

# Accelerating Low Income Savings

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## **Abstract:**

*This chapter introduces the concept of Savings Accelerator Accounts. Accelerator accounts are designed by manipulating three main program elements; expected monthly deposit amounts, incentive components, and the length of time incentives remain in effect. Participants can make deposits in any amount and at any time. Incentives are applied to each deposit independently and there is no time-restriction for participation in the program. 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 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. Savings Accelerator Accounts achieve this goal by focusing on how and when program incentives are offered to savers. Therefore Instead of focusing on the amount of incentives offered, it considers incentives as a combination of independent mechanisms that can be embedded in a program in order to influence behavior, both in the short as well as the long term.*

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

## **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 households' 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 of exposure 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 the traditional models of long-term savings.

But America is not a nation of savers and millions of families in the US, not only do not have sufficient levels of savings, but are also lacking any kind of assets, in general, to support them in a rainy day. There is an undeniable need in exploring ideas to help vulnerable, low-income households build savings in order to be able to handle financial emergencies more effectively. In doing so, it is important to understand the components of different approaches and models of savings. While in most cases, it is relatively easy to distinguish programs based on their logistical aspects, such as target populations, modes of delivery, or differences in reliance on technology, it is critical to also explore the differences on a conceptual level; as such elements can equally influence the overall effectiveness of a program in generating results. Exploring the issue of emergency savings through this lens is the general theme of the present study.

This chapter provides an overview of a low income savings platform known as the Savings Accelerator Account (SAA). After a quick review of available data and evidence regarding savings behavior and the vulnerability of low income households in the US, the chapter will introduce the elements of SAA and provide some background on its implementation. In discussing the effectiveness of the model, it will highlight some of the theoretical considerations that are foundational to the performance of SAA programs. The chapter will then continue with a discussion regarding cost and scalability of low-income savings programs, particularly with regards to the SAA platform. Finally, it will discuss the limitations of the model within the existing political and regulatory landscape. The chapter will conclude with a short summary and recommendations for future research and evaluation.

## B. Background: The Declining Rate of Saving Among US Households

Before the Great Recession, the US economy had experienced more than two decades of economic fluctuations that by most accounts was considered relatively tamed as compared to the business cycles that had befallen the economy in the earlier decades. While the reasons for this relatively successful macroeconomic performance could be attributed to several macro and microeconomic factors, including globalization, effective monetary policy interventions, improved business inventory management technics, or the rapid expansion of consumer credit that continually fueled the aggregate demand, the effect on the financial behavior of US households in terms of saving is undisputable. As can be seen in Table 1, over the past forty years, the US personal savings rate has declined steadily with the passing of each decade, from an average of 9.6% in 1970s down to 2.8% during the period from 2000 until the start of the Great Recession in December of 2007.<sup>1</sup>

**Table 1- Average US Personal Savings Rate and Consumer Sentiment (\*- Data available since January 1978).**

Period	Savings Rate	Consumer Sentiment*
1970-1979	9.6%	72.7
1980-1989	8.6%	85.3
1990-1999	5.5%	91.1
2000-2007	2.8%	91.5
2008-2012	4.7%	68.4

It is hardly a coincidence that the decline in personal savings rate is accompanied by an overall improvement in consumer sentiment during the same period.

Perhaps, as the typical economic agent became more confident in the performance, predictability, and the outlook of the US economy over the years, and as access to personal credit became increasingly more

prevalent than in the past, the need for saving for the future or for emergencies took the backseat while the US consumers continued to expand their current consumption.

But the observed downtrend in personal savings rate came to an abrupt end in the wake of the Great Recession. In the years that followed, the US personal savings rate jumped to an average of 4.7%, while at the same time, consumer confidence dropped to 68.4, the lowest average value of any five-year period since the University of Michigan started reporting the index.

