

CONNECTIONS WITH BANKING INSTITUTIONS AND DIVERSE ASSET PORTFOLIOS IN YOUNG ADULTHOOD

Children as Potential Future Investors, Report I of III

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Children as Potential Future Investors is a three-part series of reports that focuses on connecting children to the financial mainstream by giving them savings accounts. Children are potential future investors and when they have savings accounts of their own, they may be more likely to maintain relationships with mainstream banks and to invest money into their accounts in young adulthood. This series of reports examines (1) connections with banking institutions and diverse asset portfolios in young adulthood, (2) accumulating assets, debts in young adulthood, and (3) children's savings accounts offered by mainstream banking institutions. The first report examines whether having a savings account at a mainstream bank in childhood predicts owning a savings account and other types of assets in young adulthood. The second report examines whether having a savings account at a mainstream bank in childhood predicts the savings, assets, debts, and net worth accumulated in young adulthood. The third report descriptively examines existing savings accounts for children at the top 25 mainstream banking institutions in the United States and asks whether those accounts augment children's capacity to save. While children may have limited savings to invest initially, they may increasingly invest more money into different types of savings products over time. Mainstream banks stand to profit from this long-term relationship, which may begin to justify a business case for children's savings and why mainstream banks should continue offering savings accounts to children. Policy endeavors that remove barriers to account ownership may be advantageous for children and mainstream banks.



HIGHLIGHTS:

- The most commonly owned assets by young adults are savings accounts (89 percent), vehicles (54 percent), and credit cards (51 percent).
- Smaller percentages of young adults own stocks (9 percent), bonds (6 percent), and homes (8 percent).
- On average, young adults own two to three different types of assets.
- Young adults from racial and ethnic minority groups and lower income households are at a disadvantage compared to their counterparts.
 - Ninety-four percent of white young adults own savings accounts compared to 71 percent of black young adults—a 23 percentage point gap.
 - Twice as many white young adults own credit cards, stocks, and vehicles compared to black young adults.
 - Ninety-seven percent of young adults from high-income households own savings accounts compared to 71 percent of young adults from low-to-moderate-income households—a 26 percentage point gap.
 - Two to three times as many young adults from high-income households own credit cards, stocks, and bonds.
 - Eighty-eight percent of young adults from high net worth households own savings accounts compared to 55 and 56 percents from moderate and zero and negative net worth households—33 and 32 percentage point gaps, respectively.
 - Young adults from high net worth households own twice as many total assets as young adults from moderate and zero and negative net worth households.
- Young adults are two times more likely to own savings accounts, two times more likely to own credit cards, and four times more likely to own stocks when they have savings accounts as children.
- Young adults own significantly more total assets when they have savings accounts as children.
- Young adults who grew up in households with high accumulating net worth are more likely to own savings accounts and stocks and own significantly more total assets.

Over the last two decades, a growing number of researchers and policy makers have endorsed asset building as a strategy for improving children’s well-being, specifically by extending savings accounts early in life. One reason for this is to lay the foundation for connecting children—particularly lower income and minority children—to mainstream banking institutions. It is hoped that children can build upon this foundation by remaining connected to banks and diversifying their asset portfolios into young adulthood and beyond. Another reason for extending savings accounts to children is that the greatest benefits may occur when savings begins early in life (Sherraden, 1991; Sherraden, Peters, Wagner, Guo, & Clancy, 2013). This is because the effects of savings account ownership are believed to compound over time. If the savings goal is several years away, children have a longer time to develop a habit of saving, to become educated and savvy financial consumers, and to invest emotionally and financially into their accounts.

Child Development Accounts (CDAs) have been proposed as a vehicle for providing savings accounts directly to children with particular emphasis on access for those from lower income households. A number of CDA policy proposals have emerged in the U.S., including the America Saving for Personal Investment, Retirement, and Education (ASPIRE) Act, Young Savers Accounts, 401Kids Accounts, and Baby Bonds (Cramer, 2010). Of these policy proposals, the ASPIRE Act is perhaps the most well-known and comprehensive. The ASPIRE Act proposes to roll out CDAs universally to newborns at birth with a \$500 initial deposit and children whose households’ incomes fall below certain thresholds are eligible for additional subsidies. Accounts are proposed to be administered by the Thrift Savings Plan, which is the retirement account system for federal employees, and savings can be used toward expenses like education, home ownership, or retirement (Cramer, 2010). While no national CDA policy has been adopted in the United States, CDA policies have been implemented in Singapore, the United Kingdom, Canada, South Korea, and several other countries (Loke & Sherraden, 2009). A large consortium project called YouthSave¹ is currently testing the delivery of savings accounts to children in Colombia, Ghana, Kenya, and Nepal and monitoring children’s savings movements around the globe (Center for Social Development, 2011; Deshpande & Zimmerman, 2010).

