NY sample, and for the LA sample. The dependent variable in panels A and B in

each of these tables was whether an individual had at least one bank account. Panel B differs from panel A by its inclusion of neighborhood characteristics. Panels C and D use as dependent variables whether an individual had a savings account and whether an individual had a checking account respectively.

The model shown in panel A in Table 8 is similar to regressions that appear in Hogarth and O'Donnell (2000) and Caskey (1993). We found that income, wealth (which we proxy for by ownership of health insurance, home ownership, and car ownership), education, and age are each statistically significant (at the five percent level or better) and are all associated with a greater likelihood of owning a bank account. In addition, non-employment (which includes both temporary unemployment and not in the labor force), the inability to both speak and read English, household size, and receipt of government payments also significantly reduced the likelihood of having a bank account. We also found a weakly significant effect (p -value = 0.06) for gender; females were slightly more likely to have bank accounts. This finding is somewhat surprising, because our weighted sample means suggested that females were slightly less likely to be banked.

Contrary to previous research, our estimates do not show a significant effect of race or ethnicity on the whether one is banked or unbanked. In fact, a test for the joint significance of the Black and Hispanic variables did not reach the conventional (p -value = 0.05) significance level (p -value = 0.31). This contrasts with the results of Hogarth and O'Donnell (1999) who found significant effects for Hispanic and for Black variables, and Caskey who found a significant effect for a group that encompassed all racial and ethnic minorities. The divergence between our results and these other researchers might be our

use of a larger number of socio-economic variables. It might also be due to differences in sampling.

To make our specification more like those of Hogarth and O'Donnell and Caskey, we re-estimated Panel A after removing variables related to the inability to speak and read English, car ownership, health insurance, and receipt of government payments. Like the more complete specification, we detected no significant effect of race or ethnicity: The test of the hypothesis of joint significance of the Black and Hispanic variables had a P-value = 0.20. This result suggests that differences in sample designs may be the source of the different results. Apart from the differences in race and ethnicity effects, however, our estimates were broadly consistent with those reported elsewhere.

In panel B of Table 8, we show the estimates obtained after adding six variables that measure neighborhood characteristics. Four of these variables vary by census tract: percent of population that was Hispanic, percent of population that was Black, percent of population that owned their own home, and median household income. We also added a measure (in number of blocks) of the distance to the nearest stand-alone bank office. This measure of proximity to a branch equaled the median response within each sample cluster. Because the length of a block might differ in NY and LA, we also added a variable that was the product of the proximity measure and a dummy variable that equaled one if the individual lived in LA.

The inclusion of neighborhood characteristics had little effect on the significance of individual characteristics, with all variables retaining their original sign and in most cases their broad level of significance. We found a significant effect for the percent Hispanic within the census tract (p-value .013) and a weakly significant effect for the

percent black (p-value .096). A test of the joint significance of percent Hispanic and percent black has a p-value of .046. These results suggest that while race and ethnicity at the individual level may not affect the likelihood of owning a bank account, all persons who live in communities with higher levels of Hispanics and blacks are less likely to own an account. Importantly, this effect is independent of bank branch location, as reflected in the fact that the measure of distance to the nearest bank office is insignificant in explaining account ownership. Other neighborhood effects, including median household income and percent homeownership, were also insignificant.

The dependent variables in the models shown in panels C and D of Table 8 are whether the individual had a savings account and a checking account respectively. Comparing these columns shows how the determinants of having savings and checking account differ. In panel C the dependent variable is one if the individual had a savings account and was zero otherwise. In panel D the dependent variable took on the value one if the individual had a checking account and was zero otherwise.

Panel D shows that the effects of the independent variables on checking account ownership are broadly similar to those shown in panels A and B for ownership of any bank account. In panel D, however, individuals' race and ethnicity were both significant. At the same time, the neighborhood race effects remained significant. Thus, blacks and Hispanics were generally less likely to have checking accounts. In addition, living in neighborhoods that had higher proportions of blacks and Hispanic also made it less likely than anyone living in that census tract would own a checking account. As before, proximity to the nearest branch was not a significant determinant of whether an individual owned a checking account.

