Households with Low Incomes Can Save

Evidence and Lessons from Matched Savings Programs in the US and Italy

Davide Azzolini, Signe-Mary McKernan, and Kassandra Martinchek

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Matched savings programs have the potential to tackle wealth and education inequality by helping households with low incomes increase their savings toward long-term investment goals, such as postsecondary education, a first home, or a small business. Matched savings programs match personal savings—for every dollar someone saves, the program matches a specified additional amount. With evidence supporting these programs' effectiveness, they are gaining attention in policy debates.[1] This brief presents recent evidence from randomized controlled trials on the effectiveness of two matched savings programs implemented in different institutional, cultural, and socioeconomic contexts: Assets for Independence (AFI) in the United States and *Percorsi* in Italy.

Our findings add to the vast literature concluding that, contrary to popular myths, households with low incomes can save when provided a quality savings vehicle and incentives (via matched savings) (Stegman and Faris 2005; Leckie et al. 2010; McKernan, Ratcliffe, and Shanks 2012). In the first year after program entry,

- significant shares of **families with low incomes opened a savings account and made deposits** (78 percent in AFI and 94 percent in *Percorsi*);
- participants' **median monthly savings amounted to $64 in AFI and $39 in *Percorsi* before matches;**[2]
- **AFI increased participant savings by $657 at the median** (participants saved $881 before matches compared with $224 for nonparticipants).[3]

The matched savings programs also reduced participants' hardship (McKernan et al. 2020) and provide suggestive evidence that they supported long-term investment goals:

- In the first and third years, **AFI reduced the number of hardships participants experienced.** AFI led to a 34 percent reduction in the total number of hardships experienced in the first year and a 25 percent reduction in the number of times participants could not pay for housing, utilities, or needed medical care in the third year.[4]
- In the third year, exploratory subgroup analyses provide suggestive evidence that **AFI participation increased homeownership among renters (at study enrollment) by 52 percent (4.7 percentage points)** and **increased business ownership among non–business owners (at study enrollment) by 53 percent (5.1 percentage points).** Among all study participants, AFI found no statistically significant effect of the program on homeownership, business ownership, or postsecondary education or training.
- ***Percorsi* increased high school students' college enrollment by 13 percent** (8.7 percentage points) and **persistence to the second year of college** by 15 percent (8.9 percentage points).

Comparative, cross-national studies on matched savings programs are limited. This is in large part a consequence of these programs' relative novelty and their concentration in a few countries, such as the United States, Canada, Singapore, Italy, Uganda, Israel, and previously, the United Kingdom (Loke and Sherraden 2009; Leckie et al. 2010; Beverly, Elliott, and Sherraden 2013; Grinstein-Weiss et al. 2013; Grinstein-Weiss et al. 2019; Butrica 2015; Azzolini et al. 2018; Wang et al. 2018). The AFI and *Percorsi* evaluations provide suggestive evidence that matched savings programs can be successful in multiple cultures and country contexts. This timely evidence provides philanthropists, practitioners, and policymakers with effective solutions for building family resilience and opportunities at a time when COVID-19 has highlighted their dramatic need (Karpman et al. 2020). Additional research can facilitate exchange and learning across programs, countries, and populations.[5]

A Theory of Change for Matched Savings Programs

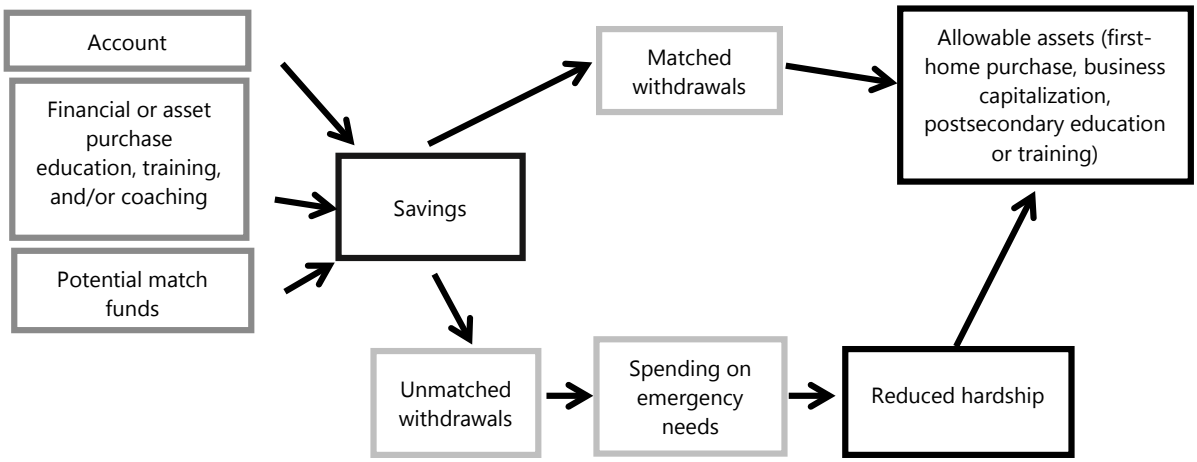
Matched savings programs (such as **Individual Development Accounts—IDAs—**proposed by Sherraden 1991) are asset-building programs that complement safety nets and have potential to reduce wealth inequality by promoting savings among families with low incomes using some of the same vehicles and incentives that households with middle and high incomes receive (Sherraden 1991; McKernan and Sherraden 2008).