Internationally, children’s savings initiatives have leveraged mainstream banking institutions as key partners in account design and delivery. The Child Trust Fund (CTF), which was the United Kingdom’s original CDA policy that operated between 2005–2010, partnered with mainstream banking institutions to deliver savings accounts to children. All families with eligible children automatically received vouchers that they could take to local banks, credit unions, or other institutions to open accounts in children’s names. Junior Individual Savings Accounts (ISAs) replaced the CTF in 2011 and discontinued the universal and automatic enrollment features; however, mainstream banking institutions remain important partners in the policy endeavor. In some cases, mainstream banks in international settings are leading children’s savings efforts by providing specially designed savings accounts for children (Deshpande & Zimmerman, 2010; Kilara & Latortue, 2012; Meyer, Masa, & Zimmerman, 2009). For instance, Jóvenes con Oportunidades in Mexico has opened over 300,000 savings accounts for children in eighth grade through a national savings and finance bank (Bansefi). Children earn points in their accounts for behaviors like attending school and their accumulated points are converted into savings after high school graduation (Deshpande & Zimmerman, 2010). In the YouthSave project, a primary question asks whether there is incentive for mainstream banking institutions to partner for providing savings accounts to children. Here, this question explores the business case² by asking whether for-profit, mainstream banks have incentive to partner in such endeavors despite the small amounts of money children save.

¹ Notably, YouthSave does not have a universal, automatic enrollment design which is different, for instance, from the proposed CDAs within the ASPIRE Act.

² The term “business case” has been used in the field previously. Hirschland (2009) used the concept to discuss children’s savings from the perspective of mainstream banks and other financial institutions. Others have built upon this concept by using the term “business case,” including Deshpande and Zimmerman (2010), Westley and Palomas (2010), and Kilara and Latortue (2012). The first report in this series explains the business case in greater detail.

In the U.S., less attention has been given to the business case for banking institutions' involvement with CDAs. Perhaps this is due in part to the push for a universal policy managed by the Thrift Savings Plan that does not identify a role for mainstream banks. Yet mainstream banking institutions are the primary providers of savings accounts and thus can be considered important partners. If mainstream banking institutions are important partners, then it might make sense for researchers and policy makers to explore incentives for mainstream banks to offer children's savings accounts. One example of this need comes from a conversation that the first author had with a branch manager of a local bank. When asked if their branch offered savings accounts for children,³ they stated that many banks are unfortunately not compelled to offer this type of an account because of the small amounts of money that children save. Small dollar accounts do not justify the extra work or costs that go into account administration.

Children are financial actors who may increasingly invest money into different types of savings products as they progress throughout their life course.

In some ways, mainstream banking institutions' hesitation to offer savings account to children may be justified. Children do indeed save small amounts of money. On average, children ages 17 to 22 save a median of \$500 (Friedline, Elliott, & Nam, 2011). Children from lower income households save a median between \$200 and \$390 and black children save a median of \$20 during the same age range (Friedline & Elliott, 2011; Friedline, Elliott, & Chowa, 2013). In many cases these amounts are not even enough to afford an initial deposit or maintain minimum account balances. From this perspective, it is likely true that mainstream banks would not receive immediate gains from children's small investments. However, children are financial actors⁴ who may increasingly invest money into different types of savings products as they progress throughout their life course, despite having limited savings to invest initially. Along these lines, mainstream banks may have strategic motives for encouraging children's savings accounts that rise above concerns about small dollar balances when children are considered potential future investors. In addition, acknowledging children as potential future investors recognizes the demand side of children's savings. While banks may stand to profit from establishing long-term customer relationships, children may also be interested in and benefit from savings accounts. Policy endeavors that remove barriers to children's account ownership access may be beneficial to both children and mainstream banks.

Children with savings accounts may be financially better off in the future. Not only can they invest more money over time, but they can develop long-term relationships with mainstream banking institutions.

Implicit in these policies and programs is the idea that children with savings accounts may be financially better off in the future. Not only can they invest more money over time, but they can develop long-term relationships with mainstream banking institutions. The first two reports in this series confirm these assumptions. As such, one potential result of giving children savings accounts may be creating a generation that automatically develops relationships with mainstream banking institutions and diversifies their asset portfolios. The long-term relationships with banks and increasing investments that children make into their accounts begin to justify the business case for children's savings. In other words, mainstream banks have much to gain from investing in children's savings.

