

Accelerating Low Income Savings

Ed Khashadourian,
Opportunity to Assets
ed@opportunitytoassets.com

Abstract:

Savings programs geared toward the low-income could be evaluated on two different levels; by focusing on their logistical aspects, such as defining target populations, modes of delivery, account setup structures, and differences in reliance on technology, or on a more conceptual level, by identifying differences in their underlying approach to stimulating savings. Attention to both is essential in building and expanding effective models of savings. This chapter introduces a new model of unrestricted savings known as Savings Accelerator Account by focusing on the conceptual differences between the accelerator model and the more traditional approach of matched savings. It also explores these differences in the context of cost and scalability.

In line with its overall philosophy of achieving long term outcomes through a sequence of short-term actions, the accelerator model provides small rewards to behavior consistent with the long term goal of increasing savings. A sequence of decisions that are made independently results in accumulation, over the long term, of liquid assets. Based on findings from behavioral economics, incentives are structured as a combination of independent mechanisms that can be embedded in the program in order to influence behavior, both in the short as well as the long term. Combining independent incentive mechanisms is a salient aspect of the accelerator model which makes it possible to offer rewards not only based on how much is saved, but also based on how regularly deposits have been made.

Key Words: financial incentives, Structural Theory of Saving, matched savings programs, emergency savings, low-income households, acceleration, scale

A. Introduction:

The conversation surrounding low income savings is historically inspired by the developments in the field of asset building where existence of long term assets is believed to lead to changed behavior. In this context, saving, while is generally viewed as an important vehicle that makes accumulation of financial wealth possible over time, is treated mostly as a transitory component in a household's asset building process. In other words, in the asset building discourse, savings is a repository of financial resources. When it reaches a critical level, it is used to leverage other forms of assets, because such assets usually offer higher, long term returns and contribute to overall financial wellbeing in a more effective way than cash in a bank account. This view characterizes a resource-oriented approach to saving.

But our understanding of emergency savings is different from the more traditional resource-oriented approach in that the purpose of having money saved for emergencies is for it to never be spent (or converted into other forms of assets for that matter). This is because the primary function of emergency savings is to provide protection against financial uncertainties. Similar to the example of an automobile insurance policy where drivers obtain it- not to get into accidents, but to enjoy the peace of mind that having the coverage offers them, the idea of having emergency savings is to build up cash and near cash reserves in order to improve one's ability to cope with financial uncertainties. Using this analogy, when individuals save, their deposits function like premium payments on an insurance policy that expands the coverage and helps them reduce the risk of managing even larger financial emergencies in the future.

This view of saving is not generally akin to a resource-oriented approach as it does not directly relate to rates of return or valuation of assets. In addition, unlike investments, which require planning, both in terms of timing and amount of savings needed to leverage investments, individuals do not plan on how and when emergencies will occur and are often unable to have a realistic assessment of the amount of expenses they'll incur in the event of an emergency. Moreover, as a fact of life, uncertainty, and the degree one is exposed to it changes according to individual circumstances or through the life cycle. It is for this reason that models of emergency savings are usually designed under a different set of structural

and behavioral parameters compared to other traditional models of savings such as Individual Development Accounts (IDA), for example, which are inspired by a resource-oriented approach.

This chapter puts forth the idea that in order to stimulate emergency savings for the low-income, the typical goal-oriented, project based approach may not be an ideal solution. Programs that are designed to encourage individuals to open a savings account with the goal of saving a set amount of money, in a set period of time before offering a match upon “graduation”, are influenced by a resource-oriented approach and may therefore not be conducive to building emergency reserves. Instead, it is argued that models of emergency savings should nudge individuals to a direction that may eventually lead to habit formation, rather than achieving a predetermined goal. One way to do so is to divert incentives from matching savings balances to engaging participants in making deposits as regularly as possible, while also removing any project-like restrictions, such as time restrictions, where participants in savings programs are required to wait before they can earn a reward.

Based on the idea outlined above, this chapter considers offering direct financial incentives to low-income savers as a requirement in stimulating saving for emergencies. Yet, as it raises questions regarding the degree of effectiveness of models that do not incorporate financial incentives, it also argues that offering incentives in the form match payments is also neither practical, nor very effective in generating the desired results. Instead, an alternative, low-cost mechanism referred to as *acceleration*, is introduced which serves as a key component in a new savings model known as Savings Accelerator Account (SAA).

B. Problem to be Addressed: Savings and Financial Vulnerability of Low Income Households

Five years after the onset of the Great Recession, there are reasons to believe that the personal savings rates may very well stay higher than their prerecession lows, at least within the foreseeable future.¹

Uncertainties surrounding the US economic outlook have presented an opportunity to revisit the notion of

¹ For a list of reasons, for example, see (Dyanan 2012).

personal savings and have built the momentum to promote policies that support healthier savings rates among American households. While many of these policy recommendations focus on long term savings, including retirement savings or college savings initiatives and in that capacity often recommend changes to the tax code, less has been said or done with regards to short term savings and the critical role that it plays in helping American households improve their ability to weather financial emergencies. Still, the importance of focusing on emergency savings is often discussed in policy papers and by researchers in the field. For example, a 2010 policy paper by the Center for Economic Progress suggests that, “*For some workers, particularly LMI ones as well as people in their 20s and 30s, making savings for retirement the default over other valuable forms of savings may ‘put the cart before the horse’.*”² Others, including (Cramer 2011) and (Boshara 2011) to name a couple, have also discussed the urgency of considering the short term savings needs of low income households. Of course, there is understandably a more pronounced emphasis on Low to Moderate Income (LMI) households in this conversation, as they are generally believed to be more vulnerable to financial emergencies. Yet, focus on low-income families is also important from a macroeconomic perspective as there is evidence suggesting that low income savings can have the largest marginal effect on total national savings in the US. In fact, according to (Johnson et al. 2006, 13) the US national savings could increase by as much as 53% if households in the bottom two quintiles of income increase their savings by \$1,000 a year.