The estimates for savings accounts differ notably from the estimates for checking accounts. We found that, *ceteris paribus*, blacks and Hispanics were more likely to have savings accounts than whites were. The estimated effect of being Hispanic was strongly significant (p -value = 0.03); the estimated effect of being black had a p -value = 0.10. A test for the joint significance of black and Hispanic variables had a p -value = 0.09. Income, wealth (proxied by ownership of health insurance, home ownership and car ownership), not in labor force, age and receipt of government payments were each significant determinates of whether an individual owned a savings account and carried the expected sign. Gender, temporary unemployment, inability to speak and read English, and education were all significant covariates for having a checking account, but none was significantly related (at conventional levels) to ownership of a saving account. Measures of the racial and ethnic composition of an individuals' neighborhood were significant determinants of having savings accounts, just as they were for checking accounts. A test for the joint significance of the percent of the neighborhood that was Hispanic and the percent of the neighborhood that was black had a p -value of 0.03. Thus, our estimates suggest that while minority individuals were more likely to have savings accounts, savings accounts were generally less common the larger the minorities' share of the population of a neighborhood.

Our results regarding the effects of income, wealth and education on bank account ownership fit neatly into Caskey's framework that stresses the difficulty of managing a checking account among the very poor. If an account holder's balance approaches zero every month than the possibility of bouncing checks and incurring fees is high. Thus persons with lower average income, wealth, and education should prefer savings accounts

to checking accounts when they choose to own a bank account. However, the difficulty of managing a checking account for the very poor does not explain the observed effects of race, both at the individual level (minorities are less likely to own a checking account, but more likely to own a saving account), and at the neighborhood level (anyone living in a community with higher levels of minorities is less likely to own a bank account).

One possible explanation for the observed race effects, both at the individual and neighborhood level, is that retailers in LMI neighborhoods may be less willing to accept checks from individual minorities specifically or from individuals doing business in minority neighborhoods. Unfortunately, we do not have a measure of check acceptance to directly test this hypothesis. If this hypothesis were true, however, then the effect of the racial composition of the neighborhood should be stronger for checking accounts than for savings accounts.

To explore differences in ownership patterns between checking accounts and savings accounts, we estimated a multinomial logit model. The dependent variable represented four independent states: (1) unbanked, (2) having only a savings account, (3) having only a checking account, and (4) having both a checking and savings accounts. We used having only a checking account as the reference category. Thus, the effects of all independent variables are relative to owning only a checking account. We dropped the variables that controlled for median household income, percent homeownership, and proximity to the nearest bank office because these had not been statistically significant in our previous specifications.

Panels A, B, and C of Table 11 present our multinomial logit estimates for the unbanked, for those with only savings accounts, and for those with both savings and

checking accounts. The estimates paint a statistical portrait that is quite similar to that shown by the binominal logit estimates in Tables 8, 9, and 10. Blacks, Hispanics, those out of the labor force, those who do not speak and read English, and those receiving government payments are each more likely to be unbanked (relative to having only a checking account). Higher income, greater wealth, and being female were associated with a lower likelihood of being unbanked.

Being black or Hispanic was also associated with a significantly higher likelihood that an individual would have only savings account (relative to owning only a checking account). Homeownership and more education were each associated with a lower likelihood of having a savings account. Most of the other control variables did not significantly affect the choice between having a savings and a checking account.

Focusing in on the role of neighborhood effects, we show that the higher the percentage of a neighborhoods' population that were black or Hispanic, the greater the likelihood that anyone living in the census tract will be unbanked (relative to owning only a checking account). However, living in a neighborhood with a higher percent of minorities is not associated with an increased likelihood of owning a savings account relative to a checking account (although the sign of this effects is consistent with our hypothesis regarding systematic differences in the ease of paying by check in different census tracts). Finally, we test the hypothesis whether the racial or ethnic composition of neighborhoods is significant when comparing owning a savings account to being unbanked. The p-value of the test that $\text{percent black}_{\text{unbanked}} = \text{percent black}_{\text{savings only}}$ equaled 0.87; for percent Hispanic the analogous p-value was 0.18. Thus we do not show a significant effect of the racial composition of the neighborhood on the choice between

being unbanked and owning only a savings account. Taken as a whole these three tests provided weak evidence that higher levels of racial and ethnic minorities at the neighborhood level was more relevant to deterring checking account ownership than savings account ownership.