³ These accounts are often called 'minor' savings accounts, which are opened by account holders under age 18.

⁴ The authors thank Dr. Margaret S. Sherraden for her suggested use of the term 'financial actors.'

Many mainstream banking institutions already offer specially designed accounts for children outside of CDA-type programs and policies, which in part indicates their willingness to help children save. What do these accounts look like and are they sufficient for children? The third report in this series takes a look at the existing savings accounts at the top 25 mainstream banking institutions as a way to evaluate banks' capacity for opening savings accounts for children.

One potential result of giving children savings accounts is creating entire generations that develop relationships with mainstream banking institutions and diversify their asset portfolios.

RESEARCH QUESTIONS

We ask three research questions in this first report. The first question is descriptive in nature and asks what types of financial and nonfinancial assets do young adults own at ages 22 to 25 in 2009? The second research question asks whether or not children's savings accounts in 2002 are associated with young adults' savings accounts in 2009, after controlling for relevant covariates? This second question investigates young adults' connectedness to mainstream banking institutions. The third research question asks whether or not children's savings accounts in 2002 are associated with owning more financial and nonfinancial assets as young adults in 2009, after controlling for relevant covariates? The third question is intended to investigate the diversity of young adults' asset portfolios. Given that few previous studies examine the relationships between children's savings accounts and their ownership of diverse financial and nonfinancial assets in young adulthood, this latter question is exploratory.

METHODS

Data

This study used longitudinal data from the PSID and its Child Development Supplement (CDS) and Transition into Adulthood (TA) supplement. The PSID is a nationally representative longitudinal survey of U.S. individuals and families that began in 1968. The PSID collects data every two years on characteristics such as employment, income, and assets. The CDS was administered to 3,563 PSID respondents in 1997 to collect a wide range of data on parents who participated in the PSID and their children (birth to 12 years). Questions covered a range of developmental outcomes across the domains of health, psychological well-being, social relationships, cognitive development, achievement, motivation, and education. Follow-up surveys were administered in 2002 and 2007. The TA supplement, administered in 2005, 2007, and 2009, measured outcomes for young adults who participated in earlier waves of the CDS and were no longer in high school. The three data sets were linked using PSID, CDS, and TA map files that contained family and personal identification numbers. The linked data sets provided an opportunity for analyses in which data collected at earlier points in time could be used to predict outcomes at a later point in time, with stable background characteristics as covariates.

Independent Variables

Ten independent variables were used in this study: children's race and gender; young adults' employment and college enrollment status; head of households' marital status and education level; households' income, net worth, and parents' savings for their children; and children's savings account. Children's savings account was the primary variable of interest. Table 1 describes in detail how independent variables were measured.

TABLE 1—Independent variables for children ages 15 to 19 and their households from the PSID, CDS, and TA.

Variable Name	Description	Coding
<i>Child and Young Adult Variables</i>		
Race	Available from the 1997 CDS.	White = 1; Black = 0
Gender	Available from the 1997 CDS.	Male = 1; Female = 0
Employment status	Young adults in the 2007 TA are asked whether or not they are currently working for money.	Yes = 1; No = 0
College enrollment status	Young adults in the 2007 TA are asked whether or not they have ever enrolled in college.	Yes = 1; No = 0
<i>Head and Household Socio-Economic Status (SES) Variables</i>		
Head's marital status	Available from the 2001 PSID that asks heads of households whether or not they are married.	Married = 1; Not married = 0
Head's education level in 2001	Continuous variable available from the 2001 PSID where each number represents a year of completed schooling (e.g., 12 years of education indicated graduating high school).	Range from 1 to 16
Household income (natural log transformed)	Continuous variable that averages household income from the 1996, 1997, 1999, 2001, and 2003 PSID after inflating to 2003 prices with the Consumer Price Index, log transformed.	Range from 1 to 13.956 (log transformed)
Household net worth (IHS transformed)	Continuous variable that sums all assets, including savings, stocks / bonds, business investments, real estate, home equity, and other assets, and subtracts all debts, including credit cards, loans, and other debts and available from the 1984, 1989, 1994, 1999, 2001, and 2003 PSID. Inverse hyperbolic sine (IHS) transformation is used (Friedline, Masa, & Chowa, 2012). Splines for each sample (3 knots, including ≤ 0 [zero and negative], $0 < 10$ [moderate], and > 10 [high]) are included in the analyses.	Range from -11.176 to 17.575 (IHS transformed)
Parents' savings for child	Two questions from the 2002 CDS ask parents whether they have money for their child in a bank account separate from other savings, and whether they have money specifically for their child's future schooling, separate from other savings. Combined responses create a dichotomous variable.	Yes = 1; No = 0
<i>Variable of Interest</i>		
Child's savings account	Available from the 2002 CDS that asks children whether they have a savings or bank account in their own name.	Yes = 1; No = 0