In spite of this significant potential contribution, available data and research on actual savings levels of low income households and their ability to pay for unexpected financial expenses is not very encouraging. In a study of low income households’ savings behavior using the Federal Reserve Board’s 1998 Survey of Consumer Finances (SCF) data, (Hogarth and Anguelov 2003, 13) conclude that while 68% of the low income households identified themselves as regular savers, the median value of all financial assets held by families at or below 100% of poverty level was only \$350 (\$1,480 for those between 100 and 150% of

² See page 11 of the following document: Universal Savings for American Households (2010), Center for Economic Progress, Retrieved on 01/14/2013, Link: https://tax-coalition.org/policy-resources/savings-policy/Universal_Savings_for_American_Workers_FINAL.pdf/view

the poverty threshold.) Based on their findings, the authors conclude that low income households would probably not be able to meet short-term financial emergencies. Recent studies and reports, such as (Brobeck 2008), (Lusardi et al. 2011), and (Khashadourian 2012) also show similar results. In a survey of American households commissioned by the Consumer Federation of America in 2005, Brobeck reports that 64% of those surveyed with incomes of less than \$25,000 annually and 38% with incomes between \$25,000 and \$50,000 per year had emergency savings of less than \$500. Using a measure of financial fragility based on household's ability to raise \$2,000 in 30 days, (Lusardi, et al. 2011, 9), conclude that 50% of American households would probably or certainly not be able to raise \$2,000 in 30 days. Along the same lines, in a recent survey of 600 LMI match savings program applicants in the Los Angeles area, (Khashadourian 2012, 5), reports that one out of two applicants indicated that they neither had enough savings nor could even borrow from family or friends should they need \$3,000 to pay for an unexpected expense.

These numbers are somewhat surprising as an increasing number of American households report that they face financial emergencies every day. In one study, (Taylor et al. 2010), indicate that in a nationwide survey of 2000 households conducted by the Pew Research Center in late 2006, 34% of the respondents reported that they had faced an unexpected financial expense within the past year which had set them back financially. Taking this statistic at face value, the finding implies that there is almost a 100% chance that a typical household will experience a major unexpected expense within a three-year period. In fact, the said time period for a low income household might even be much shorter; begging the question of why a considerable group of these households are unable or unwilling to save for emergencies while they know that the prospects of facing such expenses is almost certain.

Literature on behavioral economics suggests that unrealistic expectations, behavioral biases, and blind spots may explain why many, especially among lower income households, remain overly vulnerable to even a relatively small, albeit unexpected, financial emergency when they occur. Fortunately, the literature also demonstrates how the introduction of relatively small changes such as default options,

mental accounting, or certain channel factors and behavioral nudges, could result in large impacts in savings outcomes.³ Motivated by these developments, new programs and initiatives are introduced in conferences and publications every day. The Accelerated Savings Account platform is one such example that is detailed in the following sections.

C. Proposed Intervention: Savings Accelerator Accounts (SAA)

In discussing the conceptual underpinnings of different low income savings models, frequent references are made to the Institutional Theory of Saving (ITS). Spearheaded by (Beverly and Sherraden 1998), and later expanded by (Beverly et al. 2008), ITS assumes that low-income earners save less than higher-income individuals primarily due to differences in their level of access to existing financial institutions and not only because of individual preferences and values. According to (Beverly et al. 2008, 90), “The term *institutions* ... refers to purposefully-created policies, programs, products, and services that shape opportunities, constraints and consequences”.⁴

From a practical point of view, introducing the concept of Savings Accelerator Account in the context of ITS is important because it provides the necessary perspective in separating a resource-oriented approach from a behavioral approach to saving. In particular, of the seven institutional constructs referred to in the institutional theory, this chapter will focus primarily on the role of incentives and restrictions in accelerating savings.

C.1. Key Mechanisms: Deposit Structure and Incentives in SAA

The central hypothesis of Savings Accelerator Account is that it is possible to cope with behavioral biases that impede the process of long term accumulation of savings if focus on the long term is essentially

³ For an introduction, the reader is referred to (Thaler et al. 2010), (Mullainathan and Thaler 2000), (Bertrand et al. 2006), and (Mullainathan and Shafir 2008) for a comprehensive discussion. Also, (Pronin and Kugler 2007) provide an interesting analysis regarding behavioral blind spots.

⁴ The extended list of institutions includes Access, Information, Incentives, Facilitation, Expectations, Restrictions, and Security. Also, in speaking of financial incentives, the authors make a distinction between subsidies and rates of return. However, this distinction does not make a practical difference in terms of our present analysis. Therefore in this paper, we will focus on incentives as any kind of financial reward offered to low income participants in a savings program.

disguised by structuring saving as a sequence of short-term decisions consisting of a series of independent actions and rewards. This could be done by combining different reward mechanisms and minimizing or eliminating restrictions. In such circumstances, a typical low-income household will probably be more resourceful in making a short term decision of earning a reward by making a deposit, knowing that, if they need to, they can still have access to the money they saved in a matter of days, rather than when deposit actions are structured with a view of the long term. Based on this hypothesis, in Savings Accelerator Account programs, participants earn rewards that are instantaneous and partially independent from the past and future deposit activities. A similar approach is found in savings models such as prize-linked or lottery-based programs; however, a big difference between savings accelerator and lottery-based accounts is that whereas in the latter incentives are contingent on the saver winning the raffle prize, they are not subject to probability in SAA.

Models of SAA are designed by manipulating three main program elements, namely, deposit amounts, incentive components, and the length of time incentives remain in effect. These elements will be discussed in more detail in the next few paragraphs.

Deposit Structure - Participants can make deposits in any amount and at any time and earn corresponding rewards. They can, however, maximize their benefits if they deposit at least once a month and at levels recommended by the program. In other words, incentives increase with the amount of deposit but reach a maximum at a set monthly level. So, if the deposit cap is set at \$40 per month, then incentives apply to the first \$40 deposited in that month. Incentives are applied to each deposit independently and there is no time-restriction in the program. This means that participants can choose to withdraw their funds at any time and earn the proportional benefits for the length of time they participated in the program.

Typically, SAA programs are designed by making a separation between the opening deposit (made in the first month of the program) and all subsequent deposits made after the first month. By making this

separation, different types of savings plans are designed featuring a larger opening-month deposit compared to subsequent monthly deposits. These other monthly deposits are usually within the range of \$25 to \$50. While higher introductory deposits may be seen as a barrier limiting the ability of at least some participant to join the program, it should be noted that customization means that different savings plans are often available, each featuring different contribution levels. Therefore, program counselors can address this barrier by offering an alternative plan to an individual who finds the introductory deposit in one plan too high.

At the same time, several behavioral as well as economic factors rationalize the use of higher introductory deposits in savings plans. For example, if a savings program is offered during the tax season, a higher introductory deposit might actually be a more attractive option for a tax filer who receives a significant tax refund and is interested in saving a part of that refund. In fact, Ramp-UP accounts, a category of SAA featuring a high introductory deposit of \$500 have been very popular at participating VITA sites in the Los Angeles area in the past few years.

