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A FRAMEWORK OF ASSET-ACCUMULATION STAGES AND STRATEGIES

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AUTHORS' NOTE

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ABSTRACT

We propose that asset accumulation occurs in three stages. In the first stage (reallocation), current resource inflows must exceed current outflows. To meet this objective, people reallocate resources from current consumption, current leisure, or future consumption or leisure. In the second stage (conversion), people may convert resources from liquid to illiquid forms. In the third stage (maintenance), individuals resist temptations to dissave. We suggest that people adopt psychological and behavioral strategies to achieve each of these objectives. Putting the two types of strategies together with the three stages of asset accumulation results in six strategy groups. We provide examples of each strategy group and discuss implications related to encouraging account ownership among the unbanked, improving asset-accumulation programs, and improving financial-education curricula.

Key Words: saving, financial services, unbanked, financial education

Financial assets are a base for family economic security and development. Saving and asset accumulation are almost universally viewed as desirable goals, and much effort has been devoted to the development of financial-education curricula that include practical strategies for saving and asset accumulation. In this paper, we propose a framework of asset-accumulation strategies that assumes that asset accumulation occurs in three “stages” and that individuals engage in two broad categories of asset-accumulation strategies. If validated by future research, this framework can provide a structure for thinking systematically about asset-accumulation programs. It may also provide new—or more specific—rationales for particular program and policy efforts. For example, the framework identifies new strategies that may be taught in financial-education curricula. The framework also strongly reinforces the idea that bank accounts facilitate saving and asset accumulation. The framework thus provides additional support for current efforts on the part of policy-makers, program administrators, and practitioners to encourage account ownership among the “unbanked.”

We begin with some definitions. *Saving* occurs when current income exceeds current consumption and therefore when total resources increase. We focus here on financial resources. Financial resources that last through time are *assets*. *Dissaving* occurs when current consumption exceeds current income and when total resources decrease. Dissaving is the opposite of saving. *Asset accumulation* is an increase in assets, and saving leads to asset accumulation as long as saving is greater than dissaving.

The rest of the paper describes existing theory and research related to saving and asset-accumulation strategies, proposes a framework of stages and strategies, and offers program and policy implications.

THEORY AND RESEARCH RELATED TO ASSET-ACCUMULATION STRATEGIES

What strategies do people use to save and accumulate assets? A few scholars have begun to develop theory in this area, and some exploratory research has identified saving and asset-accumulation strategies. Existing theory and research address strategies used to control spending, strategies used to earmark resources for saving, and sources of savings.

Strategies to Control Spending

The most well developed theoretical framework related to strategies of saving and asset accumulation is the behavioral life-cycle hypothesis proposed by Shefrin and Thaler (1988; 1992; see also Thaler, 1990; Thaler & Shefrin, 1981). These scholars stress that individuals are tempted to spend and that saving requires effort and self-control. Thus, to reduce the need to exercise self-control, individuals may choose to alter their incentives or to create their own constraints.

In some cases, people adopt simple “rules-of-thumb” such as restricting borrowing to certain purchases, paying off credit card bills every month, or choosing to save a certain amount each month. In other cases, individuals use “precommitment constraints,” techniques that make it difficult to choose current pleasure at the expense of future pleasure (Maital, 1986; Maital &

Maital, 1994; Shefrin & Thaler, 1988). A common precommitment constraint is payroll deduction. When pension-plan contributions, for example, are deducted from a person's paycheck, the participant no longer has to make, on a monthly or weekly basis, a conscious decision to save. Other precommitment constraints include Christmas and vacation accounts, over-withholding of income taxes (Neumark, 1995), and even mortgage-financed home purchases (Maital & Maital, 1994).¹ In short, behavioral theory implies that household saving is at least in part "the result of the successful and sophisticated imposition of welfare-improving, self-imposed constraints on spending" (Maital & Maital, 1994, p. 7).