Outcome Variables

There were six dichotomous outcome variables used in this study, all of which measured whether or not young adults in 2009 owned different types of financial and nonfinancial assets. These assets included savings accounts, credit cards,⁵ stocks, bonds, vehicles, and homes. There was one continuous outcome variable, which measured the total number of assets owned by young adults in 2009. This variable was created by summing ownership of the six dichotomous assets. For example, a young adult had a score of zero if they did not own any assets, had a score of two if they owned both savings accounts and stocks, and so forth. The highest number of assets owned was five because there were no young adults who owned every asset. Table 2 describes in detail how outcome variables were measured.

⁵ Credit cards could be seen as a liability instead of an asset because they are a vehicle through which households accumulate debt rather than savings. However, young adults may use credit cards as a financial resource to afford expenses. A sizeable percentage (48 percent) of young adults under age 35 carries a credit card balance (Bucks, Kennickell, & Moore, 2006). There is some concern about young adults' use of credit cards (Hancock, Jorgensen, & Swanson, 2012; Robb, 2011), suggesting it is important to know whether young adults own credit cards and predictors of their credit card ownership. Our study is not intended to endorse young adults' credit card ownership; rather, we examine credit as a commonly owned type of an account by many young adults in the United States.

TABLE 2—Financial and nonfinancial assets outcome variables for young adults ages 22 to 25 from the TA.

Variable Name	Description	Coding
Savings accounts	Young adults are asked whether or not they have a savings account in their name.	Yes = 1; No = 0
Credit cards	Young adults are asked whether or not they carry any credit or store cards in their name.	Yes = 1; No = 0
Stocks	Young adults are asked whether they own any shares of stock in publicly held corporations, mutual funds, or investment trusts, excluding any stocks held in employer-based pensions or IRAs.	Yes = 1; No = 0
Bonds	Young adults are asked whether they own any other savings or assets like money market funds, certificates of deposit, government savings bonds, or rights in a trust account.	Yes = 1; No = 0
Vehicle	Young adults are asked whether or not they own any vehicles, including cars, trucks, or motorcycles.	Yes = 1; No = 0
Home	Young adults are asked where they lived between October 2008 and April 2009, with response options including their parents' house or apartment, their own apartment, college housing, house or condo owned by their parents, or their own house or condo. Young adults who reported living in their own house or condo were coded as home owners.	Yes = 1; No = 0
Total asset ownership	Summed ownership of savings accounts, credit cards, stocks, bonds, vehicles, and homes.	Range from 0 to 5

Sample

This study examined financial and nonfinancial assets with an aggregate sample ($N = 425$) that began in childhood in 2002 at ages 15 to 19 and ended in young adulthood in 2009 at ages 25 to 29. Children in 2002 had an average age of 17 and a majority were white (80 percent). There were slightly more females (54 percent) than males (46 percent). A majority was employed (77 percent) and had enrolled in college (74 percent) by 2007. Their heads of households, most of whom were married (78 percent), had about one-and-a-half years of education beyond high school. Households' median annual income was \$66,527 and their median net worth was \$60,427 (including home equity). There were about equal percentages of parents with (53 percent) and without (47 percent) savings accounts for their child. However, a majority of children owned their own savings accounts (74 percent).

Young adults in 2009 were an average age of 23. The most commonly held assets owned by young adults included savings accounts (89 percent), credit cards (51 percent), and vehicles (54 percent). Smaller percentages owned stocks (9 percent), bonds (6 percent), and homes (8 percent). The total number of assets owned in young adulthood ranged between zero and five and the majority of young adults (65 percent) owned two to three assets. Eight percent of young adults did not own any assets, 18 percent owned one asset, and 9 percent owned more than four assets.

Analysis Plan

There were four steps in the analysis, including (1) accounting for missing data, (2) applying propensity score weighting, (3) checking for balance within the data, and (4) conducting logistic, rare event, and multiple regression. More details on these steps are available from the authors upon request.⁶

⁶ Readers should note that the analysis tests associations between children's savings accounts and young adults' assets and debts; the authors do not make claims about causality in this study.