While the separation between the first and subsequent monthly deposits may sound trivial, it's worth emphasizing that a higher introductory deposit can actually set in motion the strong behavioral heuristic of anchoring, which may impact retention rates in the program. For example, in a savings plan featuring a \$200 introductory and a \$25 monthly deposit, making monthly deposits of \$25 appears more affordable in the presence of the high introductory deposit compared to a plan that does not feature a higher initial contribution amount. Brooks (2011, p181), uses the example of a liquor store to explain the effect of anchoring: "A \$30 bottle of wine may seem expensive when surrounded by \$9 bottles of wine, but it seems cheap when surrounded by \$149 bottles wine". Therefore the choice of a higher introductory deposit, which is often rewarded by a signup bonus (discussed below), can play an important role in helping participants who open the account to continue to save in subsequent months.

Incentives – While ITS recommends the inclusion of financial incentives as an important factor in stimulating savings and increasing program take-up rates, it refers to it, by and large, as a dollar figure and does not elaborate on the mechanisms through which incentives incite behavior. To close this gap, the literature on behavioral economics demonstrates that certain situational and channel factors, as well as cognitive principles resulting from bounded rationality of economic agents can generate different types of responses to financial incentives based on how these incentives are structured in a savings program. Accordingly, a multicomponent incentive structure is embedded in SAA to offer rewards, not only based on amounts saved, but also based on consistency of deposits. This is one of the more salient features of SAA that separates it from alternative models of incentivized savings.

To understand how incentives are incorporated in a Savings Accelerator Account, a partial list of incentive subcomponents is provided in Table 1. According to this table, a signup bonus is a reward that is applied upon making the first deposit. The bonus is typically offered in plans where the initial deposit is substantially higher than the subsequent monthly deposits. In many cases, the sign-up bonus could be a strong de-biasing mechanism in addressing the status-quo bias of inaction.

Another subcomponent of the incentive structure in SAA is the straight deposit match. This mechanism targets the frequency of deposits and is important from a behavioral perspective. The reward is applied when a monthly deposit is made into the account. The incentive amount is fixed and does not depend on the amount saved. As long as a deposit, in any amount, is registered in a month the straight deposit match will apply to that deposit. Therefore, participants making contributions at least once every month, earn a higher reward, regardless of how much they save, compared to others who may save the same total amount albeit at a more sporadic pattern. This may help savers avoid the cognitive load of making long term decisions as it sends the signal to the participant that it is important not to miss the deposit in a given month regardless of whether or not one is able to make a full contribution in that month or even in the future. In other words, the straight deposit match helps a participant to focus on the immediate future, which involves making a deposit in any amount and reaping the instant reward for that deposit, even if

they know they may need to close their account next month. The inclusion of this mechanism may therefore improve consistency of deposits and increase deposit rates and support habit formation among participants.⁵

Table 1 - Examples of Incentive Components in Savings Accelerator Account.

Incentive Component	Description
Signup Bonus	A benefit applied to the first deposit in the program. The signup bonus does not depend on the amount deposited. For example, if your first deposit is \$100 and you are promised a \$50 signup bonus, a deposit of less than \$100 would still earn you the signup bonus.
Straight Deposit Match	A direct match offered on deposits. The straight deposit match does not depend on the amount deposited. As long as a deposit in any amount is registered at any time during the month, a straight deposit match is applied.
Interest	Annualized rate of interest applied to monthly deposits. The rate is compounded monthly.

The third incentive component in SAA is similar to interest payments on expected monthly deposits often referred to as a fractional match. Following (Khashadourian 2009), the interest amount is calculated on a month to month basis and is applied to the deposit cap. It is commonly believed that low-income households face a high rate of time preference, i.e., a measure of readiness to sacrifice present pleasures for future ones (Pennings and Garcia 2005), (Lawrence 1991), (Carvalho 2010). Accordingly, (Khashadourian 2009) recommends that the interest in savings programs should be set at a sufficiently high rate to help savers make the sacrifice of saving their hard earned dollars more easily. For this reason, and while some exceptions exist, SAA models typically offer rates ranging from 15 to 23% on various savings plans.

Since interest accounts for both current and past deposits, the amount of incentive awarded each month increases with each deposit, therefore participants can enjoy a higher benefit amount with each successive deposit activity, a process that is referred to as “acceleration” in SAA.

⁵ While conclusive evidence does not exist to support this hypothesis, in a survey of a small group of SAA account holders, North (2012, p.45) notes that 67% of SAA participants who indicated that they would continue to save after the program, had reduced their monthly expenses to allow for more savings, indicating a long term change in consumption habits.

It should be pointed out here that the choice of interest as an incentive mechanism is important not only because of its role in accelerating savings, but also because of the role it plays in allowing the model to take advantage of the reinforcing effect of construal. (Bertrand et al. 2006, 9) provide examples showing that the responses of people to different stimuli depend on how they understand and interpret them. In terms of dollars, since monthly deposit amounts in SAA are limited, such high rates of interest do not translate into significant sums, but in terms of context they can be very effective in attracting deposits. This is because many low-income households understand the mechanics of interest; however, their circumstances are such that, often times, they find themselves on the paying end of it. Therefore, it is hypothesized that in mental processing of incentives, an interest rate of 19% may appear even more appealing than a higher valued match rate.

The Savings Cycle - To make the cost of incentive payments manageable, the plan duration is limited, (i.e., incentive payments are limited only to a set number of months, typically ranging from 12 to 18 months). In effect, the plan duration is simply framed as the number of monthly opportunities a participant has in order to make deposits and earn rewards. So, if a deposit is missed in one month, the participant has lost one opportunity to draw the full benefit from saving in that month. And since incentives are treated independently in the program, one cannot make up for a lost reward in one month by making a deposit in a subsequent month, even if a larger deposit is made at that time. As indicated above, every month, a participant has several opportunities to decide whether to close the account and withdraw the funds, leave the funds in the account for another month without making additional contributions, or make another deposit and defer the decision to determine the fate of the account to the next month. Therefore, another hypothesis in SAA suggests that offering incentives through acceleration will help depositors stay on track and make a decision in favor of continuing saving rather than withdrawing funds in the absence of any restrictions (See Section C.2 below).

While the savings cycle is limited, the model does not adopt a project based approach to saving. Once a program cycle is completed, participants are advised to continue saving independently and increase their

savings account balance going forward. But in most cases, rollover options or continuation plans are made available to participants who are interested to save for a second cycle. In most cases, the amount of incentives in the continuation cycle is typically smaller in amount than that in the initial cycle. Therefore, what makes continuation plans important from a habit formation perspective is that it prepares the individual to gradually disassociate the habit of making deposits from the expectation of receiving a reward. Figure 1, shows the deposits and the total account value (deposits plus rewards) in a savings plan that features the components listed under code T16 in Table 2.