In spite of the available data, addressing the issue of personal savings is a rather complicated task. On the one hand, in macroeconomics, saving is treated as a balancing term in the equation that relates aggregate consumption to income. On the other hand, there is a solid microeconomic, as well as a developing behavioral literature on savings. Whereas in macroeconomics, aggregate saving is studied, more to provide insights into aggregate consumption behavior and the general equilibrium problem, in microeconomics it is studied in the context of intertemporal choice as well as an asset allocation problem. Finally, in behavioral economics, the attempt is to explain the gaps in theory where the assumption of a rational economic agent provides results that are at variance with the observed phenomenon. For example, while microeconomic theory posits that a rational economic agent would not make a decision to leave one overly exposed to risk, behavioral biases and blind spots could explain

<sup>1</sup> Data on quarterly US personal savings rate and University of Michigan Consumer Sentiment (reported monthly) was retrieved from FRED Economic Data service at the Federal Reserve Bank of St. Louis, Link: <http://research.stlouisfed.org/fred>, series names are PSAVERT and UMCSSENT.

the financial fragility of households who remain overly confident about their financial security outlook during periods of economic prosperity.

### **C. 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 in the foreseeable future.<sup>2</sup> At the same time, uncertainties surrounding the US economic outlook have presented an opportunity to revisit the notion of 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’.”*<sup>3</sup> 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, Mensah, and Steuerle (2006), 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.<sup>4</sup>

In spite of this significant potential contribution, available data and research on low income households' actual savings levels 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), 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 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

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<sup>2</sup> For a list of reasons, for example, see Dynan (2012).

<sup>3</sup> 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](https://tax-coalition.org/policy-resources/savings-policy/Universal_Savings_for_American_Workers_FINAL.pdf/view)

<sup>4</sup> See page 13 of Johnson, Mensah, and Steuerle (2006) for the complete table.

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, p.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), 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.<sup>5</sup>

These numbers are somewhat surprising as an increasing number of American households report that they face financial emergencies every day. In one study, Taylor, Funk, and Clark (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.<sup>6</sup> Motivated by these developments, new programs and initiatives are introduced in conferences and publications every day. The Accelerated Savings Account (SAA) platform is one such example that is detailed in the following sections.

#### **D. 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), ITS assumes that low-income earners save less than higher-income individuals primarily due to differences in access to existing financial institutions and not only because of individual preferences and values. According to Beverly, et.al., (2008, p90), "The term *institutions* ... refers to purposefully-created policies, programs, products, and services that shape opportunities, constraints and consequences".

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<sup>5</sup> See Khashadourian (2012) for details.

<sup>6</sup> For an introduction, the reader is referred to Thaler, Sunstein, and Balz, (2010), Mullainathan, and Thaler, (2000), Bertrand, Mullainathan, and Shafir, (2006), and Mullainathan, and Shafir, (2008) for a comprehensive discussion. Also Pronin and Kugler (2007), provide an interesting analysis regarding behavioral blind spots.

ITS underlines the significance of “institutionalized mechanisms of saving”. These mechanisms are important because they draw attention to saving. In addition, Beverly and Sherraden (1998), discuss the importance of other constructs in stimulating savings. For example, “facilitation” which is often put in place through pre-commitment constraints (such as direct deposit) may help reduce the conflict in making decisions between current consumption and future pleasures. Also, “financial information and education” and “incentives”, primarily of a financial nature, are also deemed important in stimulating savings. In a later study, Beverly, et.al., (2008), extend this list to now include seven institutional constructs that can affect savings behavior.<sup>7</sup>

From a practical point of view, ITS presents a convenient structure upon which, one can build and expand models of low-income savings. Attention to details such as facilitation, or access to savings opportunities, the importance of keeping participants engaged by providing information regarding the program, or the role of incentives and restrictions, etc., are all discussed in detail in ITS and can serve as a user manual for building new models of low-income savings. It is for this reason that the introduction of SAA is made within the same context of ITS. In particular, of the seven institutional constructs referred to in this theory, SAA focuses primarily on the role of incentives and restrictions in accelerating savings.