Reviewing all our empirical results thus far suggests the following conclusions: Income, wealth, being out of work, age, and receipt of government payments were each significant determinants of what bank accounts individuals owned. Education and inability to speak and read English were also significant, except in the case of owning only a savings account. Homeowners and those with more education were more likely to have checking accounts, whether in isolation or along with savings accounts. Homeowners were also more likely to have savings accounts, which were typically coupled with checking accounts. Blacks and Hispanics were more likely to be unbanked and less likely to own checking accounts than whites were. However, Blacks and Hispanics were generally more likely to own savings accounts than whites were.

The higher proportion of a neighborhood's population that was minority (particularly Hispanic), the lower the likelihood of account ownership for everyone in the neighborhood. Generally, we found stronger effects of the racial and ethnic composition of neighborhoods on the likelihood of owning a checking account than on owning a savings account. Proximity, as measured by the number of blocks to the nearest bank branch, was never found to have significantly affected banking status.

VII. Conclusions

Our estimates add considerably to the systematic statistical analysis of the unbanked and of the banking choices of LMI individuals. We show that socio-economic

characteristics have significant and importantly different effects on the choices about which bank accounts to have. In particular, racial and ethnic minorities were less likely to have checking accounts than whites were, but were more likely to have savings accounts.

Our estimates could be used to support Caskey's recommendation that efforts to reach LMI individuals should focus on savings accounts. Caskey's view that managing a checking account is particularly difficult (and likely very costly) for the very poor is consonant with our findings that those with less income, education, employment, and wealth are more likely to own a savings account than a checking account.

We also provide evidence that, in addition to individuals' characteristics, neighborhood characteristics significantly affected whether individuals were unbanked. Our estimates showed that everyone living in neighborhoods with higher proportions of racial or ethnic minorities was less likely to have any bank account and that the likelihood of owning a checking account was particularly reduced by neighborhood effects.

Caskey's view about the difficulty of managing a checking account does not easily explain these effects. One of many possibilities may be that retailers in LMI neighborhoods may be less willing to accept checks from individual minorities specifically or from individuals doing business in LMI neighborhoods generally. If so, minorities and non-minorities doing business in minority neighborhoods may reap fewer benefits from having bank accounts (and checking account in particular) and therefore have lower demand for them than individuals whose individual and neighborhood characteristics make for greater acceptance of their checks. While we have provided

some support for this proposition, however, further work is needed to more fully understand differences in bank account ownership patterns by race and racial composition of neighborhoods.

Importantly, one factor that consistently had no discernible impact on banking status was proximity. Measures of distance to the nearest branch were not significant in explaining accounts.

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Table 1

Survey Census Tracts by Race and Income

Selection Criteria	Number of Tracts	
	Low Income	Moderate Income
Majority Black	3	3
Majority Hispanic	3	3
Majority White	3	3
Integrated	1	2

Memo: 21 Census tracts were sampled in each city (NY and LA) according to this distribution.

Table 2
Variable Labels and Definitions

Variable Label	Definitions
Dependant Variables	
Unbanked	1= has no checking or savings account.
Savings	1= has savings account.
Checking	1= has checking account.
Multinomial	0=unbanked, 1= savings acct only, 2=checking acct only, 3=savings and checking acct.
Individual Characteristics	
Income	7.5 if income <15; 22.5 if 15<income<30; 37.5 if 30<income< 45; 52.5 if income> 45.
Hispanic	1= Hispanic.
Black	1= Black.
Unemployed	1= temporarily unemployed.
Not in labor force	1= unemployed for a long period of time (e.g. retired, homemaker, student, or disabled).
Health Insured	1= covered by health insurance.
Own home	1= own home.
Own car	1= own car (or truck or other motor vehicle).
Education	Formal education (in years).
English illiteracy	1= cannot speak or read English.
Female	1= female.
Age	age (in years).
Receipt of gov't pmt	1=received government support payments (e.g. food stamps, welfare).
Household size	household size.
Neighborhood Characteristics	
LA indicator	1= Los Angles resident, 0= New York resident.
Distance to bank	median distance in blocks for each sampling cluster to the nearest stand alone bank office.
LA*Distance	LA*Distance to bank.
Percent Hispanic	Share of Hispanics in total population for each census tract.
Percent black	Share of blacks in total population for each census tract.
Percent own home	Share of housing units owned by occupant for each census tract.
Median HH income	Median household income for each census tract.