Table 2 - Examples of SAA Savings Models.

Plan Code	S24	T16
Plan Period (Months)	12	18
Initial Deposit	\$200	\$50
Other Deposits	\$25	\$30
Signup Bonus	\$50	-
Straight Deposit Match	\$5	\$3
Interest (Fractional Match)	19%	23%
Total Incentive Reward	\$190 (0.4 to 1)	\$183 (0.33 to 1)
Total Deposits	\$475	\$560
Account Value	\$665	\$743

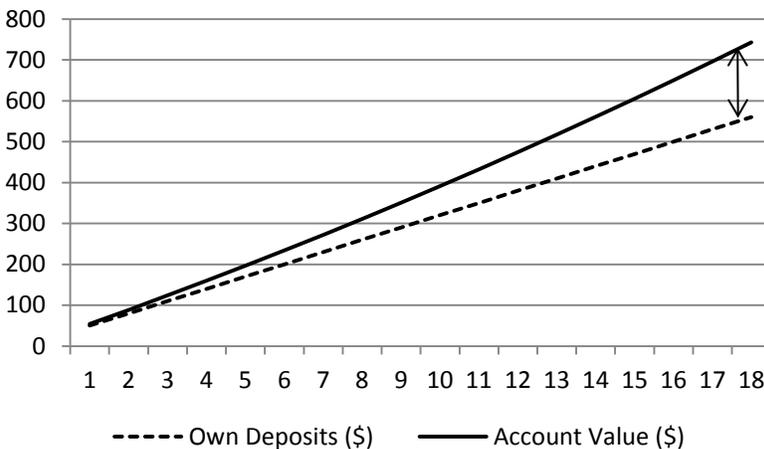


Figure 1 - Deposits and the total Account Value in SAA plan T16 (18-month savings period).

C.2. The Significance of No Time Restrictions

Restrictions are perhaps the most common aspect among different types of savings programs. From retirement savings accounts to college savings plans or matched savings programs for the low-income, access to dollars saved in an account remains restricted until participants reach a certain milestone. The most common restriction is a time restriction where participants have to wait for a specified period of time before accessing funds. Other examples involving use restrictions (where funds are available only for specific types of expenses); minimum or maximum contribution levels; sources of deposited funds; etc., are also common among different types of matched savings programs.

By far, the most prevalent type of restriction is time restriction. It is often argued that the need for time restrictions in incentivized savings programs is evidenced by the lack of willpower in resisting the temptation to spend money rather than saving it for the future. (Mullainathan and Shafir 2008, 131), suggest that because of such self-control problems, saving is a weak vehicle for transforming small deposits into big sums of cash. Therefore, when incentives are offered to abet saving, time restrictions may need to be put in place automatically to guarantee accumulation.⁶ Obviously, in most cases, participants are still able to access the amounts they have contributed to their account at any time and for any purpose, but run the risk of forfeiting the program incentives if they violate the time restriction.⁷

Restrictions, in general, are deemed important in influencing behavior of the participants in a savings program. However, in the case of an emergency savings model, imposing time restrictions may be rather counterintuitive as it may result not only in a reduction in the ability of an individual to cope with unexpected financial emergencies, but may also result in welfare losses in consumption.

Programs that impose time restrictions on incentive payments, in effect adopt an all or nothing approach with no middle ground for participants who in good faith make an attempt to save, yet for various reasons,

⁶ One difficulty in assessing the effect of demand-side incentives in stimulating savings relates to the presence of restrictions. In other words, in most cases, the presence of restrictions may obscure the real effect of incentives.

⁷ It should be noted that withdrawals from certain retirement savings accounts like a 401(k) account for example, may result in forfeiture of a fraction of own deposits. However, this is due to the complications in separating the exact value of the incentive amount and the rate of return on such accounts.

are unable to continue with or complete the program at the specified time. Given the generally short decision horizons of low-income households, a program that requires a participant to lock their cash in a 12-month restricted account before collecting the rewards, introduces an element of uncertainty that increases the cognitive load of the decision to participate in the program. Saving is already a complicated decision for the poor, so programs need to make participation as appealing as possible by reducing such mental barriers.

A distinguishing feature of SAA is that it does not adopt the all or nothing approach as is commonly used in other savings programs. Rather than creating such hard restrictions, which may negatively influence a potential saver's experience, it utilizes a soft barrier in the sense that incentives are offered regardless of when a participant leaves the program, however it does so by distributing the incentives exponentially (through acceleration) so that it increases the opportunity cost of an early withdrawal. Opportunity cost, like the time restriction could nudge behavior in the desired direction, prompting participants to remain active in the program until maturity, while minimizing the risk of a welfare loss due to the possibility of limited participation.

This aspect of the model, coupled with the mostly independent treatment of deposit rewards, makes a clear example of "asymmetric paternalism" as defined by (Camerer et.al 2003). Since the imposition of time restrictions in programs may result in welfare losses to participants who withdraw from the program, the incentive structure in SAA can offer significant benefits to this group (who are prone to make errors by terminating), yet imposes no harm on those who make the rational choice of completing the program. Every month, a participant has to make a choice between making another deposit and continuing with the program for yet another month, or giving up on a potentially higher reward by prematurely withdrawing

funds from the account.⁸ Acceleration or the increased opportunity cost of early termination makes the sequence of such short-term decisions compatible with the long term goal of increased savings.

C.3. Acceleration vs. Savings Match

As a model of emergency savings, instead of targeting a predefined level of savings as the financial goal for participants, SAA focuses on habit forming behavior. Accordingly, it utilizes “acceleration” instead of “matching” as the underlying incentive mechanism. In its technical definition, a “match” is a reward that is offered on a set amount of savings. In other words, it applies to a stock measure of assets. Acceleration on the other hand, is applied to a flow concept or the amount an individual is capable of setting aside each period (e.g., each month) that may lead to accumulation of savings over the long term.

But why is acceleration different from a match payment? Part of the reason traces back to the overarching philosophy in a resource-oriented savings program. When focus is on savings as a resource, it implies that the program will typically try to offer a significant amount of match on a per-account basis. Since the approach is resource-oriented, it is natural for a program to try to offer as high a reward as possible under existing budget and cost constraints in order to help savers build a larger nest egg. Acceleration, on the other hand, is concerned only with finding the minimum dollar amount required to entice an individual to make a spot decision; that of spending a relatively small amount of money in a given month or save it until the next period in order to earn an instant reward. Because of this perceived difference in approach, incentive amounts required to accelerate savings are typically much smaller than match payments.