### **D.1. Key Mechanisms: Deposit Structure and Incentives in SAA**

The idea of acceleration first appeared in Khashadourian (2009), in an article regarding savings outcomes in the Individual Development Account (IDA) program. The basic hypothesis in that article is that participation and saving in IDA programs may entail elements of uncertainty that the existing match mechanism is unable to properly address. As a result, IDA programs often face attrition rates, or inactivity that is relatively high, especially considering the significant amount of incentives offered in these programs; Boshara (2005), Schreiner and Sherraden (2006), DeMarco et.al.,(2008). In order to address this problem, Khashadourian (2009) recommends a bifurcation of the match and creation of a Hybrid IDA model in order to adequately address risk elements by using a flexible match component that rewards savings independently from the match that is offered at the time of asset purchase.

The idea of a flexible match was later developed into a multicomponent incentive structure that is used to accelerate savings in SAA. The specific details of the model will be explained in the next few paragraphs, but it is important to emphasize that the central hypothesis in SAA 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 disguised by structuring saving as a sequence of short-term decisions consisting of a series of independent actions and rewards. In a matched savings program like SAA this could be done by combining different incentive mechanisms and minimizing or eliminating restrictions. Participants in savings programs will probably be able to make such short term decisions more efficiently than when actions are structured with a view of the long term. Therefore, in Savings

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<sup>7</sup> The extended list 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 term 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.

Accelerator Account programs, participants earn rewards that are instantaneous and partially independent from their past and future deposit activities.

**Deposit Structure** - SAA programs are designed by manipulating three main program elements, namely, deposit amounts, incentive components, and the length of time incentives remain in effect. Participants can make deposits in any amount and at any time. 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 corresponding incentive reward for the length of time they participated in the program. Moreover, periodic incentives increase with the amount of deposit but reach a maximum at a set amount of monthly deposit. In other words, if the deposit cap is set at \$40 per month, then incentives apply to the first \$40 deposited in that month. It should be emphasized that 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 that are usually within the range of \$25 to \$50.

**Incentives** - A multicomponent incentive structure is embedded in SAA to offer rewards, not only based on amounts saved, but also based on consistency of deposits. Participants, making deposits at least once every month, earn a higher reward, regardless of how much they save, compared to others who may save the same amount albeit at a more sporadic pattern. This component of the SAA incentive structure is designed to reward positive behavior that may, over time, result in habit formation.

As discussed earlier, incentives in SAA also depend on the amounts saved and are applied to a set amount of monthly deposits (e.g., the first \$40 deposited per month). To understand how incentives are incorporated in a Savings Accelerator Account, a partial list of these subcomponents is provided in Table 2. 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. Another component is the straight deposit match. This mechanism targets the frequency of deposits and is important from a behavioral perspective. The incentive 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.

The third incentive component in SAA is a fractional match. Following Khashadourian (2009), the mechanism used for this purpose is similar to an interest rate that is calculated on a month to month basis and is applied to the deposit cap. Since interest accounts for current and past deposits, the amount of the incentive award increases with each deposit, therefore participants enjoy a higher benefit amount with each successive deposit activity, a process that is referred to as “acceleration” in SAA.

Acceleration is instrumental to the success of the program. Since there is no effective time-restriction in this model and participants can potentially leave the program or stop making deposits at any time, the model is potentially exposed to the risk of self-control issues. To address this problem, the choice of interest rate (acceleration) was made with a view of imposing a soft barrier in the form of increasing the

opportunity cost of an early termination. In other words, since the savings reward in each month is higher than the month before, opportunity cost of termination increases with each deposit. 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 3.

**Table 2 - Examples of Incentive Components in Savings Accelerator Account.**

<b>Incentive Component</b>	<b>Description</b>
<b>Signup Bonus</b>	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.
<b>Straight Deposit Match</b>	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.
<b>Interest</b>	Annualized rate of interest applied to monthly deposits. The rate is compounded monthly.

**Savings Cycle** - To make the cost of incentive payments manageable, the program 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 program duration is simply the number of monthly opportunities a participant can have 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 the program 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 an additional contribution, or make another deposit and decide the fate of the account again next month.

**Table 3 - Examples of SAA Savings Models.**

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

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 also made available to participants who are interested to save for a second cycle. However, in



many cases, the amount of incentives in the continuation cycle is generally 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.