Matched savings programs provide three key services (figure 1). First, they provide beneficiaries with a **savings account**, where deposits can be made at regular intervals. Second, to incentivize savings deposits and the purchase of any or one of the three allowable assets, the programs match households' savings at specified rates, which vary across programs. Third, many matched savings programs provide beneficiaries with **financial education** or coaching.[6]

Savings are only **matched** when withdrawn to purchase allowable assets. However, some programs allow participants to withdraw **unmatched savings** to meet short-term needs. In this case, the match is not granted. In using unmatched savings for short-term emergencies, reduced hardship in the short run could have indirect effects on long-term outcomes (e.g., education or homeownership; figure 1).

FIGURE 1

A Theory of Change for Matched Savings Programs



Source: Adapted from Mills et al. 2019.

Notes: For simplicity, the figure does not consider all possible mechanisms linking matched savings programs to the long-term outcomes. For example, it does not consider the role played by college-bound identity in programs aimed at raising postsecondary education attainment (Beverly, Elliott, and Sherraden 2013). Nor does the figure consider potential longer-term outcomes, such as wages, income, and other life outcomes (see the original figure in Mills et al. 2019, figure 1, p. 5).

BOX 1

Existing Evidence on the Effectiveness of Matched Savings Account Programs

The existing studies on matched savings programs distinguish **Individual Development Accounts (IDAs)** from **Children's Savings Accounts (CSAs).** Although they are similar programs, they differ mainly in target population and purpose. IDAs typically serve adults (ages 18 and older) and match personal savings deposits when used for allowable asset purchases such as a first-time home purchase, business capitalization, postsecondary education or training, and in some cases an automobile purchase. In contrast, CSAs typically serve children and match personal deposits only for postsecondary education investments (Elliott and Lewis 2018). A variation of CSAs, Child Development Accounts (CDAs) allow a broader set of approved purchases, such as a first home or small business capitalization. **The AFI program provides IDAs while *Percorsi* provides accounts more like CSAs.**

The existing evaluation studies on **IDAs** include programs implemented in North America such as the American Dream Demonstration (ADD) and AFI in the United States and the learn$ave Demonstration in Canada. Evaluations of these programs find **positive impacts on savings and asset ownership.** The ADD reports positive effects of the tested IDA on debt repair, retirement savings

among African Americans, and homeownership (Mills et al. 2004). The learn$ave IDA showed modest effects on self-reported savings and the intention to save regularly for education and training in the future (Leckie et al. 2010). The studies, however, **do not find positive impacts on net worth (or assets minus nonhousing debts)** (Mills, Gale, et al. 2008; Mills, Lam, et al. 2008; Leckie et al. 2010).

Mixed evidence exists of IDA's impacts on **postsecondary education outcomes.** The learn$ave matched savings program increased participation rates in adult learning 54 months (4.5 years) after participants had enrolled in the project (Leckie et al. 2010). The ADD evaluation finds strong positive effects on enrollment in an education program and increased educational attainment for men 10 years after program entry (Grinstein-Weiss et al. 2013). The AFI study, conversely, did not find any impact on education three years after study enrollment (Ratcliffe et al. 2019; McKernan et al. 2020).

Most experimental evidence on the impacts of **CSAs** comes from the Saving for Education, Entrepreneurship, and Downpayment for Oklahoma Kids (SEED OK) demonstration. Participants received an automatically opened OK 529 account—or tax-advantaged savings plan designed to encourage saving for future education costs—with $1,000, an incentive of $100 to open an individual OK 529 account, and a savings match rate for the first four years. The program was reported to have **positive impacts on savings for college** (Beverly, Clancy, and Sherraden 2016), **children's social-emotional development** (Huang et al. 2014), and **parents' educational expectations** (Kim et al. 2015). Findings from an experimental study conducted in Uganda also show positive impacts on savings (Wang et al. 2018) and children's educational outcomes (Curley, Ssewamala, and Han 2010).

Despite these impacts on important intermediate outcomes, **little evidence exists on CSAs' impacts on postsecondary education access and attainment** (Elliott and Lewis 2018; Markoff et al. 2018). A likely explanation is the long time horizon between investments made in children's postsecondary education and when program evaluators measure educational access and attainment. It is no surprise that the only two studies providing experimental evidence of savings programs' impacts on postsecondary education concern programs targeting high school students rather than young children. Beyond the *Percorsi* evaluation—which shows positive impacts on college enrollment and persistence in Italy (Martini et al. 2020)—some evidence of savings programs' positive impact on postsecondary education outcomes comes from the evaluation of the Early College Planning Initiative conducted in Boston Public Schools (Long and Bettinger 2017). Participants who were incentivized to save (i.e., via a $50 initial deposit required to open a 529 savings plan) showed similar college enrollment rates as students in the control group, but they experienced a higher—although insignificant, possibly because of the small sample size—likelihood of enrolling in a four-year college versus a two-year one.