Memo: Incomes are stated in thousands of dollars.

Table 3**Weighted Means of Characteristics**

	Total	Unbanked	Banked		
			Savings Only	Checking Only	Checking & Savings
Variable label	N=1834	N=573	N=232	N=335	N=694
Individual Characteristics					
Income	28.6	20.8	23.2	32.9	37.4
Hispanic	0.57	0.67	0.52	0.51	0.51
Black	0.34	0.32	0.50	0.32	0.31
Unemployed	0.05	0.08	0.04	0.04	0.02
Not in labor force	0.33	0.48	0.21	0.26	0.24
Health Insured	0.72	0.57	0.67	0.74	0.89
Own home	0.24	0.07	0.03	0.29	0.49
Own car	0.48	0.25	0.34	0.59	0.74
Education	11.3	10.1	10.2	12.2	12.5
English illiteracy	0.09	0.15	0.16	0.04	0.02
Female	0.54	0.55	0.49	0.61	0.52
Age	40.1	37.4	43.9	42.0	40.6
Receipt of gov't	0.14	0.28	0.10	0.09	0.02
Household size	4.23	4.64	3.99	4.31	3.81
Neighborhood Characteristics					
LA indicator	0.52	0.42	0.34	0.60	0.66
Distance to bank	3.23	2.98	2.62	3.35	3.72
LA*Distance	2.36	2.00	1.61	2.68	2.92
Percent Hispanic	0.53	0.55	0.47	0.53	0.53
Percent black	0.31	0.32	0.42	0.29	0.26
Percent own home	0.18	0.15	0.14	0.20	0.22
Median HH income	19.2	18.2	18.5	19.3	20.6

Table 4

Simple Correlations between Characteristics

	Unbanked	Savings only	Checking only	Checking & Savings	Income	Hispanic	Black	Unemployed	Not in labor force	Health insured	Own home	Own car	Education	English literacy	Female	Age	Receipt of gov't pmt	Household size	LA indicator	Distance to bank	LA*Distance	Percent Hispanic	Percent black	Percent own home	Median HH income	
Unbanked	1.00																									
Savings only	-0.26	1.00																								
Checking only	-0.32	-0.18	1.00																							
Checking & Savings	-0.53	-0.30	-0.37	1.00																						
Income	-0.40	-0.11	0.02	0.44	1.00																					
Hispanic	0.24	0.07	-0.08	-0.22	-0.24	1.00																				
Black	-0.08	0.06	-0.02	0.06	0.05	-0.58	1.00																			
Unemployed	0.13	0.00	-0.04	-0.09	-0.12	0.04	-0.03	1.00																		
Not in labor force	0.28	-0.03	-0.06	-0.20	-0.35	0.10	-0.01	-0.13	1.00																	
Health insured	-0.29	-0.03	0.04	0.26	0.22	-0.24	0.16	-0.12	0.00	1.00																
Own home	-0.26	-0.14	0.02	0.33	0.34	-0.14	0.06	-0.05	-0.05	0.14	1.00															
Own car	-0.35	-0.10	0.10	0.32	0.38	-0.10	-0.01	-0.09	-0.23	0.09	0.37	1.00														
Education	-0.32	-0.12	0.06	0.34	0.46	-0.37	0.10	-0.09	-0.25	0.26	0.19	0.28	1.00													
English illiteracy	0.22	0.02	-0.07	-0.17	-0.17	0.29	-0.21	0.09	0.11	-0.22	-0.08	-0.11	-0.41	1.00												
Female	0.08	-0.03	0.03	-0.08	-0.19	-0.01	0.08	-0.05	0.26	0.04	-0.04	-0.13	-0.09	0.08	1.00											
Age	-0.15	0.06	0.05	0.06	-0.14	-0.21	0.16	-0.08	0.29	0.20	0.20	-0.01	-0.10	0.01	0.03	1.00										
Receipt of gov't pmt	0.36	-0.02	-0.10	-0.25	-0.38	0.11	0.00	0.11	0.38	0.04	-0.18	-0.28	-0.22	0.07	0.16	0.03	1.00									
Household size	0.15	0.02	-0.03	-0.13	0.03	0.24	-0.08	0.06	0.05	-0.16	0.01	0.00	-0.17	0.10	0.07	-0.27	0.05	1.00								
LA indicator	-0.14	-0.15	0.10	0.16	0.19	0.00	-0.07	-0.03	-0.12	-0.08	0.38	0.44	0.05	0.07	-0.02	-0.02	-0.21	0.10	1.00							
Distance to bank	-0.02	-0.11	0.00	0.10	0.12	0.04	0.00	0.00	-0.09	-0.13	0.22	0.23	-0.01	0.13	-0.03	-0.05	-0.13	0.11	0.54	1.00						
LA*Distance	-0.08	-0.13	0.07	0.11	0.13	0.05	-0.06	-0.02	-0.09	-0.12	0.34	0.35	0.00	0.13	-0.02	-0.02	-0.17	0.13	0.87	0.75	1.00					
Percent Hispanic	0.16	-0.02	-0.01	-0.13	-0.13	0.43	-0.28	0.04	0.05	-0.15	0.00	0.02	-0.17	0.19	0.00	-0.12	0.07	0.17	0.19	0.24	0.28	1.00				
Percent black	0.02	0.08	-0.06	-0.03	-0.06	-0.22	0.50	0.00	0.04	0.04	0.01	-0.06	-0.09	-0.04	0.07	0.09	0.07	0.01	-0.16	0.02	-0.13	-0.56	1.00			
Percent own home	-0.12	-0.10	0.07	0.13	0.13	-0.03	0.12	-0.03	-0.09	-0.05	0.36	0.34	-0.01	0.07	0.02	0.02	-0.17	0.10	0.74	0.42	0.69	0.02	0.18	1.00		
Median HH income	-0.16	-0.08	0.05	0.17	0.26	-0.07	-0.08	-0.01	-0.12	-0.04	0.22	0.26	0.17	-0.04	-0.06	-0.03	-0.22	-0.01	0.47	0.23	0.40	-0.07	-0.20	0.42	1.00	