RESULTS

Descriptive Results

Ownership of financial and nonfinancial assets in young adulthood fell along lines of race and class. For instance, white young adults (94 percent) owned savings accounts more often compared to black young adults (71 percent)—a percentage point gap of 23. There was a percentage point gap of 31 for vehicle and credit card ownership between whites and blacks. Higher percentages of young adults from high-income (97 percent) and high net worth (88 percent) households owned savings accounts compared to their counterparts from low-to-moderate income (71 percent) and moderate (55 percent) and zero and negative net worth households (56 percent). There was a 28 percentage point gap in young adults' savings account ownership between those with (97 percent) and without (69 percent) savings accounts in childhood. Similar percentage point gaps existed for each type of asset. For instance, while the total percentage of young adults owning stocks was small (9 percent), young adults owned stocks more often when they were white (10 percent), their heads of households had college degrees or more (31 percent), their households had higher incomes (13 percent) and net worth (7 percent), and they had savings accounts as children (11 percent). By comparison, 5 percent of black young adults, 2 percent whose heads of households had a high school diploma or less, 2 percent from low-to-moderate income households, and 6 percent from zero and negative net worth households owned stocks. Four percent who did not have savings accounts as children owned stocks in young adulthood.

Gaps also existed in terms of the total number of assets owned. On average, young adults owned two to three different assets. Young adults from high-income households owned about two-and-a-half assets whereas those from low-to-moderate income households owned less than two assets. Consistently, young adults owned more assets when they were white, had enrolled in college, were from higher income and net worth households, had parents with savings accounts for them as children, and had their own savings accounts as children. See Table 3 for more information.

Regression Results

Savings accounts (Model 1). Results for Model 1 are available in Table 4. Young adults were four times more likely to own savings accounts when they were white compared with black ($\beta = 1.313$, $OR = 3.717$, $p = .002$). Males were about 56 percent less likely than females to own savings accounts in young adulthood ($\beta = -.831$, $OR = .436$, $p = .030$). Young adults who were employed were about twice as likely as those who were unemployed to own savings accounts in young adulthood ($\beta = .692$, $OR = 1.998$, $p = .073$). Young adults were about seven times as likely to own savings accounts in young adulthood when they had enrolled in college compared to not enrolled in college ($\beta = 1.916$, $OR = 6.794$, $p < .001$). Young adults were about two times more likely to own accounts for each accumulating point of their households' high net worth ($\beta = .667$, $OR = 1.948$, $p = .036$). Young adults were over two-and-a-half times more likely to own accounts when their parents had savings accounts for them as children, compared to parents who did not have savings accounts for them as children ($\beta = .897$, $OR = 2.452$, $p = .048$). Young adults were two times more likely to own accounts when they had savings accounts as children compared to children who did not have savings accounts ($\beta = .713$, $OR = 2.040$, $p = .039$).

Credit cards (Model 2). Results for Model 2 are available in Table 4. Males were about 60 percent less likely than females to own credit cards in young adulthood ($\beta = -.925$, $OR = .397$, $p = .004$). Young adults were about two times more likely to own credit cards when they were employed compared to not employed ($\beta = .614$, $OR = 1.848$, $p = .072$). Young adults were about four times more likely to own credit cards when they had enrolled in college compared with never enrolled ($\beta = 1.406$, $OR = 4.080$, $p = .001$). Young adults were about 27 percent more likely to own credit cards for each increasing year of heads' level of education ($\beta = .236$, $OR = 1.266$, $p = .011$). Young adults were about two times more likely to own credit cards when they had savings accounts as children ($\beta = .602$, $OR = 1.826$, $p = .054$).

TABLE 3—Percentages of young adults’ financial and nonfinancial asset ownership at ages 22 to 25 from the 2009 TA (N = 425).