The AFI and *Percorsi* programs

The AFI program was directed by the Office of Community Services, within the Administration for Children and Families at the US Department of Health and Human Services. Federal fiscal year 2016 was the final year of five-year grant awards under the program, as no funds were appropriated for the AFI program for 2017 or 2018. Organizations operating AFI projects with 2016 (or earlier) grants continued the projects for the funded period. The AFI program was the largest funding source for IDAs in the United States. The two participating AFI evaluation sites were in Albuquerque and Los Angeles: Prosperity Works in Albuquerque, with its partner at Central New Mexico Community College, and RISE Financial Pathways in Los Angeles. In both cases, only adults with low incomes could participate, but in Albuquerque the population was community college students and in Los Angeles the program was open to any household earning a low income. In both sites, participants were allowed to save up to

$1,000 dollars and could benefit from a 4:1 (in Albuquerque) and a 2.5:1 (in Los Angeles) match rate. In both AFI sites, allowable expenses included first-time home purchases, business capitalization, and postsecondary education (though AFI had a narrower range of allowed postsecondary expenses than *Percorsi*; see table 1*)*.

Percorsi is a matched savings program run by a private foundation (*Ufficio Pio—Compagnia di San Paolo*) in the metropolitan area of Turin (Northwest Italy) since 2010. *Percorsi* was developed to complement existing higher education financial aid policies (need-based grants and tuition waivers). It aims to incentivize households with low incomes to invest in children's postsecondary education. Between 2014 and 2017, the *Percorsi* program was evaluated with a randomized controlled trial funded by the European Union called, "Affording College with the Help of Asset Building" (ACHAB). Participating households were required to save between $5.20 and $52 monthly and attend financial education classes, and they could skip fewer than two consecutive months of deposits. The maximum deposit allowed was $2,084, which could be matched by the foundation at a 4:1 rate if used for university-related expenses (e.g., tuition fees, transportation, computer and internet, study materials, training courses, rent, or meals) or at a 2:1 rate for the same types of expenses incurred during high school. As a result, savings could be supplemented by a maximum match of $8,336 so that the funds available to pay the university could reach $10,420. This amount is higher than the available estimates of average costs to complete a three-year university degree in Italy (rent excluded).[7]

TABLE 1

Main Features of AFI and *Percorsi*[8]

	AFI	*Percorsi*
Eligibility	▪ At least 18 years old (community college students in Albuquerque) ▪ Low income and low wealth	▪ High school student (12th and 13th grades) ▪ Low income ▪ Turin metropolitan area resident
Recruitment and enrollment	Opt in: recruitment campaign and application	Opt in: recruitment campaign and application
Allowable match uses	▪ Education (tuition, fees, and books and supplies bought directly from an eligible educational institution) ▪ First-time home ownership ▪ Business capitalization	▪ Education (any education-related purchases validated by program staff)
Account	Opened automatically after the Albuquerque participant made a deposit; opened by the Los Angeles participant through a reportedly lengthy and cumbersome process and an initial deposit of at least $50.	Opened by the participant at the partner bank
Program-provided Initial deposit (seed)	No	No

	AFI	*Percorsi*
Min. and max. savings period	Six months to two years	Four months to six years
Monthly deposits	Monthly deposit required with the amount defined in a personal savings agreement	Min.: $5.20 Max.: $52
Savings cap	1,000 dollars (in Los Angeles, this amount was required before withdrawal)	$2,084
Match rate	4:1 in Albuquerque; 2.5:1 in Los Angeles	4:1 for university educational expenses 2:1 for expenses incurred in high school
Emergency (unmatched) withdrawals	Both sites permitted unmatched emergency withdrawals to cover rent or mortgages, medical bills, or other living expenses, with approval from project staff	Not allowed
Financial education	One-semester credit course (21 classroom hours) or self-paced online option in Albuquerque; multisession on-site classes offered on weekday evenings or Saturdays (10 hours) in Los Angeles	Three modules (27 hours)

Sources: Mills et al. 2016; Martini et al. 2020.
Notes: In AFI, households with low incomes are defined as households eligible for Temporary Assistance for Needy Families, having adjusted gross income less than or equal to 200 percent of the federal poverty level, or having the federal earned income tax credit limit and net worth not exceeding $10,000, excluding primary residence and one vehicle. In *Percorsi*, households with low incomes are households whose equivalent annual incomes do not exceed $26,050, equaling approximately 150 percent of the poverty level for four-person households.

Main Findings from AFI and *Percorsi*

Savings and Hardship

Both the AFI and *Percorsi* demonstrations provide evidence that families with low incomes can save. The AFI demonstration provided further evidence that families can save without creating material hardship for themselves. The majority of participants opened the provided accounts and made at least one deposit: 82 percent in AFI and 94 percent in *Percorsi* (table 2). Most households (79 percent in AFI and 96 percent in *Percorsi*) also participated in financial education classes.