Strategies to resist spending temptations are relevant to households of all income levels.² However, these strategies may be particularly important to low-income families because they are closer to subsistence (thus the marginal utility of consumption is high) and because they may face greater pressures to transfer resources to less-advantaged social-network members (see, e.g., Chiteji & Hamilton, 2000; Stack, 1974). Several qualitative studies provide insight into strategies used by low-income households to resist spending temptations. Observed strategies include: (1) choosing to receive the federal Earned Income Tax Credit (EITC) as a lump-sum, rather than choosing the advance-payment option (Olson & Davis, 1994);³ (2) postponing the cashing of checks (Finn, Zorita, & Coulton, 1994); (3) giving money to trusted individuals to avoid spending it (Caskey, 1997); (4) making rent, child care, or other payments in advance (Caskey, 1997; Romich & Weisner, 2000); (5) choosing not to have an ATM card (Caskey, 1997); (6) choosing a savings account that charges per withdrawal (Caskey, 1997); and (7) opening a bank account at a branch that is inconveniently located (Romich & Weisner, 2000).

Strategies to Earmark Resources for Savings

A second feature of the behavioral life-cycle hypothesis is the proposition that people use systems of mental accounts (Shefrin & Thaler, 1992). A simple mental accounting scheme might consist of two accounts: "spending money" and assets. Shefrin and Thaler posit that the source and the amount of resources received largely determine whether resources are earmarked as spending money or assets. Large gains in economic resources, relative to income, tend to be designated as assets. Asset income and other inflows not considered "regular, earned" income also tend to be earmarked as assets (Thaler, 1990).

Two small studies using survey data provide some evidence that people do indeed use mental accounts (Shefrin & Thaler, 1988; Winnett & Lewis, 1995). In addition, in ethnographic research with 30 low- and moderate-income families, Caskey (1997) found that several families had accumulated savings because they had received recent lump-sum payments (see also Lazear, 1999). This behavior is consistent with the behavioral proposition that "irregular" income is more likely to be earmarked for savings.

Sources of Savings and Strategies to Cope with Budget Shortfalls

Besides the literature related to resisting spending temptations and earmarking resources for savings, there is some literature regarding sources of saving deposits and strategies used by households to cope with budget shortfalls. Schreiner et al. (2001) note that deposits into savings

accounts may be new savings or shifted assets. New savings come from increases in time and effort allocated to market or household production or decreases in consumption, while asset shifts come from debt or from resources saved in the past. Using data from a survey of about 300 low-income participants in a matched-saving program, Moore, Beverly, Schreiner, et al. (2001) found that the most common strategies for setting aside money for savings were shopping more carefully for food, eating out less, spending less on leisure, and buying used clothing.

Data on strategies used by households to cope with budget shortfalls are also informative. Using survey and in-depth interview data from almost 2,000 U.S. families, Caplovitz (1979) identified four types of adjustments in financial management: increasing income, reducing consumption, increasing the efficiency of resource use, and increasing debt. The most common strategy was reducing consumption, followed by increasing efficiency, and increasing income. Assuming debt was relatively uncommon. Varcoe (1990) surveyed 934 households in California regarding methods for meeting unexpected expenses. Twenty-seven percent said they did without new clothes, entertainment, or other items, 14 percent borrowed money from a financial institution, 11 percent postponed paying other bills, and 8 percent borrowed from friends or family.⁴ In in-depth interviews with 42 low-income families in Milwaukee, Romich and Weisner (2000) noted the following strategies: increasing work hours, cooking inexpensive meals, being more vigilant about collecting child-support payments from non-custodial parents, borrowing money from relatives, and conserving energy to reduce utility payments.

ASSET-ACCUMULATION STRATEGIES: A PROPOSED FRAMEWORK

We find it useful to assume that asset accumulation occurs in three “stages.” First, current resource inflows exceed current outflows. To meet this objective, people often reallocate resources from consumption, but they may also increase resource inflows without reducing consumption, for example, by working more. This constitutes a reallocation of time and effort from leisure to labor. Individuals may also reallocate resources through time. We refer to this first stage of asset accumulation as *reallocation*.

In the second stage of asset accumulation, resources may be converted from some easy-to-spend form to a more difficult-to-spend form. For example, cash may be converted to resources in a bank account or cash held by a trusted friend. Although asset accumulation can occur without this second step (if resources are saved and maintained in liquid forms), the theoretical literature summarized above implies that asset accumulation is more likely when resources are converted to less-liquid forms. We refer to this stage as *conversion*.

Finally, in the third stage, for saving to lead to asset accumulation, individuals must resist pressures to dissave. We refer to this stage as *maintenance*. Maintaining assets is not an end in itself, but a means to obtain certain goods and services, such as education, a house, a car, or a vacation.