	Savings Accounts	Credit Cards	Stocks	Bonds	Vehicle	Home	Mean Total Asset Ownership
Full Sample	89	51	9	6	54	8	2.440
<i>Child and Young Adult Variables</i>							
White	94	57	10	8	57	10	2.640
Black	71	26	5	2	26	2	1.609
Male	87	48	7	6	48	7	2.399
Female	91	54	11	8	54	9	2.470
Employed	90	54	9	7	54	9	2.580
Not employed	86	42	10	5	42	7	1.963
Enrolled in college	96	62	10	7	62	9	2.703
Never enrolled in college	69	21	6	4	21	7	1.683
<i>Head and Household Socio-Economic Status (SES) Variables</i>							
Head is married	92	55	9	8	55	9	2.575
Head is not married	78	39	10	2	39	5	1.945
Head has college degree or more	98	68	31	8	54	5	2.811
Head has some college education	87	51	6	6	51	8	2.367
Head has high school diploma or less	84	38	2	6	57	10	2.196
High income (HI; \geq \$80,000)	97	64	13	11	54	9	2.830
Low-to-moderate income (LMI; $<$ \$80,000)	71	28	2	3	51	6	1.828
High net worth ($>$ \$10,000)	88	59	7	7	54	8	2.381
Moderate net worth ($\$0 \sim$ \$10,000)	55	21	5	5	38	2	1.500
Zero and negative net worth ($<$ \$0)	56	11	6	0	44	6	1.284
Parent has savings for child	97	60	13	8	60	9	2.750
Parent does not have savings for child	80	41	5	5	41	8	2.085
<i>Variable of Interest</i>							
Child has savings account in 2002	97	60	11	7	60	9	2.708
Child does not have savings account in 2002	69	26	4	6	26	5	1.682

Source: Expectation-Maximization (EM) completed data from the Panel Study of Income Dynamics (PSID) and the 2002 Child Development Supplement (CDS) and the 2007 and 2009 Transition into Adulthood (TA) supplement. Data is weighted using the recommended sampling weight from the 2009 TA.

Notes: Row percentages are reported. Characteristics presented prior to applying the ATT weight

TABLE 4—Logistic regression results: Predicting young adults' *savings account* and *credit card ownership* in 2009 in the full sample ($N = 425$; ATT weighted).

Covariates	Savings Account			Credit Card		
	(Model 1)			(Model 2)		
	β	SE	OR	β	SE	OR
<i>Child and Young Adult Variables</i>						
White	1.313**	.429	3.717	.446	.324	--
Male	-.831*	.360	.436	-.925**	.312	.397
Employed	.692†	.386	1.998	.614†	.342	1.848
Enrolled in college	1.916***	.388	6.794	1.406**	.322	4.080
<i>Head and Household Socio-Economic Status (SES) Variables</i>						
Head is married	.302	.421	--	-.267	.342	--
Heads' education level	.034	.109	--	.236**	.093	1.266
Log of household income	-.050	.087	--	-.115	.124	--
IHS of household net worth: Splines						
≤ 0 : Zero and negative net worth	-.078	.166	--	-.129	.178	--
> 0 to < 10 : Moderate net worth	.007	.307	--	.244	.345	--
≥ 10 : High net worth	.667*	.318	1.948	.256	.245	--
Parents have savings for child	.897*	.454	2.452	-.330	.303	--
<i>Variable of Interest</i>						
Child has savings account	.713*	.346	2.040	.602†	.312	1.826
Constant	-.971	1.791	$p = .588$	-5.157	2.123	$p = .015$
Pseudo R^2			.386			.198

Source: Expectation-Maximization (EM) completed data from the Panel Study of Income Dynamics (PSID) and the 2002 Child Development Supplement (CDS) and the 2007 and 2009 Transition into Adulthood (TA) supplement.

Notes: ATT = the average treatment effect for the treated using the weight of 1 for children with savings and $p/(1-p)$ for children without savings. β = regression coefficients. Robust SE = robust standard error. OR = Odds ratio.

* $p < .05$; ** $p < .01$; *** $p < .001$; † $p < .10$

TABLE 5—Rare event logistic regression results: Predicting young adults' *stock* and *savings bond ownership* in 2009 in the full sample ($N = 425$; ATT weighted).

Covariates	Stocks			Bonds		
	(Model 3)			(Model 4)		
	β	SE	OR	β	SE	OR
<i>Child and Young Adult Variables</i>						
White	1.131	.807	--	-.056	.607	--
Male	-.096	.512	--	-.030	.517	--
Employed	.070	.636	--	1.010	.677	--
Enrolled in college	-.542	.917	--	.113	.777	--
<i>Head and Household Socio-Economic Status (SES) Variables</i>						
Head is married	-.037	.645	--	.324	.838	--
Heads' education level	.414**	.149	1.513	-.330*	.158	.719
Log of household income	.021	.021	--	1.234**	.443	3.435
IHS of household net worth	--	--	--	.311	.224	--
IHS of household net worth: Splines						
≤ 0 : Zero and negative net worth	.298	.216	--	--	--	--
> 0 to < 10 : Moderate net worth	-.805*	.393	.447	--	--	--
≥ 10 : High net worth	.852**	.326	2.344	--	--	--
Parents have savings for child	-.548	.922	--	-.145	.451	--
<i>Variable of Interest</i>						
Child has savings account	1.449†	.849	4.259	-.070	.572	--
Constant	-5.962	2.273	$p = .009$	-16.895	4.539	$p < .001$

Source: Expectation-Maximization (EM) completed data from the Panel Study of Income Dynamics (PSID) and the 2002 Child Development Supplement (CDS) and the 2007 and 2009 Transition into Adulthood (TA) supplement.