A second and related difference between a match payment and acceleration that makes the latter more cost effective goes back to the time value of incentives. If, in the presence of time restrictions on match payments, such incentives are back-ended and offered only to people who complete the program at a certain time, then the present value of the offered incentive will be smaller compared to a scenario, such as in SAA, where incentives are earned with each deposit activity.

⁸ A higher opportunity cost will help with the decision to save for another month, and if a participant decides to terminate they still can earn all the benefits they accrued in the past.

Long term results in Savings Accelerator Accounts are products of a sequence of short-term actions. So the goal in SAA is to nudge the individual to save a nominal amount in a given month. The incentives are structured to make each monthly deposit *appear* as a separate decision, independent from deposits made in the past or those that will be made in the future. This is due to the fact that lost incentives resulting from a missed deposit in one month cannot be made up in the future. When attention is focused on an instant reward or a short time interval, a decision maker is able to avoid complications that result from biases such as hyperbolic discounting. Hyperbolic discounting is defined as the declining rate of time preference as the delay for receiving a reward is prolonged (Frederick et al. 2002, 360). So, to the extent hyperbolic discounting is the governing mental process in making the decision to save, it doesn't make a material difference if the promise of receiving a match on savings requires a wait period of six months or two years (for example), since most of the discounting happens in the near term anyway. This means that it would be difficult to entice an individual to make a deposit in a savings account if his mental timeframe with respect to saving needs to expand beyond the very short term.

Still, other developments in this area such as sub-additive discounting suggests that the perception of a delay depends on whether or not an economic agent considers the time interval between the present and the delayed future as one unit or subdivides it into smaller time intervals. And to the extent that such subdivisions occur, economic agents will assign a higher discount rate to processes that involve shorter intervals. According to (Read 2001, 12) sub-additive discounting may result in more discounting than predicted by hyperbolic discounting, therefore making the decision to save with a vision of the long term may be even more difficult for a low-income saver. To put things into perspective, assuming that a monthly cycle typically corresponds to the shortest time interval for a low income household (primarily because a majority of payments for the household such as rent or utility payments occur on a monthly basis), it is likely that the decision to save in one month and having the option to revisit the same decision next month will be discounted at a lower rate compared to a situation where a decision to save in one month is made with a vision of the long-term, involving several intervals of delay. Yet, if the sequence of

such recurring short term decisions- i.e., those involving smaller discount rates, is resolved, often in favor of saving then the individual has automatically moved closer to his long term goal of accumulating liquid assets.

Table 1 - Basic Demographic Information of SAA Participants

Demographic Indicators	Based on 2011-2012 Enrollments
• Gender	
○ Male	31.8%
○ Female	68.2%
• Marital Status	
○ Married	28.1%
○ Single	55.5%
○ Other	16.4%
• Education	
○ High School Diploma or Below	65.4%
○ Postsecondary Education	34.5%
• Income -Area Median Income (AMI)	
○ Below 30% of AMI	48%
○ 31-50% of AMI	36.1%
○ 51-80% of AMI	12.8%
• Household	
○ Household Size	3.1
○ Minors per Household	0.86

D. Background on Implementation

SAA programs have been in existence since 2011 in small numbers in Southern California. A simpler version of the SAA model, known as the Ramp-UP accounts was debuted in 2009 as a tax-time savings initiative across four nonprofit organizations in Los Angeles. The technology to implement Savings Accelerator Accounts is currently offered by Opportunity to Assets (OPTA), a social microenterprise based in Los Angeles, CA. In 2011, OPTA launched the “Savings Path” online database system that is designed to support large volumes of transactions and allows customization of savings plans, based on different program parameters. Since 2009, more than 1,000 individuals have opened accounts through one of several nonprofit organizations across Los Angeles and Orange County in S. California. These organizations are partners of OPTA in implementing the program. The company supports each

organization by setting up the program and designing savings plans based on the needs of each partner.⁹ These partners enroll participants in the program by referring them to their partnering financial institutions. Since its inception in 2010, OPTA has provided data management services to each organization and has centralized the process of data collection and reporting. As such, it periodically aggregates the data collected from the various components of the program and provides it to community stakeholders in the form of data reports. A small selection of demographic and financial information regarding the program is provided in Tables 4 and 5.

The numbers reported in the first section of Table 5 are based on information available on 12/31/2012. Customization of the accounts resulted in the creation of 33 different SAA savings plans available to participants in various programs. It should be emphasized that these programs differ in terms of deposit amounts, duration, and total incentives. Therefore the average amounts reported should be interpreted with caution. For example, the average incentive amount per dollar saved is \$0.21 across all programs. However, this amount is lower for tax-time savings programs that feature high introductory deposits (around \$0.19) and higher for various youth savings models.

Table 2- Selected Program Financial Information as of 12/31/2012

Program Years (2009-2012)	
Total Number of Accounts (2009-2012)	1,028 (399 during 2009-2010)
Total Amount Deposited (Own Deposits)	\$729,568
Average Account Balance	\$709
Total Incentive Payments	\$156,217
Average Incentive per Dollar Saved	\$0.21
Program Years (2009-2010)	
Average Deposit Activity Rate (per Month)	78.7%
Average Deposit Amount (per Month)	\$34
Completion Rate (Graduating Accounts)	73.2%
Percentage of Accounts Never Funded	15.3%
Premature Termination (Funded Accounts)	11.5%

⁹ For a more detail account of implementation of Savings Accelerator Accounts the reader is referred to North (2012).

Consistent with the expectations, one significant result of the program is the high rate of deposit activity across these accounts. As is seen in Table 5, during 2009-2010, on average, more than 78% of all open accounts posted a deposit each month throughout the entire program.¹⁰ While these results have not been subjected to independent statistical evaluation in an experimental setting, they seem to corroborate the idea that incentive mechanisms in SAA can potentially influence the savings behavior of accountholders.

E. Discussion: Financial Incentives, Savings Accelerator Accounts, and the Question of Scale

Are Savings Accelerator Accounts scalable? The answer to this question depends partly on our understanding of the concept of scale as well as the costs related to offering incentives in savings programs. In what follows, both issues will be addressed in order to determine whether or not SAA includes elements of a scalable platform.

F.1. Are Financial Incentives Necessary in Low-Income Savings Programs?