Next, as a simplification, we suggest that people often use two types of strategies: psychological and behavioral. Psychological strategies are grounded in saving goals, asset goals, and/or self-imposed rules about making deposits and maintaining assets. They may be viewed as mental

“tricks” that reduce the deliberation and self-control required to save and maintain assets. Behavioral strategies represent efforts to change economic actions, especially efforts to control consumption and methods of making deposits and withdrawals. Data from a matched-saving program confirm that low-income individuals use both behavioral and psychological strategies as they accumulate assets (Moore, Beverly, Schreiner et al., 2001).

Putting the two types of strategies together with the three stages of asset accumulation results in the two-by-three matrix in Table 1. Each of the six cells represents an asset-accumulation strategy group, and the bulleted items are types of strategies within each group.⁵ The framework shows the diversity of strategies that people may use in order to save and accumulate assets. As the next section shows, it also provides a specific rationale for encouraging account ownership among the unbanked, criteria for describing and evaluating savings programs, and recommendations for improving financial-education curricula.

Psychological Reallocation Strategies

Psychological reallocation strategies include setting and mentally focusing on a saving or asset goal and seeking encouragement from family, friends, and program staff (e.g., extension agents and social service agency caseworkers). These strategies aim to make saving goals primary; they encourage people to meet saving targets and to consume what remains, rather than to meet consumption targets and to save the residual. Psychological reallocation strategies also include mental accounting, such as earmarking as savings unexpected income, earnings from a specific job or specific earner, or tax refunds. This strategy involves mentally reallocating resources from a “spendable” account to a “non-spendable” account. Financial-education curricula typically encourage people to focus on saving and asset goals, but the other strategies mentioned here probably receive less attention.

Behavioral Reallocation Strategies

Behavioral reallocation strategies include increasing efficiency (i.e., spending less on the same quantity of goods and services, perhaps by shopping more carefully or eating out less often), reducing consumption, or increasing income (e.g., working more or working harder). Two other strategies, selling assets and increasing debt, involve a reallocation of resources but may not increase net worth. Thus, these are strategies for reallocating resources toward a particular saving vehicle but should not be considered *saving* strategies per se.

As noted above, people may also reallocate resources through time. For example, they may choose to receive lump-sum EITC payments or arrange for over-withholding of income taxes. If behavioral theory is correct, these choices help people reallocate resources from consumption to saving (because lumpy inflows are likely to be earmarked as saving). Budgeting—that is, monitoring resource inflows and outflows and then making decisions about how to reallocate resources toward saving—is an additional behavioral reallocation strategy, one that generally precedes the others. Financial-education curricula typically emphasize budgeting, reducing consumption, and increasing efficiency. Helping families evaluate the costs and benefits of postponing income in order to receive lump-sum payments and the costs and benefits of selling

assets and increasing debt to finance saving deposits would also be appropriate financial-education topics.

Psychological Conversion Strategies

Psychological conversion strategies are likely to involve conceptualizing saving deposits as bills. In other words, people may deliberately “trick” themselves into believing that saving is obligatory. Financial-education curricula often encourage this strategy.

Behavioral Conversion Strategies

Behavioral conversion strategies are likely to involve “paying” savings accounts first. People might simply make deposits immediately after receiving income, before making any other purchases or payments. The most effective strategy, however, is likely to be arranging for direct deposit into savings accounts. This strategy combines—and makes automatic—reallocation and conversion activities. Financial-education curricula usually encourage the use of direct deposit. The conversion options available to the unbanked involve storing money informally. Examples include giving money to trusted friends and family members, postponing the cashing of checks, and hiding money. Money stored informally is less secure than money deposited in formal accounts, and this is an important rationale for encouraging account ownership among the unbanked.

Psychological Maintenance Strategies

Psychological maintenance strategies involve adopting rules-of-thumb regarding the uses of savings. For example, people may decide that savings is “off-limits” or may be used only in emergencies. Financial-education curricula typically encourage these rules-of-thumb, and this strategy is available to the unbanked as well as the banked.

Behavioral Maintenance Strategies

For the banked, behavioral maintenance strategies include choosing financial services that increase the cost of withdrawals and avoiding financial services that facilitate withdrawals. Examples include choosing an account where withdrawals are restricted and choosing not to have an ATM card. Adopting behavioral maintenance strategies is probably more difficult for those who do not have formal accounts. Moreover, money stored informally may be “visible” to relatives and friends, and these individuals may put pressure on the saver to share resources. Money in bank accounts is presumably more private and therefore more protected from the demands of social-network members.