Notes: ATT = the average treatment effect for the treated using the weight of 1 for children with savings and $p/(1-p)$ for children without savings. β = regression coefficients. Robust SE = robust standard error. OR = Odds ratio.

* $p < .05$; ** $p < .01$; *** $p < .001$; † $p < .10$

Stocks (Model 3). Results for Model 3 are available in Table 5. Young adults were about 51 percent more likely to own stocks for each increasing year of heads' level of education ($\beta = .414$, $OR = 1.513$, $p = .011$). Young adults were about 54 percent less likely to own stocks for each increasing point of their households' moderate net worth ($\beta = -.805$, $OR = .447$, $p = .041$). Young adults were about two-and-a-half times more likely to own stocks for each increasing point of their households' high net worth ($\beta = .852$, $OR = 2.344$, $p = .009$). Young adults were over four times more likely to own stocks when they had savings accounts as children, compared to not having savings accounts as children ($\beta = 1.449$, $OR = 4.259$, $p = .088$).

Bonds (Model 4). Results for Model 4 are available in Table 5. For each additional year of heads of households' level of education, young adults were 28 percent less likely to own bonds ($\beta = -.330$, $OR = .719$, $p = .037$). Young adults were almost three-and-a-half times more likely to own bonds for each accumulating point of household income ($\beta = 1.234$, $OR = 3.435$, $p = .005$).

Vehicle (Model 5). Results for Model 5 are available in Table 6. White young adults were over two times more likely to own vehicles compared with black young adults ($\beta = .725$, $OR = 2.065$, $p = .041$). Young adults who were employed were almost four times more likely to own vehicles compared with their counterparts who were not employed ($\beta = 1.348$, $OR = 3.850$, $p < .001$).

Home (Model 6). Results for Model 6 are available in Table 6. White young adults were almost four times more likely to own homes compared with black young adults ($\beta = 1.270$, $OR = 3.561$, $p = .057$). Young adults were about three times more likely to own homes when their heads of households were married compared to not married ($\beta = 1.057$, $OR = 2.878$, $p = .088$).

Total asset ownership (Model 7). Results for Model 7 are available in Table 7. Whites had significantly more assets compared with blacks ($\beta = .482$, $SE = .127$, $p < .001$). Males had significantly fewer assets compared with females ($\beta = -.221$, $SE = .124$, $p = .075$). Young adults had more assets when they were employed ($\beta = .596$, $SE = .132$, $p < .001$) and had ever enrolled in college ($\beta = .643$, $SE = .144$, $p < .001$). Young adults owned more assets when heads of households had higher levels of education ($\beta = .062$, $OR = .034$, $p = .068$). Young adults owned fewer assets when households had accumulating income ($\beta = -.089$, $OR = .048$, $p = .063$). For every accumulating point of households' high worth, there was a 17 percent increase in young adults' total asset ownership ($\beta = .127$, $SE = .089$, $p = .053$). Young adults who owned savings accounts as children owned significantly more assets compared to their counterparts who did not own savings accounts as children ($\beta = .289$, $SE = .119$, $p = .015$).

Summary of Results

The most commonly owned assets in young adulthood included savings accounts, vehicles, and credit cards. Smaller percentages of young adults owned stocks, bonds, and homes. On average, young adults owned two to three different assets. Young adults were two times more likely to own savings accounts, two times more likely to own credit cards, and four times more likely to own stocks when they had savings accounts as children compared to those who did not. Young adults owned savings accounts, stocks, and more total assets when households were accumulating net worth above a high threshold. White young adults also owned savings accounts, vehicles, homes, and more total assets compared to black young adults. Table 8 provides a summary of the findings.

TABLE 6—Logistic and rare event logistic regression results: Predicting young adults' *vehicle* and *home ownership* in 2009 in the full sample ($N = 425$; ATT weighted).