Participants saved substantial amounts of money each month (figure 2). Median monthly savings in the first 12 months of program participation amount to $64 in AFI and $39 in *Percorsi*.

TABLE 2

Most AFI Participants and Nearly All *Percorsi* Participants Opened a Savings Account and Participated in Financial Education

Program services received by AFI and Percorsi participants

AFI (3 years after enrollment)	*Percorsi* (about 4 years after enrollment)[a]
▪ 82 percent of participants opened an IDA (made at least one deposit) ▪ 79 percent participated in financial education ▪ 71 percent made at least one matched withdrawal in Albuquerque	▪ 100 percent opened an account ▪ 94 percent made at least one deposit ▪ 96 percent participated in financial education ▪ 80 percent made at least one matched withdrawal

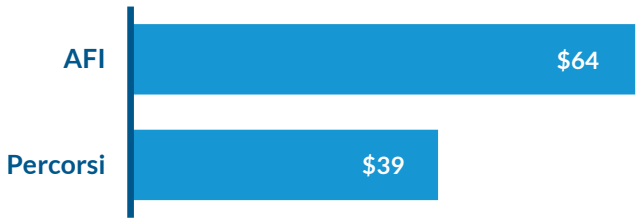
Sources: Ratcliffe et al. 2019; Martini et al. 2020.

Note: [a] The reported figures for *Percorsi* refer to about 3.5 years for the first cohort and about 4.5 years for the second cohort.

FIGURE 2

Participants Saved Substantial Amounts in Their Program-Funded Accounts

Median monthly participant savings in the first 12 months for AFI and Percorsi



Sources: Mills et al. 2016; Martini et al 2020.

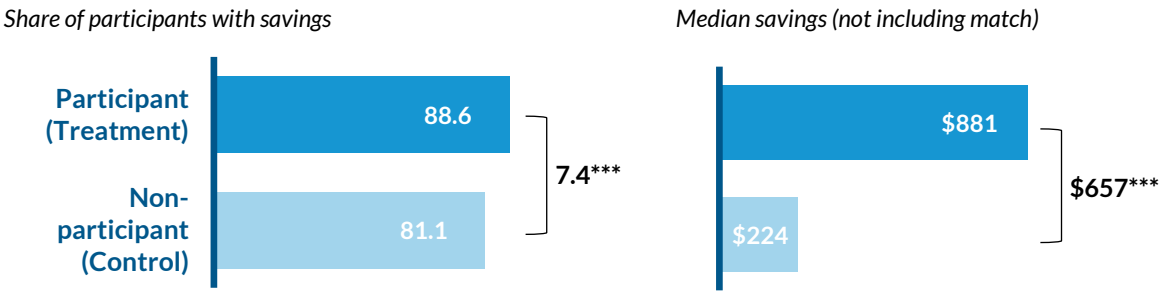
Notes: These are nonexperimental findings showing the average savings in the IDAs/CSAs in the two studies. The AFI estimate comes from the Albuquerque site only because administrative data from the Los Angeles site were not available. Savings findings from both AFI and *Percorsi* are presented in 2015 dollars. (Data from the AFI program were not inflation-adjusted and were collected from April 2014 to September 2015.)

Examining the **new savings** induced by matched savings programs can address potential concerns that participants could shift possible savings from other accounts into the program-funded account. This was possible in the AFI experiment, where information on household savings was collected for both treatment and control households and for all personal savings (i.e., liquid assets including savings, checking, money market, and retirement accounts plus stocks and bonds, but excluding matched funds), not only those held in the IDA. After one year, **AFI increased the share of participants with savings by 9 percent (7.4 percentage points, from 81.1 percent to 88.6 percent**; figure 3). **AFI increased participant savings by $657 at the median (participants saved $881 before receiving match funds compared with $224 for nonparticipants)**.

FIGURE 3

AFI Increases Savings

AFI's impact on savings at one-year follow-up, as measured by liquid assets



Sources: Mills et al. 2016; AFI first-year follow-up and baseline surveys.

Notes: Liquid assets do not include matched funds and are measured at the first-year follow-up survey (roughly 12 months after study enrollment). We present regression-adjusted impact estimates. The difference between the shares may not equal the impact estimate because of rounding. Sample sizes for specific outcomes may vary because of missing values. The maximum sample consists of 622 respondents who completed the baseline and follow-up surveys and did not have missing data for key variables.

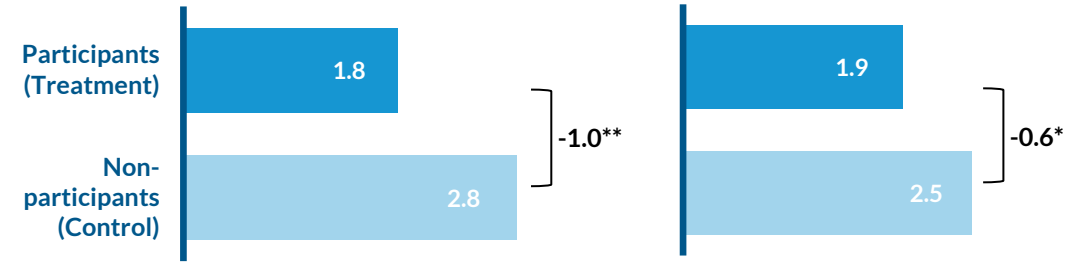
* $p < 0.10$; *** $p < 0.01$

Beyond savings, the AFI demonstration provides important evidence on the short- and medium-term effects of the program on financial well-being. In both the first and the third year, AFI **reduced the number of hardships experienced** (i.e., the number of times participants could not pay for housing, utilities, or needed medical care) compared with the control group (figure 4). AFI participants were also **less likely to report being worse off financially** in the first and third year **and more likely to report being future oriented** in the third year (McKernan et al. 2020).