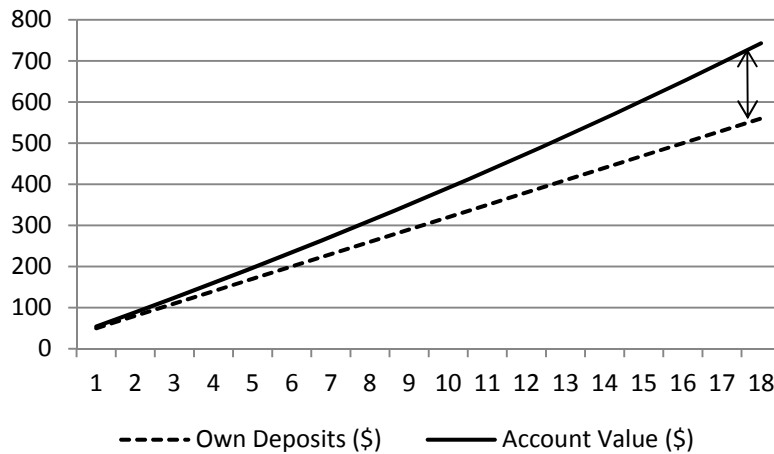


Figure 1 - Deposits and the total Account Value in SAA plan T16 (18-month savings period).

## D.2. 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 technical aspects of the program are currently supported 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.<sup>8</sup> 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.

<sup>8</sup> For a more detail account of implementation of Savings Accelerator Accounts the reader is referred to North (2012).

**Table 4 - Basic Demographic Information of SAA Participants**

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

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 5- Selected Program Financial Information as of 12/31/2012**

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

Consistent with 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.<sup>9</sup> 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. Evidence of Effectiveness: Some Conceptual Considerations**

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 discuss 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 responses to financial incentives based on how these incentives are structured in a savings program. In other words, the same dollar amount offered as a program match may produce different savings outcomes based on how the said amount is offered to savers. The next few paragraphs will explain how the specific design elements in SAA help improve savings outcomes for low-income households.

### **E.1. Multicomponent Incentive Structure**

Rather than focusing on a dollar amount, SAA considers the incentive as a collection of different mechanisms that can be utilized in combination in order to generate specific behavioral outcomes consistent with the underlying philosophy of a savings model. For example, SAA adopts the straight deposit match as a mechanism that may help savers avoid the cognitive load of making long term decisions. It sends the signal to the participant that it is important not to miss the monthly deposit, even if one is not able to make the full amount in a particular month. The inclusion of this mechanism may therefore improve consistency of deposit rates and support habit formation among participants.<sup>10</sup>

On the other hand, the interest rate mechanism (aka the fractional match component) helps accelerate the accumulation of savings. Acceleration, in turn, helps the program to replace hard *restrictions*, a key institutional component in ITS, with a soft barrier. This is because in the presence of interest and when deposits are made every month, a participant stands to lose a higher incentive amount in period  $t+1$  than that received in period  $t$ , if he terminates his account in the same period. It is argued here that such soft barriers might be preferable to the type of restrictions that require a participant to complete the savings period before access to a savings match is made available (see E.2 below). Approaching incentives as a collection of different mechanisms is a distinctive aspect of SAA compared to other models of low-income savings.

Another important aspect of SAA is the choice of interest rate (fractional match) as an incentive mechanism that allows the model to take advantage of the reinforcing effect of construal. Bertrand,

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<sup>9</sup> Data regarding deposit activity in the program is available upon request.

<sup>10</sup> 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.

et.al (2006, p9) provide examples showing that the responses of people to different stimuli depend on how they understand and interpret them. It is commonly believed that low-income households face a high rate of time preference, (Pennings, and Garcia (2005), Lawrence (1991), Carvalho (2010).) Accordingly, Khashadourian (2009) recommends that the interest rate in savings programs should be set at a sufficiently high rate to help the savers make the sacrifice of saving their hard earned dollars. For this reason, and while some exceptions exist, SAA models typically offer rates ranging from 15 to 23% on various savings plans. 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.