Table 5

**Answers to Survey Question:
What are the things you like about your bank account?**

Answer	All Banked		Checking Only		Savings Only		Checking & Savings	
	N=1261		N=335		N=232		N=694	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
it is easy	19.2	1	10.5	4	23.4	1	22.4	1
nothing in particular	16.2	2	13.1	2	20.0	2	16.3	3
I can use direct deposit	14.7	3	17.7	1	6.2	6	16.6	2
it is safe	12.1	4	8.2	7	14.4	3	13.4	4
it has convenient office (or ATM) locations	8.9	5	9.2	5	4.2	8	10.8	5
it is inexpensive	8.4	6	12.3	3	7.2	4	6.6	8
the checks I deposit clear quickly	7.9	7	8.3	6	4.6	7	9.1	6
it is fast	6.5	8	4.7	10	6.6	5	7.5	7
the required balance is low	3.0	9	5.2	9	2.3	9	2.0	9
it is easy to use in my own language	2.3	10	7.0	8	0.6	11	0.3	11
its branches are open during convenient hours	1.1	11	0.3	11	1.3	10	1.5	10

Table 6

**Answers to Survey Question:
What are the things you dislike about your bank account?**

	All Banked		Checking Only		Savings Only		Checking & Savings	
	N=1261		N=335		N=232		N=694	
Answer	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
nothing in particular	58.7	1	59.8	1	76.0	1	50.5	1
it is expensive	9.3	2	9.3	2	1.2	4	12.9	2
the bank requires a high balance (to avoid fees)	7.4	3	2.2	4	8.0	2	10.1	3
it is slow to operate	3.9	4	3.4	3	1.1	5	5.4	4
it has no convenient office (or ATM) locations	1.9	5	1.2	6	1.6	3	2.5	5
the checks I deposit clear slowly	1.1	6	0.3	7	0.6	6	1.8	6
it is not safe (at offices or ATMs)	0.8	7	1.5	5	0.2	8	0.6	9
the offices are not open during convenient hours	0.5	8	0.0	9	0.0	10	1.0	7
I can not operate bank account in my language	0.4	9	0.1	8	0.1	9	0.6	8
the bank requires me to use direct deposit (in order to have low fees or a free account)	0.1	10	0.0	9	0.5	7	0.0	10
it is difficult to operate	0.0	11	0.0	9	0.0	10	0.0	10

Table 7

Answers to Survey

What are the main reasons why you do not have a bank account?