FIGURE 4

AFI Reduced Number of Hardships Experienced in the Short and Medium Terms

AFI's impact on number of hardships at the first- and third-year follow-ups



Sources: McKernan et al. 2020; AFI first-year follow-up, third-year follow-up, and baseline surveys.

Notes: Material hardship is measured in the 6 months before the first-year follow-up survey (roughly 6 to 12 months after study enrollment) and again 6 months before the third-year follow-up survey (30 to 36 months after study enrollment). We present regression-adjusted impact estimates. Sample sizes for specific outcomes may vary because of missing values. The maximum sample consists of 622 respondents who completed the baseline and follow-up surveys at the first-year follow-up and 621 at the third-year follow-up and did not have missing data for key variables.

** $p < 0.05$; * $p < 0.1$.

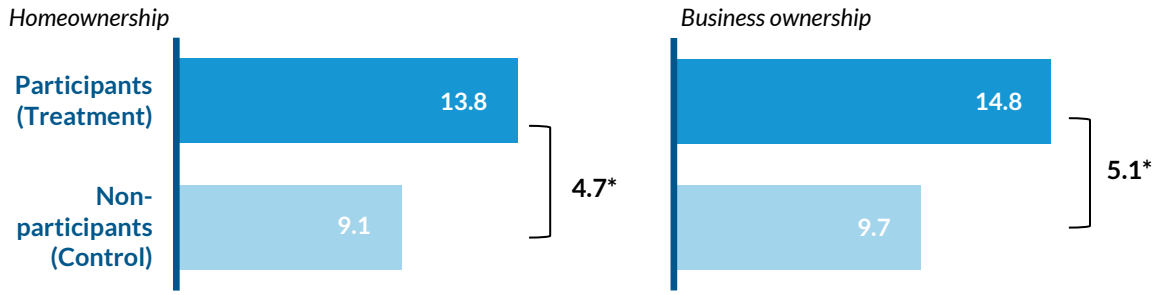
Homeownership, Small Business Ownership, and Education

In the medium term, AFI is hypothesized to increase participants' homeownership (among renters), business ownership (among non–business owners), and postsecondary education or training, as enough time has passed for participants to save, receive matched funds, and complete their allowable asset purchases. Among all study participants, AFI had no statistically significant effect on homeownership, business ownership, or postsecondary education or training in the medium term (Ratcliffe et al. 2019). But exploratory subgroup analyses provide **suggestive evidence that AFI increased homeownership among renters at study enrollment and increased business ownership among non–business owners at study enrollment** (figure 5). The program increased homeownership to 52 percent (4.7 percentage points) among renters and business ownership by 53 percent (5.1 percentage points) among non–business owners.

FIGURE 5

AFI Increased Homeownership among Renters and Business Ownership among Non–Business Owners in the Medium Term

AFI's impact on homeownership and business ownership at the three-year follow-up



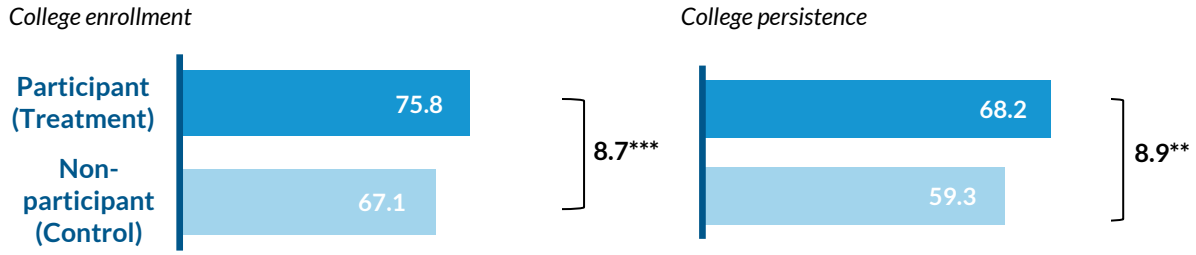
Sources: Ratcliffe et al. 2019; AFI third-year follow-up and baseline surveys.
Notes: Home and business ownership is measured at the third-year follow-up survey (roughly 36 months after study enrollment). We present regression-adjusted impact estimates. Sample sizes for specific outcomes may vary because of missing values. The maximum sample consists of 621 respondents who completed the baseline and third-year follow-up surveys and did not have missing data for key variables.
* $p < 0.1$.