## E.2. 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 time restrictions; 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 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, p 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.<sup>11</sup> 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 restrictions.<sup>12</sup>

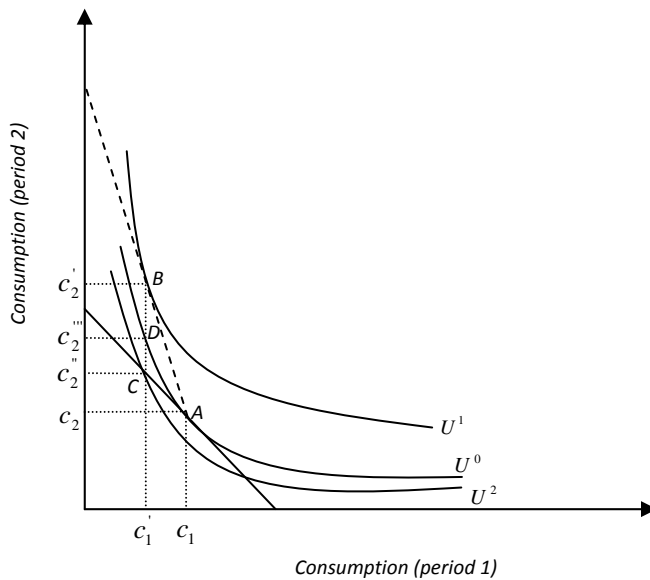
Restrictions, in general, are deemed important in influencing behavior of a participant in a savings program. However, in the case of an emergency savings program, imposing time restrictions may be rather counterintuitive as it may result not only in a reduction in the ability of an individual to cope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

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<sup>11</sup> 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.

<sup>12</sup> 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 on such accounts.

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



**Figure 2 - Incentive Effects and Intertemporal Utility in Time-Restricted Savings Programs.**

different reasons 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 earning an incentive, introduces an element of uncertainty that increases the cognitive load of making 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.

As indicated above, a time-restricted incentive model may result in loss of intertemporal utility for program participants who forfeit the match. To illustrate, consider a two-period consumption/income model shown in (Figure 2).<sup>13</sup> Let's assume that an individual with no opportunity to borrow or save, is able to maximize his intertemporal utility by choosing to consume at point A (autarky point) which is located on his intertemporal budget constraint, maximizing utility at  $U^0$ . The corresponding consumption values in periods one and two are given by  $c_1$  and  $c_2$ .

Now imagine that in the presence of demand-side incentives, the participant is encouraged to save an amount equal to  $c_1 - c_1'$  in order to increase future consumption from  $c_2$  to  $c_2'$ , which is located on the higher utility curve  $U^1$  at point B, touching the new budget constraint (represented by the dotted line connecting point A to the vertical axis.) In this situation, the total amount of the incentive is equal to  $(c_2' - c_2'')$ . However, if the participant fails to meet the time restriction in the savings program and forfeits the match, he will still be able to use his limited savings from period one to increase consumption in period two, by moving from point A to point C on the original budget constraint, resulting in consumption values of  $c_1'$  in period one and  $c_2''$  in period two. This however, will lower the utility of the consumer from  $U^0$  to  $U^2$  representing a net welfare loss resulting from saving when incentives are forfeited. The welfare loss could be easily avoided if the program does not restrict incentives to an all or nothing outcome and awards savers who have participated in the program a proportional benefit based on their level or duration of participation in the program. In Figure 2, a reward equal to  $(c_2''' - c_2'')$  which is a fraction of the total incentive award  $(c_2' - c_2'')$  will be enough to

<sup>13</sup> For a more comprehensive analysis of consumption and saving the reader is referred to Chapter 7 of Romer (2011) or any intermediate economics textbook.

leave the consumer indifferent between point A and the “limited participation” point represented by point D, resulting in no loss of welfare.