The reason for having a robust dialog around incentives is manifold. Most importantly, on an operational level, inclusion of incentives in savings programs has major implications for cost and scalability of low – income savings programs. The direct cost of offering incentives as well as the indirect costs associated with administering programs, including determining participant eligibility, tracking and record keeping, and other program management requirements, makes the case for scalability of alternative models a no contest compared to programs that do offer such resource intensive variants.¹¹

Some of the most prominent examples of savings initiatives that do not involve any direct payments of incentives to savers include the “Bank On” campaigns, or recently the FDIC’s “Model Safe Accounts” pilot project that are launched in various parts of the country with the goal of increasing access to safe,

¹⁰ This number is significantly higher than those reported for IDA programs. For example, (Boshara 2005) reports a 50% deposit rate for the IDA program). Data regarding deposit activity in the program is available upon request.

¹¹ Moreover, and while there are some exceptions, if savings campaigns and programs do not offer specific financial incentives, there is not a major reason to limit participation only to low-income households.

and low-cost transactional and savings products for LMI households.¹² These programs are generally offered in close collaboration with financial institutions, financial regulators, and community advocacy groups and have received great support and attention in the past few years. From a comparative perspective, it is important to understand the promises and the limitations of each approach in stimulating low-income savings.

In order to make such comparisons possible, it should be pointed out that even in efforts based on customization and marketing of bank products such as the cases mentioned above, incentives are still present, in a significant way, through discounted pricing of financial products. But, while implementation of such programs also requires financial resources, they appear to be more cost effective compared to other programs involving direct match payments, largely because the incentive costs related to discounted pricing of financial products is absorbed, at least initially, by the participating financial institutions. The large consumer base of financial institutions along with the expansive list of products makes it possible for most, if not all financial institutions to internalize the incentive costs of such programs.

In effect, the conversation regarding incentives should distinguish between these two types of cases, henceforth referred to as demand-side vs. supply side incentive models. A demand-side incentive includes any kind of payment that directly supplements amounts saved by an individual. On the other hand, a supply-side incentive is usually defined in the form of reduced costs or price discounts on financial products and transactions. In theory, both demand and supply-side incentives can result in higher utilization rates for bank accounts and increase in savings; yet, supply-side incentives could be much more cost effective and can promise an easier transition to scale.¹³ It is partly because of this reason that such initiatives have gained great popularity among both practitioners and policymakers in recent years.¹⁴

¹² For more information regarding Bank on projects and Model Safe Accounts, the reader is referred to <http://joinbankon.org/> and <http://www.fdic.gov/consumers/template/>.

¹³ In reality, demand-side incentives are not only costlier, but independently, may not even be enough as they may require inclusion of supply-side incentives to facilitate access to safe and affordable bank accounts.

¹⁴ However, it is also important to note that these initiatives are not particularly focused on savings accounts, yet most of them try to incorporate options to facilitate savings for low-income customers.

However, the argument that is put forth in this chapter is that supply-side incentives are necessary, but not sufficient. These incentives are necessary, because they offer access to safe and affordable bank accounts as a prerequisite for accumulation of savings. Yet, if the demand for emergency savings is inelastic (i.e., unresponsive to changes in the price of financial products and services), then supply side-incentives will generally not result in any significant increases in emergency savings. Of course, without a formal analysis, it is impossible to judge with any degree of certainty if the demand for emergency savings is in fact inelastic with respect to the cost of transactions in formal financial institutions. But one might get a glimpse into this by looking at data from unbanked surveys which seem to indicate that a significant portion (around 20%) of low income individuals and households that have bank accounts still utilize Alternative Financial Institutions (ATIs) and conduct their financial transactions at a higher cost through these establishments.¹⁵ This apparent insensitivity to transaction costs implies that the demand for emergency savings at financial institutions may be close to being perfectly inelastic with respect to the cost of transactions.

Still, while supply-side incentives alone may not be effective in stimulating savings, the foregoing discussion does not automatically imply that the demand-side incentives will do the trick. There is however, some evidence in support of this hypothesis. Demand-side financial incentives are generally associated with increased savings. In a famous large-scale randomized study conducted in 2005, (Dufalo et al. 2005), evaluate the response rates and contribution levels of individuals in H&R Block's Express IRA program at selected H&R Block tax preparation locations. Individuals were randomly assigned to the control group (with no match on Express IRA), or to two experiment groups with a 20% match or 50% match for Express IRA contributions of up to \$1,000. The study concludes that matching had a significant effect on contributions. While the average contribution in the control group was reported at \$765, that number increased to over \$1,100 in the groups with 20% and 50% match rates.

¹⁵ For example, see (Khashadourian and Tom 2007, 6-7), for a synopsis of findings from two studies in the Los Angeles area regarding the degree of utilization of check cashing places by people with bank accounts. More recent results are provided in the FDIC's 2011 National Survey of Unbanked and Underbanked Households, available at: http://www.fdic.gov/householdsurvey/2012_unbankedreport_execsumm.pdf

(Beverly et al. 2008) provide additional support mainly from the literature on Individual Development Accounts (IDA) to explain the effect of demand-side incentives in impacting savings contributions. However, they also caution the reader that the evidence in support of the role of such incentives is mixed. If individuals have a fixed savings goal, then in the presence of financial incentives, they may reduce their own savings and rely on the match to still achieve their goal. Individuals may also reallocate assets from categories that have no or low incentives into ones that have higher incentives, resulting in zero net impact on savings. Finally, the introduction of incentives may create income and substitution effects that can work in opposite directions resulting in canceling the effect of incentives on increasing net savings.¹⁶

These arguments make a logical case in questioning the effectiveness of demand-side incentives; however, they may not be applicable to emergency savings of low-income households. For one, it is not clear if low income households have a priori fixed savings goals. In fact, according to ITS, savings programs can set the expectations for the individuals regarding how much to save and since incentives are typically conditioned upon participant contributions, the likelihood of a financial incentive diminishing own savings is rather slim. Also, assuming that current and future consumption (saving) are normal goods, the theoretical argument regarding income and substitution effects generally holds true only for households with net positive assets who may choose to reshuffle their portfolios in order to contribute to a matched savings program without increasing net savings. Yet, in the case of low income savings and asset poor households, the likelihood of such canceling effects is questionable at best. This could be partly explained by the fact that low income households often face a higher degree of future income vulnerability, which according to (Muellbauer 1996, 106) will generally prompt individuals to shift income away from present to the uncertain future or by the fact that many low income households have

¹⁶ A financial incentive on savings will lower the relative price of future to present consumption and will signal the individual to substitute future consumption for current consumption (by saving more). This is called the substitution effect. However, at the same time, a financial incentive automatically increases the future purchasing power of the individual, so a net saver with a fixed savings goal, may decide to reduce net savings as the incentive amount would compensate for lower savings. This is called the income effect.

net asset values that are very low (if not negative), making it impossible for them to reshuffle assets they don't have.