Regarding postsecondary education, Ratcliffe and colleagues (2019) **find no effect of AFI participation on education or training outcomes at the three-year follow-up**, even among those without a college degree at study enrollment. The evaluation of *Percorsi*, instead, provides evidence about the matched savings program's impacts on youth postsecondary education attainment. As shown by Martini and colleagues (2020), *Percorsi* had **substantial impacts on college enrollment (measured in the year right after high school) and persistence (measured as enrollment in the second year of college). College enrollment** increased to 13 percent (8.7 percentage points) and **college persistence to the second year** increased to 15 percent (8.9 percentage points) (figure 6).

FIGURE 6

Percorsi Increased College Enrollment and Persistence

Percorsi's impacts on college enrollment and persistence to the second year



Source: Martini et al. 2020.

Notes: College enrollment is measured at the first-year follow-up survey, right after high school (N = 686). College persistence is measured as enrollment in the second year of college (N = 663). We present regression-adjusted estimates.

*** $p < 0.01$: ** $p < 0.05$

As stated by McKernan and colleagues (2020), one possible reason why the AFI program did not have any effect on participants' postsecondary education outcomes is that, in contrast with *Percorsi*, AFI IDAs could be used for a narrower range of education or training needs (i.e., tuition, fees, and books and supplies bought directly from an eligible educational institution). A second explanation is that programs aimed at increasing educational investments should start earlier than age 18, as done in Arizona's Earn-to-Learn program and *Percorsi*, which began working with students in high school. Another possible reason for no visible effect of AFI on education and training outcomes after three years is that impacts on education and training may take longer to materialize, as found in the American Dream Demonstration study, which reported a significant positive impact on education enrollment and increased educational attainment at the 10-year follow-up (Grinstein-Weiss et al. 2013). This suggests that, in the long term, the AFI program could increase educational attainment.

Policy and Research Implications

Building on past research on IDAs and CSAs, the AFI and *Percorsi* evaluations further debunk the myth that families with low incomes are incapable of saving. When provided with a safe, affordable savings account, the right incentives (a match rate), and complementary services (financial education or coaching), families with low incomes can save, reduce their hardship, and increase their financial well-being. Suggestive evidence indicates they can afford longer-term investment goals such as postsecondary education, homeownership among renters, and small business ownership among non–business owners. **Matched savings programs are an evidence-based policy option for policymakers, philanthropists, and practitioners interested in increasing resilience and opportunity at the cross-national, national, and local levels.**

The requirement that AFI IDA dollars for postsecondary education could be used only for tuition, fees, and books and supplies bought directly from an eligible educational institution was a program limitation (Mills et al. 2019). It may also be a reason that the AFI evaluation does not find any effects of

AFI participation on education or training outcomes, even among those without a college degree at study enrollment. Community colleges are already free or nearly free to many students with low incomes who are eligible for Pell grants in the United States. Future incentivized savings programs that include a postsecondary education focus could consider accommodating additional expenses not paid directly to an eligible educational institution, such as internet, computers, transportation and parking, standardized tests, and living expenses (e.g., rent, groceries) to improve education and training success. The evaluation of the *Percorsi* matched savings program allowed any education-related expenses and found that, after tuition fees, a large share of participants' funded expenses were for computers, internet, or software; transportation; and additional training and rent.

In addition to the main findings presented above, the two studies draw attention to two additional aspects of matched savings interventions: **risk of regressivity** arising when the poorest families cannot save as much as others, as well as the need to **remove savings penalties** in program designs to support saving and asset accumulation (box 2). Considering these factors can improve designs of matched savings interventions so they can better meet the needs of families with low incomes.

BOX 2

Regressivity and Savings Penalties

Beware of Regressivity

In theory, matched savings programs are inclusive and progressive asset-building vehicles (Sherraden 1991). In reality, equity concerns cannot always be ruled out. The *Percorsi* evaluation provides a telling example of how regressivity can emerge in matched savings programs. While the program worked equally well in terms of college enrollment and persistence outcomes among households with lower and higher incomes in the sample (i.e., households whose income fell below or above the sample median), in the first 3.5 or 4.5 years after program entry, depending on whether subjects belonged to the first or second cohort, **families with lower incomes accumulated lower monthly savings (on average, $30 versus $39) and had a higher probability of using the matched savings during high school (thus benefiting from the 2:1 match rate, rather than the 4:1 rate)**. This **led to lower estimated amounts of matched savings for the poorer households ($4,140 versus $5,935)** (Martini et al. 2020).

Features that counteract regressivity could be embedded in matched savings programs. Several options are available:

- letting the match rate vary by income,
- providing initial seed deposits to households with lower income incomes,
- activating automatic progressive subsidies,
- offering targeted savings options, and
- applying savings caps.

These promising strategies could increase matched savings program inclusivity (Elliott 2018; Sherraden, Clancy, and Beverly 2018; Markoff et al. 2018). Both AFI and *Percorsi* had savings caps. Combining matched savings accounts with a reward card that would allow participants to save each time they make a purchase at a participating vendor's store is another potential way to improve saving outcomes and wealth accumulation for families with low incomes (Elliott 2018).