DISCUSSION

We believe this framework has implications for program and policy development. We focus our discussion on encouraging account ownership among the unbanked, thinking systematically about the design of asset-accumulation programs, and improving financial-education curricula.

Encouraging Account Ownership

According to data from the Survey of Consumer Finances, in 1998, about 10 percent of all U.S. families had neither a checking nor savings account (Kennickell, Starr-McCluer, & Surette, 2000). Estimates from other data sets suggest that as many as 20 percent of all U.S. households are unbanked (Carney & Gale, forthcoming; Hurst, Luoh, & Stafford, 1998). The federal government has recognized the importance of encouraging account ownership: In December 2000, Congress appropriated \$10 million to the Treasury Department for the “First Accounts” initiative, which will pilot strategies to help the unbanked access convenient, secure, and low-cost financial services. The framework provides a specific rationale for efforts to develop formal accounts that appeal to the unbanked. Account ownership greatly facilitates conversion and maintenance, the second and third stages of asset accumulation. Those who do not have checking or savings accounts have fewer opportunities to convert resources to less-liquid forms and therefore are likely to have more trouble resisting pressures to dissave.

Accounts designed to appeal to the unbanked should be flexible because families have different savings goals, different needs for liquidity, and different desires for additional financial services, such as ATM cards and checking accounts. Programs that encourage people to have income-tax refunds directly deposited into low-cost savings account may be an effective outreach tool for the unbanked (Beverly, Tescher, & Marzahl, 2001). The specialized bank branches proposed by Caskey (2000) also seem to have the potential to encourage account ownership. In brief, these “outlets” would offer low-minimum-balance “starter” accounts that provide access to low-cost money orders and that cannot be overdrawn, in addition to check-cashing and bill-paying services and convenience items like stamps, envelopes, prepaid telephone calling cards, and transit tokens.

Thinking Systematically about Asset-Accumulation Programs

The framework also provides a structure for thinking systematically about the design of asset-accumulation programs. Two examples illustrate this function: Individual Development Account (IDA) programs are matched-saving programs for low-income individuals (Edwards, 1997; Sherraden, 1991). Participants earn matching contributions as they save toward approved asset purchases, typically home ownership, post-secondary education, and microenterprise. Program staff also encourages participants to set monthly saving goals. Thus, IDA programs encourage psychological reallocation strategies by helping individuals focus on saving and asset goals and providing encouragement for saving efforts. Because withdrawals for “unapproved” purchases are restricted, IDA programs also help individuals maintain assets. Moreover, IDA participants are usually required to attend financial-education classes, and, depending on content, these classes may encourage and teach strategies in all six-strategy groups.

The “savings-building” account proposed by Caskey (2000) requires individuals to commit to making regular, fixed-value deposits, say, \$20 a month for 12 months. In Caskey’s preferred account structure, participants arrange for automatic deposits and incur some financial penalty (such as a reduced interest rate) for repeated missed deposits. Also, funds in savings-building accounts are kept separate from funds in other accounts, so that people mentally distinguish money designated for savings from money designated for short-term transactions. Thus, the savings-building account incorporates psychological reallocation strategies and psychological and behavioral conversion strategies.

We believe that programs that facilitate all three stages of asset accumulation will be more effective than programs that facilitate only one or two stages. If this assumption is true, then one could evaluate asset-accumulation programs by examining the extent to which they facilitate reallocation, conversion, *and* maintenance. Moreover, if future research shows that individuals who adopt a range of strategies are the most successful savers, then programs that encourage both psychological and behavioral strategies would be desirable. These statements show how the framework might be used to inform policy and program decisions.

Improving Financial-Education Curricula

The framework proposed here might also have implications for financial education. First, families (like policy-makers and program planners) may benefit from thinking concretely about the three stages of asset accumulation. In particular, it may be helpful to remind individuals that accumulating assets requires more than saving, that it is difficult for most people to resist spending temptations, but that certain strategies may help them maintain their assets. Second, the example strategies discussed above include strategies that may be under-used by financial educators. Financial-education curricula should continue to emphasize saving and asset goals, rules-of-thumb, budgeting, direct deposit, and careful consumption choices. However, curricula could also explicitly teach mental-accounting techniques, such as earmarking tax refunds or earnings from a specific job as savings. Financial educators could encourage people to find family members or friends who will “check in” each pay period to see if saving goals have been met. The strategies described here are likely to benefit people of all income levels and so could be incorporated into financial-education curricula targeted toward middle- and upper-income families and well as low-income families.