Answer	Unbanked N=573	
	Mean	Rank
Do you not have the amount of money banks require to open an account?	22.6	1
Are bank fees too high?	16.0	2
The bank might report to the government about you account?	4.3	3
Your account could be "frozen" by the government or a creditor?	3.3	4
Do banks hold your checks too long?	2.9	5
You do not think you would feel welcome at a bank or treated with respect there?	2.8	6
Are banks not located conveniently?	0.0	7
Are banks not open when you need to use them?	0.0	7
Is it not easy to speak with bank staff in a language other than English?	0.0	7
Are you not quite sure how to open an account?	0.0	7
You would need a Social Security number to open an account?	0.0	7
The bank would not let you open an account? [No job, poor credit rating]	0.0	7

Table 8

**Estimated Binomial Logit Model of Banking Status
NY and LA
(N=1834)**

Dependent Variable	Panel A		Panel B		Panel C		Panel D	
	Banked=1		Banked=1		Savings Acct=1		Checking Acct=1	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Individual Characteristics								
Intercept	-3.00	0.00	-2.35	0.00	-2.27	0.00	-2.49	0.00
Income	0.04	0.00	0.04	0.00	0.03	0.00	0.04	0.00
Hispanic	-0.23	0.17	-0.06	0.73	0.36	0.03	-0.59	0.00
Black	-0.24	0.21	-0.12	0.56	0.29	0.10	-0.64	0.00
Unemployed	-0.54	0.05	-0.54	0.05	-0.24	0.36	-0.42	0.19
Not in labor force	-1.05	0.00	-1.05	0.00	-0.67	0.00	-0.59	0.00
Health Insured	0.97	0.00	0.94	0.00	0.70	0.00	0.93	0.00
Own home	0.60	0.00	0.65	0.00	0.47	0.01	0.92	0.00
Own car	0.90	0.00	0.91	0.00	0.47	0.00	0.77	0.00
Education	0.08	0.01	0.07	0.01	0.03	0.26	0.11	0.00
English illiteracy	-0.55	0.02	-0.46	0.06	-0.23	0.37	-0.54	0.04
Female	0.26	0.06	0.24	0.09	-0.02	0.89	0.36	0.02
Age	0.04	0.00	0.04	0.00	0.02	0.00	0.02	0.00
Receipt of gov't pmt	-1.00	0.00	-0.92	0.00	-0.75	0.00	-0.80	0.00
Household size	-0.07	0.05	-0.06	0.08	-0.06	0.06	-0.11	0.00
Neighborhood Characteristics								
LA indicator	0.10	0.53	0.10	0.76	-0.27	0.23	0.50	0.13
Distance to bank			-0.03	0.44	0.02	0.57	0.06	0.20
LA*Distance			0.00	0.99	-0.03	0.58	-0.06	0.41
Percent Hispanic			-1.10	0.01	-0.70	0.02	-1.18	0.00
Percent black			-0.66	0.10	-0.17	0.57	-1.11	0.00
Percent own home			0.44	0.54	0.00	1.00	0.97	0.14
Median HH income			0.00	0.92	0.01	0.51	-0.01	0.36