To tackle wealth inequality, matched savings accounts will need to be highly progressive, not only less regressive. Darrick Hamilton's model of baby bonds would provide all newborns with a publicly funded endowment ranging from $500 to $60,000, depending on family wealth.[9] CSAs could also let the initial seed deposit vary with family wealth and activate automatic progressive subsidies each year, again depending on family wealth that year. Zewde (2019) finds that baby bonds would nearly close the massive US racial wealth gap; without baby bonds, young white Americans hold nearly 16 times the wealth of young black Americans ($46,000 compared with $2,900); with baby bonds, this gap reduces to a factor of 1.4 ($79,143 compared with $57,845) (McKernan, Ratcliffe, and Shanks 2012).[10] These findings suggest that baby bonds can narrow long-held wealth inequalities between black and white Americans while improving the asset position of young adults overall (Zewde 2019).

Remove Savings Penalties

Prior research has found that asset limits in social programs have unintended consequences on household savings behavior. Ratcliffe and colleagues (2016) find that asset limits in the Supplemental Nutrition Assistance Program (SNAP, formerly Food Stamps) led to decreased savings and a lower likelihood of having a bank account. The AFI legislation stipulated that **savings accumulated in the AFI account could not count against asset limits** used to determine eligibility for SNAP and other public benefits. This may be one possible reason why the AFI program was successful in increasing new savings and reducing hardship among families with low incomes.

This evidence suggests matched savings interventions should disregard accumulated savings from eligibility determinations for other public benefits. By making this rule clear to participants, the program could incentivize individuals with low incomes to save and help them avoid short-term hardships that may occur when they reduce their consumption spending to increase savings.

Future research on matched savings programs could prioritize five goals:

- First, it could shed light on the relative importance of program features (e.g., savings account, potential for match, and financial education) and their links to outcomes. AFI reduced hardship for participants, but it's unclear whether this resulted from emergency savings or another mechanism. Likewise, *Percorsi* increased postsecondary education participation, but the extent to which this was a result of the matched savings account or the financial education classes remains an unanswered question. Improving our knowledge about the independent effects of different matched savings account program components is important for targeting resources to what really enhances households' savings and asset accumulation.
- Second, studies could determine how to make matched savings work on a larger scale. Linking program features to outcomes would shed light on the trade-offs between high-touch programs (e.g., those that include individualized financial coaching) and low-touch programs (e.g., no financial education but access to matched savings accounts for asset-building). If low-touch programs can achieve targets, then it will be easier to implement matched savings programs on a larger scale.
- Third, research could find the link between emergency savings and asset ownership. AFI and *Percorsi* program participants saved in the short term, and the program evaluations provide suggestive evidence of increased asset ownership in the medium term. AFI participants reduced

hardship in both the short and medium terms. AFI program rules allow participants to access their savings in an emergency. Although the link between short-term emergency savings and reduced hardship is intuitively clear, the link between asset ownership and longer-term financial well-being is less broadly understood (Aspen Institute 2019). Emergency savings may buffer and protect households from shocks that would detract from progress toward their long-term asset ownership goals. Emergency savings may also help households and the economy better weather large shocks such as the wealth-damaging Great Recession (McKernan et al. 2014) and current COVID-19 recession (Elmi and Tamayo-Castillo 2020). Do emergency savings help participants purchase assets in the medium term? Are emergency savings needed to hold onto those assets in the long term? Current programs (e.g., AFI and *Percorsi*) and policies (e.g., US mortgage interest tax deduction and retirement subsidies) support asset ownership, but few support emergency savings. Future research could examine if it is best to build emergency savings before buying a home or investing in a small business and the role of emergency savings in maintaining them.

- Fourth, studies could build on theory and pilot and evaluate highly progressive matched savings account programs to measure the role they can play in reducing wealth inequality and increasing opportunity for families with low incomes. Given the role that wealth inequality plays in limiting economic mobility, interventions designed to address wealth inequality from the outset may be better positioned to achieve positive and substantive outcomes for families who face structural barriers to building wealth and assets.[11]
- And fifth, research could increase external validity, understanding of the institutional contexts necessary for program and participant success, and lessons learned through cross-country research employing common metrics to improve the comparability of programs' components, characteristics of the target populations, and outcomes of interest. Common metrics would allow programs and policymakers to benchmark program outcomes broadly and contextualize participants' financial well-being.