Finally, for the reasons noted above, financial educators should emphasize the importance of account ownership, regardless of balance. Because multiple types of accounts are available—for example, savings accounts, basic checking accounts, IDAs, and “Christmas club” accounts—financial-education curricula should help people identify accounts with features that match their needs and goals.

CONCLUSION

In conclusion, we note that asset accumulation is a much more complex process than conventional economic models assume. Individuals are not perfectly rational and omniscient economic agents. Instead, they sometimes have trouble choosing behaviors that are in their own

best interests. The framework presented here suggests that a number of psychological and behavioral strategies may help individuals accumulate assets. It also provides a rationale for encouraging account ownership among the unbanked and a structure for thinking systematically about financial-education curricula and asset-accumulation programs.

Table 1. A Framework of Asset-Accumulation Stages and Strategies

Stages of Asset Accumulation	Types of Strategies	
	Psychological	Behavioral
Reallocation	<ul style="list-style-type: none"> • Set and mentally focus on a saving or asset goal • Use mental accounting • Seek encouragement for saving 	<ul style="list-style-type: none"> • Increase efficiency • Reduce consumption • Increase income • Sell assets • Increase debt • Postpone income in order to receive lump-sum payment • Monitor resource flows
Conversion	<ul style="list-style-type: none"> • View deposits into savings accounts as bills 	<ul style="list-style-type: none"> • Pay savings account first • Store money informally
Maintenance	<ul style="list-style-type: none"> • Adopt rules-of-thumb regarding the uses of savings 	<ul style="list-style-type: none"> • Choose financial services that increase the costs of withdrawals

REFERENCES

- Beverly, S. G., Tescher, J., & Marzahl, D. (2001). *Linking tax refunds and low-cost bank accounts* (Manuscript). Lawrence, KS: University of Kansas, School of Social Welfare.
- Caplovitz, D. (1979). *Making ends meet: How families cope with inflation and recession* (Sage Library of Social Research, Vol. 86). Beverly Hills, CA: Sage Publications.
- Carney, S., & Gale, W. G. (forthcoming). Asset accumulation in low-income households. In T. M. Shapiro & E. N. Wolff (Eds.), *Benefits and mechanisms for spreading asset ownership in the United States*. New York: Ford Foundation.
- Caskey, J. P. (1997). *Beyond cash-and-carry: Financial savings, financial services, and low-income households in two communities* (Report written for the Consumer Federation of America and the Ford Foundation). Swarthmore, PA: Swarthmore College.
- Caskey, J. P. (2000). *Reaching out to the unbanked*. Paper presented at Inclusion in Asset Building: Research and Policy Symposium (Symposium sponsored by the Center for Social Development, Washington University), St. Louis, MO, September 21-23.
- Chiteji, N., & Hamilton, D. (2000, September 21-23). *Family matters: Kin networks and asset accumulation*. Paper presented at Inclusion in Asset Building: Research and Policy Symposium (Symposium sponsored by the Center for Social Development, Washington University), St. Louis, MO.
- Edwards, K. (1997). *Individual Development Accounts: Creative savings for families and communities*. St. Louis, MO: Washington University, Center for Social Development.
- Finn, C. M., Zorita, P. M.-B., & Coulton, C. (1994). Assets and financial management among poor households in extreme poverty neighborhoods. *Journal of Sociology and Social Welfare*, 21(4), 75-94.
- Hotz, V. J., & Scholz, J. K. (2001). *The Earned Income Tax Credit* (Working Paper No. 8078). Cambridge, MA: National Bureau of Economic Research.
- Hurst, E., Luoh, M. C., & Stafford, F. P. (1998). The wealth dynamics of American families, 1984-1994. *Brookings Papers on Economic Activity*, 1, 267-337.
- Kennickell, A. B., Starr-McCluer, M., & Sunden, A. E. (1997). Saving and financial planning: Some findings from a focus group. *Financial Counseling and Planning*, 8(1), 1-8.
- Kennickell, A. B., Starr-McCluer, M., & Surette, B. J. (2000). Recent changes in U.S. family finances: Results from the 1998 Survey of Consumer Finances. *Federal Reserve Bulletin*, 86(1), 1-29.
- Lazear, D. (1999). *Implementation and outcomes of an Individual Development Account project* (Policy Report). St. Louis, MO: Washington University, Center for Social Development.