Of course, one can always hypothesize that some type of reshuffling could happen even if net asset values are negative, e.g., through borrowing money and using a part of it to save, (Lusardi et al. 2011, 28). But even when considering this possibility, financial incentives may still play a significant role in stimulating low-income savings. For example, (Schreiner et. al 1998), show that if the spread between borrowing rates and return on savings narrows, low income households are more likely to both borrow and increase savings at the same time.¹⁷ This finding, while not supported through additional research, is important as the authors show that by narrowing the spread between saving and borrowing rates (for example, through offering higher rates of return on savings through program incentives), low income households may be prompted to start saving at lower levels of wealth and accelerate the rate of saving as their asset levels starts to increase.

Notwithstanding the above, demand-side incentives are still necessary in terms of their indirect role in increasing low income savings. (Beverly et al. 2008), explain the role of incentives in increasing participation rates in matched savings programs, which can indirectly impact savings and function as a de-biasing mechanism against the status quo bias. Increasing participation and take-up rates is also a key highlight in (Dufalo et al. 2005), where the authors indicate the difference in the take-up rates; 3% participation among the control group, vs. 8% for the group that offered a 20% match, and 14% for those who were offered a 50% match.

The effectiveness of demand-side incentives could also be highlighted from a behavioral perspective where group dynamics are harnessed to exert a strong influence on the behavior of an individual. The choice, timing, and payment of demand-side incentives could provide potent mechanisms, for example, by adding an element of novelty or creating a sense of competition among participants in a match savings

¹⁷ However, they also point out that in some cases the optimal choice in their optimization model is neither to borrow nor to save.

program that could influence behavior in the desired direction regardless of the amount of incentive offered. From this perspective, the more important question is not whether incentives matter; but how such incentives should be structured to generate the best results.

F.2. The Question of Scale

There is a general confusion regarding the concept of scale in the field of community economic development. For example, (Ratliff and Moy 2004, 4) in an analysis of Community Development Financial Institutions state that

“Private sector actors tend to talk about ‘scale’ as in ‘economies of’ – i.e., presuming a cost model in which variable costs decline as production increases. However, for the CDFI industry, reaching scale typically refers to delivering product(s) to a larger audience, delivering more products, or increasing assets or loan volume.”

The above quote implies that there is an inherent difference between interpretations of “scale” in the for-profit versus the community economic development industry. But this difference is rather specious, as the interpretation that refers to scale simply as a “large number” is in fact just a vague description of the more substantive definition of the term in relation to cost.

Still, the more troubling issue in the way scale is commonly discussed relates to the idea that by going to scale, costs will inevitably go down since variable costs tend to decline as production increases. A full analysis of scale is beyond the scope of this chapter, however, it should be pointed out that economies or dis-economies of scale are not related to variable costs, but to long-run average costs, (Thomas and Maurice 2005).¹⁸ In fact, it is possible to envision a case where variable costs are decreasing while an industry is plagued by diseconomies of scale. So, a discussion about scalability of a savings model is in

¹⁸ Reducing long-term average costs should not be confused with reducing variable costs. While it is relatively easy to implement cost-cutting measures in order to reduce variable costs, the issue of reducing “long run” average costs is not too easy to tackle. In addition, the main difference between economies of scale and reducing variable costs is in the underlying causal relationship between output and cost. In most cases, it is possible to cut variable costs by increasing output (output causing cost), but it is impossible to go to scale without cutting the long run average costs (costs causing output).

reality a discussion about long-term average costs. Carrying this conversation to its logical extension implies that in the context of SAA one should explore whether or not the industry is capable of introducing structural efficiencies in such a way that can further reduce the cost of the account per dollar saved if the intention is to offer accelerator accounts in large numbers. But the answer to this question is more or less obvious. As long as there is nothing in the way a savings model is designed that limits it to a certain geography or a very specific population, or requires technology and/or competencies that are not available in most regions, this model, like any other could benefit from efficiency enhancements such as, for example, an online enrollment platform, centralized data management system, universal marketing, expanded language support, and etc. Such enhancements can increase the economies of scale and in that sense SAA is no exception.

But the confusion arises when the same question is asked in a comparative sense, meaning whether or not SAA is, or could be, more scalable compared to other models of emergency savings. To the extent that we are accustomed to think about scale as “a large number of accounts” this may create confusion in responding to this question. Since SAA is an incentivized model, the mind is automatically drawn to the issue of cost on a *per account* basis and the inescapable fact that each account requires an allocation of funds for the incentive payments. And since, in most cases, this allocation is a fixed amount and that represents a big share of the total cost of the program, it is hard to imagine how economies of scale would play out in a matched savings program. This chapter argues that this comparison is at best inaccurate as the correct measure of cost at scale is not a measure of unit cost per account, but rather unit cost per dollar saved in new emergency savings.

By looking at the issue of scale from this perspective, it is argued that the SAA platform is highly scalable. As indicated in the earlier sections, if the demand for emergency savings is inelastic, then models of savings based only on supply-side incentives, while can have an advantage in terms of cost per account, may not result in significant increases in emergency savings in dollar amounts, therefore the cost effectiveness of such models is not necessarily a given. Still, this provides avenues for further research in

the field to compare the cost-effectiveness of alternative models of incentivized savings programs (both on the supply as well as on and demand side.)

A formal evaluation of the relative performance of alternative savings programs is yet to be conducted, but it is argued that the overall approach in SAA conjures up elements of scalability that look promising. As discussed earlier, incentive payments in SAA are defined as minimum dollar amounts needed to influence behavior, whereas a more common approach in offering incentives in savings programs is to offer a match that is sufficiently high to help meet emergencies. So far, the average cost of incentive payments in various SAA programs is 21 cents per dollar saved over the life of the program, which is significantly lower than many other programs that include incentive payments. In addition, since incentives are earned as deposits are made, the present value of incentives are typically higher than when such incentives are paid upon graduation. The SAA platform therefore represents a marked departure from the traditional notion of matching low income savings in terms of the cost of incentives, which can have implication for scalability of this model of low-income savings.