Table 9

**Estimated Binomial Logit Model of Banking Status
Los Angeles
(N=932)**

Dependent Variable	Panel A		Panel B		Panel C		Panel D	
	Banked=1		Banked=1		Savings Acct=1		Checking Acct=1	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Individual Characteristics								
Intercept	-3.11	0.00	-2.48	0.03	-2.52	0.00	-2.29	0.02
Income	0.04	0.00	0.04	0.00	0.03	0.00	0.04	0.00
Hispanic	-0.38	0.17	-0.20	0.48	0.30	0.19	-0.30	0.25
Black	-0.80	0.01	-0.64	0.13	0.35	0.14	-0.84	0.03
Unemployed	-0.64	0.12	-0.62	0.12	-0.09	0.80	-1.26	0.01
Not in labor force	-1.16	0.00	-1.18	0.00	-0.43	0.05	-0.81	0.00
Health insured	1.21	0.00	1.18	0.00	0.86	0.00	1.07	0.00
Own home	0.49	0.04	0.53	0.03	0.59	0.00	0.88	0.00
Own car	0.92	0.00	0.92	0.00	0.52	0.01	0.74	0.00
Education	0.06	0.18	0.06	0.23	0.02	0.52	0.11	0.02
English illiteracy	-0.83	0.00	-0.80	0.01	-0.23	0.50	-0.75	0.03
Female	0.60	0.01	0.62	0.00	0.13	0.38	0.55	0.02
Age	0.05	0.00	0.05	0.00	0.01	0.09	0.03	0.01
Receipt of gov't pmt	-0.62	0.06	-0.59	0.07	-0.64	0.05	-0.02	0.96
Household size	-0.09	0.09	-0.08	0.11	-0.04	0.45	-0.11	0.02
Community Characteristics								
Distance to bank			-0.03	0.45	-0.02	0.47	0.01	0.86
Percent Hispanic			-1.03	0.20	-0.70	0.14	-1.37	0.03
Percent black			-1.34	0.13	-0.74	0.17	-1.21	0.09
Percent own home			1.71	0.15	1.09	0.15	0.89	0.38
Median HH income			-0.01	0.71	0.01	0.70	-0.02	0.52

Table 10

**Estimated Binomial Logit Model of Banking Status
New York
(N=902)**

	Panel A		Panel B		Panel C		Panel D	
Dependent Variable	Banked=1		Banked=1		Savings Acct=1		Checking Acct=1	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Individual Characteristics								
Intercept	-2.81	0.00	-1.89	0.03	-2.56	0.00	-1.94	0.00
Income	0.03	0.00	0.03	0.00	0.03	0.00	0.04	0.00
Hispanic	-0.15	0.49	0.09	0.72	0.45	0.07	-0.75	0.00
Black	-0.02	0.93	0.04	0.87	0.29	0.25	-0.59	0.00
Unemployed	-0.50	0.15	-0.47	0.17	-0.39	0.31	0.30	0.42
Not in labor force	-1.03	0.00	-1.03	0.00	-0.92	0.00	-0.38	0.17
Health insured	0.77	0.00	0.72	0.00	0.56	0.00	0.84	0.00
Own home	0.82	0.17	0.77	0.20	0.16	0.68	1.16	0.03
Own car	0.84	0.00	0.87	0.00	0.52	0.00	0.76	0.00
Education	0.09	0.02	0.10	0.01	0.06	0.14	0.11	0.00
English illiteracy	-0.30	0.44	-0.13	0.75	-0.14	0.73	-0.27	0.53
Female	0.08	0.64	0.02	0.93	-0.22	0.25	0.25	0.15
Age	0.04	0.00	0.03	0.00	0.03	0.00	0.02	0.01
Receipt of gov't pmt	-1.11	0.00	-1.01	0.00	-0.63	0.01	-1.30	0.00
Household size	-0.07	0.14	-0.06	0.20	-0.09	0.02	-0.12	0.01
Neighborhood Characteristics								
Distance to bank			-0.04	0.31	0.01	0.82	0.06	0.24
Percent Hispanic			-1.58	0.01	-1.09	0.01	-1.21	0.03
Percent black			-0.57	0.21	-0.14	0.72	-1.14	0.01
Percent own home			0.78	0.55	-2.02	0.05	1.42	0.25
Median HH income			-0.01	0.67	0.02	0.36	-0.02	0.22