- Maital, S. (1986). Prometheus rebound: On welfare-improving constraints. *Eastern Economic Journal*, 12(3), 337-344.
- Maital, S., & Maital, S. L. (1994). Is the future what it used to be? A behavioral theory of the decline of saving in the West. *Journal of Socio-Economics*, 23(1/2), 1-32.
- Moore, A., Beverly, S., Schreiner, M., Sherraden, M., Lombe, M., Cho, E. Y. N., Johnson, L., & Vonderlack, R. (2001). *Saving, IDA programs, and effects of IDAs: A survey of participants*. St. Louis, MO: Washington University in St. Louis, Center for Social Development.
- Moore, A., Beverly, S., Sherraden, M., Sherraden, M., Johnson, L., & Schreiner, M. (2001). *Saving and asset accumulation strategies used by low-income individuals* (Manuscript). St. Louis, MO: Washington University, Center for Social Development.
- Neumark, D. (1995). Are rising earnings profiles a forced-savings mechanism? *The Economic Journal*, 105, 95-106.
- Olson, L. M., & Davis, A. (1994). *The Earned Income Tax Credit: Views from the street level* (Working Paper Series 94-1). Evanston, IL: Northwestern University, Center for Urban Affairs and Policy Research.
- Romich, J. L., & Weisner, T. (2000). How families view and use the EITC: Advance payment versus lump sum delivery. *National Tax Journal*, 53(4, Part 2), 1245-1265.
- Schreiner, M., Sherraden, M., Clancy, M., Johnson, L., Curley, J., Grinstein-Weiss, M., Zhan, M., & Beverly, S. (2001). *Saving patterns in IDA programs, Volume II*. St. Louis, MO: Washington University in St. Louis, Center for Social Development.
- Shefrin, H. M., & Thaler, R. H. (1988). The behavioral life-cycle hypothesis. *Economic Inquiry*, 26, 609-643.
- Shefrin, H. M., & Thaler, R. H. (1992). Mental accounting, saving, and self-control. In G. Loewenstein & J. Elster (Eds.), *Choice over time* (pp. 287-330). New York: Russell Sage Foundation.
- Sherraden, M. (1991). *Assets and the poor: A new American welfare policy*. Armonk, NY: M. E. Sharpe, Inc.
- Stack, C. B. (1974). *All our kin: Strategies for survival in a black community*. New York: Harper and Row.
- Thaler, R. H. (1990). Saving, fungibility and mental accounts. *Journal of Economic Perspectives*, 4(1), 193-205.
- Thaler, R. H., & Shefrin, H. M. (1981). An economic theory of self-control. *Journal of Political Economy*, 89(2), 392-401.

Varcoe, K. P. (1990). Financial events and coping strategies of households. *Journal of Consumer Studies and Home Economics*, 14, 57-69.

Winnett, A., & Lewis, A. (1995). Household accounts, mental accounts, and savings behavior: Some old economics rediscovered? *Journal of Economic Psychology*, 16, 431-448.

ENDNOTES

¹ Mortgage-financed home purchases have been classified as precommitment constraints because mortgage payments are a contractual obligation and because the part of each payment that goes toward the principal increases home equity (Maital & Maital, 1994).

² For example, in a focus group conducted as part of the pretest of the 1995 Survey of Consumer Finances, several high-income individuals mentioned the need to put money “out of reach” to avoid spending temptations (Kennickell, Starr-McCluer, & Sunden, 1997, p. 4).

³ The federal EITC is a refundable tax credit for low-income workers. In 1999, the maximum refund was \$3,816. Through the advance-payment option, the Internal Revenue Service allows EITC-eligible individuals to receive a portion of their credits through their paychecks, but virtually all EITC recipients receive a lump-sum refund after they submit their tax returns (Hotz & Scholz, 2001).

⁴ Also, 44 percent used regular savings and 22 percent used emergency savings.

⁵ This framework emerged from our review of the literature summarized above and from our thematic coding of qualitative data from participants in a matched-saving program. These data are described in more detail in Moore, Beverly, Schreiner, et al. (2001) and Moore, Beverly, Sherraden, et al. (2001).