In addition to the relatively low cost of incentives, in designing the SAA platform, OPTA's innovation has introduced significant economies of scope by allowing programs to customize savings plans according to different target populations; for example based on age, or income levels of participants, or even based on specific programmatic connections such as tax preparation, or financial literacy programs, etc., while utilizing the same general platform in all cases to manage the ongoing operations of the program. This is also important from a marketing perspective, as SAA is capable of providing a malleable platform for the proliferation of savings products and meeting the needs of low-income households with different abilities or reasons to save, without adding to the cost of simultaneous administration of different programs. The set of parameters, including deposit amounts, composition and values of incentives, program duration, and even rollover options are all managed using the "Savings Path" database which is available online for any organization or entity that is interested to launch the program. The system allows the user to combine various incentive components and create uniquely coded plans, which they can then

use to offer as different savings options to their clients. Account transactions are uploaded into the system and incentives are calculated on each account according to the account codes. The system generates program statements that are mailed to participants on monthly or quarterly intervals, reporting the total value of the account and the remaining months until graduation. Other modes of communication of account information, such as email or text messaging are currently being reviewed as possible options. In addition, OPTA offers an expanded language support for program materials. Accounts statements are now available in English, as well as Spanish, with future plans in place to include other languages.

Finally, it should be noted that a key aspect of scalability relates to distribution networks. Currently opening an incentivized savings account is not as easy as walking to a bank branch or setting up an account online. Since the accounts are only offered to low-income households, participant screening seems inevitable. However, this process could be streamlined in a number of different ways. Similarly, data collection and reporting procedures could be streamlined in order to generate additional benefits to scale. These issues require further investigation, but are generally not unique to SAA.

In concluding this section, it appears that a more efficient measure of scale is the ability of a savings program to increase the dollar amount of savings rather than the number of accounts opened. Therefore, exploring new ideas and options for increasing short-term low income savings without incorporating specific demand-side financial incentives may not be too practical to pursue, regardless of the issue of cost. This is even more important in the post-recession era as monetary easing policies have generally resulted in negative real interest rates on most savings accounts available to low income households, making it even more difficult to convince households to save in the absence of meaningful and transparent rewards.

F.3. The Political and Regulatory Framework

The emergency savings model presented in this chapter is currently implemented within the same regulatory environment that impacts other matched savings programs. SAA utilizes account structures offered by financial institutions that are almost identical to traditional matched savings programs such as

the IDA. And like many other savings programs, SAA faces some of the same challenges low-income savings programs generally face in offering meaningful savings opportunities to low-income households. For example, existing asset and property limits in public benefit programs remain a big factor in limiting program take-up rates. While, in most cases, the amount of savings including the incentive payments in most SAA plans remains well below \$1,000 or \$1,500, which is usually within the asset thresholds in most public benefit programs, it still creates challenges in some case for project administrators to recruit participants.

Another issue relates to the tax consequences of SAA incentive payments. It should be noted that these payments are typically small, ranging from \$150 to \$250 per account so there are almost no significant income tax consequences resulting from such small benefits. Also in most cases, these payments are treated as gifts with no tax consequences to the saver.¹⁹ Still, policy interventions to formalize any tax consequence of such incentive payments in this and other programs could help address any cognitive barriers that may exist for participants in joining the program.

Financial institutions could also play a significant role in streamlining the process and supporting incentivized savings programs. Existing partnerships in banking projects such as the Bank On efforts are extremely valuable, yet anecdotal evidence suggests that these campaigns place a high emphasis on offering transactional products such as checking accounts. In addition, investment in resources to create low-fee or no fee accounts, should also include products that are designed for the purpose of matched savings programs, offering flexibility in setting up the accounts, online access, and reporting capabilities. Several high level account platforms, including reloadable debit card account platforms, are currently available that offer the kind of functionalities that could help facilitate the management of incentivized savings programs, but due to cost or other considerations, many financial institutions are reluctant to offer these products to community based organizations on a low or no-fee basis. This could potentially present

¹⁹ Also, most of the existing programs periodically offer these incentives during the course of the program. Therefore, depending on when an account is enrolled, the total incentive payments are split between two calendar years making any possible tax consequence really negligible.

an opportunity for financial regulators to play a more active role in guiding financial institutions in finding ways to support matched savings programs more effectively. Currently, under the CRA guidelines, many financial institutions offer resources and provide services that are valuable, yet from a practical point of view, may not represent the best use of scarce resources in meeting the community needs.

F. Conclusion

The main theme of this chapter is to highlight the importance of saving as a sound financial habit. While most of the literature on building wealth for the poor has focused on the transformational power of assets, reference is typically made to long-term assets, such as human capital formation or tangible assets. But changes in the economy in the aftermath of the Great recession underline the necessity of paying a closer attention to the role of asset allocation decisions, which requires that households maintain a healthy balance between liquid and illiquid assets.

Justification for increasing savings does not necessarily stem from the need to address financial emergencies as building and maintaining assets in the liquid form can also offer speculative benefits to households and make it possible to take advantage of opportunities as they arise. But America is not a nation of savers, so interventions such as creating programs to help increase savings are necessary to effect change in this arena. Still, identifying a model or a collection of models that can effectively address this problem is not easy. Considerations regarding cost, effectiveness, and scalability of alternative models are important elements in the discussion regarding low-income savings.

This chapter introduces the concept of Savings Accelerator Accounts. In line with its overall philosophy of impacting long term outcomes through a sequence of short-term actions, a savings accelerator account program provides small rewards to behavior consistent with long term savings outcomes. A sequence of decisions that are made independently, result in accumulation, over the long term, of liquid assets. SAA achieves this goal by focusing on how and when program incentives are offered to savers. Employing

concepts of behavioral economics, instead of focusing on dollar amounts, SAA utilizes incentives as a combination of independent mechanisms that could be embedded in a program in order to influence behavior, both in the short as well as the long term.

Further development of the savings platform presented in this chapter can be informed by a comprehensive evaluation of different components embedded in SAA. Statistical models can be developed based on an experimental design in order to evaluate the relative importance and effectiveness of the multicomponent incentive mechanism. Multivariate techniques can be employed to determine the simultaneous impact of each incentive component, both on deposit frequency as well as amounts saved. These evaluations can help fine tune the model, for example by identifying the minimum rate of fractional match (or interest) needed to create a meaningful acceleration in the model. Such an analysis can also help determine the most effective combination of incentive mechanisms, some of which have not been introduced in this chapter.

As a concept, SAA might seem as an interesting idea to further explore, but it is only one among several alternative approaches that could potentially increase low-income emergency savings. Therefore, a full-fledged experimental study of Savings Accelerator Account programs is on the top of the list of recommendations in this study. SAA can be tested against other models of incentivized savings to determine the advantages or limitations of each model in stimulating low-income emergency savings. For example, a comparative analysis could test the significance of time restrictions in alternative models, or the significance of back-ending the savings match as compared to the gradual distribution of benefits in SAA. The results of such a study, if satisfactory, could pave the way for communities to raise funds and engage financial partners more effectively and could justify future investments in program delivery options and the use of technology in low income savings programs.

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