Table 11

**Multinomial Logit Model of Banking Status
NY and LA
(N=1834)**

	Unbanked		Savings Only		Checking & Savings	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Individual Characteristics						
Intercept	3.32	0.00	0.32	0.69	-0.92	0.22
Income	-0.03	0.00	-0.01	0.12	0.03	0.00
Hispanic	0.52	0.02	1.20	0.00	0.33	0.16
Black	0.58	0.03	1.15	0.00	0.29	0.22
Unemployment	0.73	0.07	0.25	0.65	0.26	0.54
Not in labor force	0.95	0.00	-0.32	0.26	-0.07	0.73
Health insured	-0.85	0.00	-0.27	0.22	0.54	0.02
Own home	-0.48	0.07	-0.75	0.02	0.61	0.01
Own Car	-0.91	0.00	-0.30	0.15	0.18	0.29
Education	-0.09	0.04	-0.08	0.04	0.04	0.34
English illiteracy	0.67	0.04	0.34	0.39	0.04	0.94
Female	-0.44	0.01	-0.39	0.05	-0.12	0.42
Age	-0.04	0.00	0.00	0.67	0.00	0.52
Receipt of gov't pmt	0.94	0.00	0.12	0.72	-0.13	0.71
Household size	0.04	0.38	0.05	0.32	-0.10	0.04
Neighborhood Characteristics						
LA	-0.58	0.00	-0.99	0.00	-0.32	0.09
Percent Hispanic	1.05	0.02	0.23	0.61	-0.37	0.35
Percent black	0.82	0.05	0.73	0.13	0.03	0.93

Memo: All estimates are relative to owning a checking account only.

Table 12

**Multinomial Logit Model of Banking Status
LA
(N=932)**

	Unbanked		Savings Only		Checking & Savings	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Individual Characteristics						
Intercept	3.11	0.01	-0.52	0.69	-1.11	0.23
Income	-0.04	0.00	-0.01	0.16	0.02	0.00
Hispanic	0.47	0.14	0.80	0.13	0.40	0.12
Black	1.07	0.03	1.29	0.02	0.54	0.07
Unemployment	1.16	0.08	1.45	0.05	-0.14	0.81
Not in labor force	1.23	0.00	0.04	0.92	0.20	0.40
Health insured	-0.99	0.00	-0.16	0.62	0.59	0.06
Own home	-0.27	0.38	-0.74	0.03	0.82	0.00
Own Car	-0.86	0.00	-0.14	0.71	0.17	0.58
Education	-0.06	0.37	-0.12	0.03	0.05	0.31
English illiteracy	1.04	0.00	0.40	0.43	0.11	0.84
Female	-0.70	0.01	-0.24	0.51	-0.04	0.83
Age	-0.05	0.00	0.00	0.75	-0.01	0.12
Receipt of gov't pmt	0.32	0.50	-1.32	0.11	-0.01	0.98
Household size	0.09	0.20	0.10	0.30	-0.04	0.56
Neighborhood Characteristics						
Percent Hispanic	0.79	0.28	0.49	0.52	-0.65	0.14
Percent black	0.62	0.39	0.36	0.69	-0.28	0.45

Memo: All estimates are relative to owning a checking account only.

Table 13

**Multinomial Logit Model of Banking Status
NY and LA
(N=902)**

	Unbanked		Savings Only		Checking & Savings	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Individual Characteristics						
Intercept	2.86	0.01	0.01	0.99	-1.15	0.33
Income	-0.02	0.25	-0.01	0.64	0.05	0.00
Hispanic	0.57	0.09	1.45	0.00	0.29	0.49
Black	0.36	0.29	1.01	0.00	0.06	0.86
Unemployment	0.37	0.44	-0.76	0.28	0.53	0.42
Not in labor force	0.65	0.04	-0.69	0.09	-0.45	0.24
Health insured	-0.69	0.02	-0.30	0.35	0.57	0.07
Own home	-1.10	0.11	-1.52	0.03	-0.06	0.87
Own Car	-0.85	0.00	-0.32	0.15	0.31	0.09
Education	-0.12	0.02	-0.06	0.28	0.02	0.72
English illiteracy	0.26	0.63	0.19	0.76	-0.04	0.96
Female	-0.36	0.12	-0.55	0.05	-0.29	0.30
Age	-0.03	0.00	0.01	0.47	0.01	0.44
Receipt of gov't pmt	1.42	0.00	0.84	0.03	0.03	0.94
Household size	0.00	1.00	0.01	0.83	-0.20	0.01
Neighborhood Characteristics						
Percent Hispanic	1.28	0.12	-0.24	0.71	-0.39	0.65
Percent black	1.02	0.10	0.94	0.12	0.14	0.86

Memo: All estimates are relative to owning a checking account only.