A distinguishing feature of SAA is that it does not adopt the all or nothing approach as is commonly used in many 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 accelerating or distributing the incentives in a way that it increases the opportunity cost of an early withdrawal. Opportunity cost, like a 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 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 to 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 withdrawing funds from the account.<sup>14</sup> 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.

### **E.3. Expected Deposits**

Several design features in SAA warrant further analysis. In terms of deposits, most SAA plans feature a higher introductory deposit as compared to the expected regular monthly contributions. While this may create a barrier limiting the ability of a participant to join the program, it should be noted that SAA programs are typically customized using different savings plans, 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.

But on the other hand, several behavioral as well as economic factors rationalize the use of higher introductory deposits in savings plans. For example, if the 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 his 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.

The above notwithstanding, a higher introductory deposit can 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

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<sup>14</sup> 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.

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, can play an important role in helping participants who open the account to continue to save in subsequent months. In the meantime, the sign-up bonus could be a strong de-biasing mechanism in addressing the status-quo bias of inaction.

#### **E.4. Acceleration vs. Savings Match**

As a model of emergency savings, rather than targeting a predefined level of savings as a 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? Part of the reason traces back to the overarching philosophy in a 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 and acceleration that may make 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.

Long term results in SAA are the products of a sequence of short-term actions. So the goal in SAA is to nudge the individual to make the decision 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, Loewenstein, O’Donoghue (2002, p360). 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 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, p. 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 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 in the next 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.

## **F. 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 the program, including determining eligibility of participants, 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.<sup>15</sup>

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”

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<sup>15</sup> 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.



pilot project that are launched in various parts of the country with the goal of increasing access to safe, and low-cost transactional and savings products for LMI households.<sup>16</sup> 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. And 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.<sup>17</sup> It is partly because of this reason that such initiatives have gained great popularity among both practitioners and policymakers in recent years.<sup>18</sup>

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, 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

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<sup>16</sup> 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/>.

<sup>17</sup> 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.

<sup>18</sup> 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.

transactions at a higher cost through these establishments.<sup>19</sup> 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.

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.<sup>20</sup>

These arguments make a logical case in questioning the effectiveness of demand-side incentives; however, they may not be applicable to emergency savings. For one, it is not clear if low income households have a priori fixed savings goals. If 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, the likelihood of such canceling effects is not significant. This could be partly explained by the fact that low

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<sup>19</sup> For example, see Khashadourian and Tom (2007, p.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](http://www.fdic.gov/householdsurvey/2012_unbankedreport_execsumm.pdf)

<sup>20</sup> 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.

income households often face a higher degree of future income vulnerability, which according to Muellbauer (1996, p.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 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, p.28). But even when considering this possibility, financial incentives may still play a significant role in stimulating low-income savings. For example, Schreiner, Graham, and Miranda (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.<sup>21</sup> 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, as a result of higher returns on savings because of 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. For example, Beverly, et.al., (2008), explain the role of incentives in increasing participation rates in matched savings programs, which can indirectly impact saving and function as a de-biasing mechanism in countering 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 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, p.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.”*

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<sup>21</sup> However, they also point out that in some cases the optimal choice in their optimization model is neither to borrow nor to save.

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 referred to relates to the idea that by going to scale, costs will inevitably go down because 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 as referenced in the above quote are not related to variable costs, but to long-run average costs, (Thomas, and Maurice, 2005).<sup>22</sup> 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 reality a discussion about long-term average costs. When one asks the question of whether or not the SAA platform contains elements of scale, what one really means is whether or not the industry is capable of introducing structural efficiencies in such a way that can further reduce the cost of these accounts. But the answer to this question is clear. 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 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 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. But in fact, 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

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<sup>22</sup> 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).

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 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.

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 to 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 them 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 \$1,500, 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.<sup>23</sup> Still, policy interventions to formalize the 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 an opportunity for financial regulators to play a more active role in guiding financial institutions

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<sup>23</sup> 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.

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.

## **G. 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, results 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. Instead of focusing on dollar amounts, it considers 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 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 matched savings to determine the advantages or limitations of each model in stimulating low-income savings. 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 use of technology in low income savings programs.

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