Appendix. Randomized Controlled Trial Details

TABLE A.1

Features of the Two Randomized Controlled Trials

	AFI	*Percorsi*
Dates	2013–2017	2014–2019
Number of participants	807 (treatment: 407)	716 (treatment: 289)
Randomization	Stratified by site	Stratified by school type and enrollment cohort
Data collection method	▪ Baseline application form ▪ Phone, web, in-person survey ▪ Qualitative interviews ▪ Program administrative data	▪ Baseline application form ▪ Phone survey ▪ Qualitative interviews ▪ Program administrative data
Outcomes	*First follow-up Survey (~12 months)* Liquid assets, hardship *Second follow-up Survey (~36 months)* Education, homeownership, business capitalization	*First follow-up Survey (~12 and ~24 months for the first and second cohorts, respectively)* College enrollment *Second follow-up Survey (~24 and ~36 months for the first and second cohorts, respectively)* College persistence
Equivalence tests	*t*-tests	*t*-tests
Overall attrition	22.2 percent in the first follow-up survey; 23.0 percent in the second follow-up survey	4.7 percent in the first follow-up survey; 7.4 percent in the second follow-up survey
Differential attrition	9.0 percentage points in the first follow-up survey; 6.3 percentage points in the second follow-up survey	1.7 percentage points in the first follow-up survey; 3.4 percentage points in the second follow-up survey
Impact estimation	Intent-to-Treat (ITT), linear regression models including baseline covariates	Intent-to-Treat (ITT), linear regression models including baseline covariates

Sources: Mills et al. 2016; Ratcliffe et al. 2019; Martini et al. 2020.

Notes

[1] Several US states have adopted matched savings policies. In 2018, Pennsylvania created a universal, automatic, opt-out CDA policy. In 2019, Nebraska, Illinois and California also enacted statewide policies (Clancy et al. 2019).

[2] In this brief, all monetary values related to AFI or *Percorsi* are presented in 2015 dollars. Data from the AFI program were not inflation-adjusted and were collected from April 2014 to September 2015. *Percorsi* original values in euros were converted into US dollars using the exchange rate of May 2 2019 provided by the International Monetary Fund (IMF): "Representative Exchange Rates for Selected Currencies for May 2019," IMF, accessed November 11, 2020, https://www.imf.org/external/np/fin/data/rms_mth.aspx?SelectDate=2019-05-31&reportType=REP.

[3] Program impacts on savings are not reported for *Percorsi* because the evaluation did not collect savings data outside of the program-funded accounts.

[4] Hardship was not included as an outcome in the *Percorsi* evaluation study.

[5] Efforts to compare matched savings programs are being carried out by organizations such as ABT/Prosperity Now, the Consumer Financial Protection Bureau, the Center for Social Development at Washington University in St. Louis, the Center on Assets, Education and Inclusion at the University of Michigan, and the Urban Institute.

[6] Financial education usually includes classroom education, such as workshops or classes, to improve participants' understanding of and ability to use basic financial and economic concepts. Financial coaching is a client-led intervention that is longer in duration and focuses on changing financial behavior to achieve long-term financial goals through one-on-one sessions with a financial coach (Butrica and Martinchek 2020).

[7] On average, Italian public universities' tuition fees amount to $1,000 a year (OECD 2018). Available estimates of the total cost of university, including other costs (such as books, transportation, software, and Internet access but excluding rent), indicate an average annual cost ranging between $2,500 and $3,100 (Barone et al. 2014).

[8] Both programs were evaluated with randomized controlled trial designs. A comparison of the two experimental evaluations is provided in the appendix.

[9] Darrick Hamilton, "How 'Baby Bonds' Could Help Close the Wealth Gap," December 18, 2018, TED video, https://www.ted.com/talks/darrick_hamilton_how_baby_bonds_could_help_close_the_wealth_gap?language=en; and Loren Berlin, "Shrinking the Racial Wealth Gap without Focusing on Race: An Interview with the Kirwan Institute's Darrick Hamilton," *Next50* (blog), Urban Institute, March 29, 2019, https://next50.urban.org/article/shrinking-racial-wealth-gap-without-focusing-race-interview-kirwan-institutes-darrick.

[10] Dollar figures in 2015 dollars. Zewde (2019) uses longitudinal data from the Panel Study of Income Dynamics (PSID) on the assets of young adults in 2015 to simulate a policy environment where the US had administered baby bonds when these young adults were children (with initial bond values defined by household wealth in 1989 and 1994). See also Signe-Mary McKernan, Caroline Ratcliffe, C. Eugene Steuerle, Caleb Quakenbush, and Emma Kalish, " Nine Charts about Wealth Inequality in America (Updated)," Urban Institute, February 2015, https://apps.urban.org/features/wealth-inequality-charts/.

[11] Kilolo Kijakazi, "50 Years after Martin Luther King's Death, Structural Racism Still Drives the Racial Wealth Gap," *Urban Wire* (blog), April 6, 2018, https://www.urban.org/urban-wire/50-years-after-martin-luther-kings-death-structural-racism-still-drives-racial-wealth-gap.

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About the Authors

Davide Azzolini is an affiliated scholar at the Urban Institute and a research fellow at the Research Institute for the Evaluation of Public Policies of the Bruno Kessler Foundation (Italy). His research primarily focuses on student achievement and attainment and education policy.

Signe-Mary McKernan, a national expert on wealth building, codirects the Urban Institute's Opportunity and Ownership initiative. She published the book *Asset Building and Low-Income Families* with Michael Sherraden and has testified before Congress. She has a PhD in economics from Brown University.

Kassandra Martinchek is a research analyst in the Center on Labor, Human Services, and Population, where she studies financial well-being and safety net programs and works on bringing research to practice.

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500 L'Enfant Plaza SW
Washington, DC 20024

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