Covariates	Vehicle			Home		
	(Model 5)			(Model 6)		
	β	SE	OR	β	SE	OR
<i>Child and Young Adult Variables</i>						
White	.725*	.295	2.065	1.270†	.666	3.561
Male	.148	.311	--	-.532	.607	--
Employed	1.348***	.306	3.850	.065	.701	--
Enrolled in college	.260	.292	--	-.134	.547	--
<i>Head and Household Socio-Economic Status (SES) Variables</i>						
Head is married	.105	.306	--	1.057†	.620	2.878
Heads' education level	-.006	.086	--	-.142	.117	--
Log of household income	-.141	.122	--	-.270	.275	--
IHS of household net worth: Splines						
≤ 0: Zero and negative net worth	.068	.143	--	-.716	.586	--
> 0 to < 10: Moderate net worth	-.059	.261	--	1.372	1.258	--
≥ 10: High net worth	-.144	.220	--	-.737	.708	--
Parents have savings for child	.119	.296	--	.733	.541	--
<i>Variable of Interest</i>						
Child has savings account	.465	.297	--	-.286	.524	--
Constant	-.198	1.864	$p = .916$	-5.390	4.553	$p = .236$
Pseudo R ²			.088			--

Source: Expectation-Maximization (EM) completed data from the Panel Study of Income Dynamics (PSID) and the 2002 Child Development Supplement (CDS) and the 2007 and 2009 Transition into Adulthood (TA) supplement.

Notes: ATT = the average treatment effect for the treated using the weight of 1 for children with savings and $p/(1-p)$ for children without savings. β = regression coefficients. Robust SE = robust standard error. OR = Odds ratio.

* $p < .05$; ** $p < .01$; *** $p < .001$; † $p < .10$

TABLE 7—Multivariate regression results: Predicting young adults' *total asset ownership* in 2009 in the full sample ($N = 425$; ATT weighted).

Covariates	Total Asset Ownership		
	(Model 7)		
	β		SE
<i>Child and Young Adult Variables</i>			
White	.482***		.127
Male	-.221†		.124
Employed	.596***		.132
Enrolled in college	.643***		.144
<i>Head and Household Socio-Economic Status (SES) Variables</i>			
Head is married	.183		.146
Heads' education level	.062†		.034
Log of household income	-.089†		
IHS of household net worth: Splines			
≤ 0 : Zero and negative net worth	-.018		.058
> 0 to < 10 : Moderate net worth	.016		.110
≥ 10 : High net worth	.172†		.089
Parents have savings for child	.096		.121
<i>Variable of Interest</i>			
Child has savings account	.289*		.119
Constant	.658	.764	$p = .390$
R ²			.378

Source: Expectation-Maximization (EM) completed data from the Panel Study of Income Dynamics (PSID) and the 2002 Child Development Supplement (CDS) and the 2007 and 2009 Transition into Adulthood (TA) supplement.

Notes: ATT = the average treatment effect for the treated using the weight of 1 for children with savings and $p/(1-p)$ for children without savings. β = regression coefficients. Robust SE = robust standard error. OR = Odds ratio.

* $p < .05$; ** $p < .01$; *** $p < .001$; † $p < .10$

TABLE 8—Summary of regression results for young adults’ financial asset ownership at ages 22 to 25 from the 2009 TA ($N = 425$).

	Savings Accounts	Credit Cards	Stocks	Bonds	Vehicle	Home	Total Asset Ownership
<i>Child and Young Adult Variables</i>							
White	+				+	+	+
Male	–	–					–
Employed	+	+			+		+
Enrolled in college	+	+					+
<i>Head and Household Socio-Economic Status (SES) Variables</i>							
Head is married						+	
Heads’ education level		+	+	–			+
Log of household income				+			–
IHS of household net worth							
IHS of household net worth: Splines							
≤ 0 : Zero and negative net worth							
> 0 to < 10 : Moderate net worth			–				
≥ 10 : High net worth	+		+				+
Parents have savings for child	+						
<i>Variable of Interest</i>							
Child has savings account	+	+	+				+

Source: Expectation-Maximization (EM) completed data from the Panel Study of Income Dynamics (PSID) and the 2002 Child Development Supplement (CDS) and the 2007 and 2009 Transition into Adulthood (TA) supplement.

Notes: ATT = the average treatment effect for the treated using the weight of 1 for children with savings and $p/(1-p)$ for children without savings.

DISCUSSION

Child Development Accounts aim to lay a foundation for savings upon which children can build. Mainstream banking institutions may be important partners in policy endeavors like CDAs that open savings accounts for children. We suggest that mainstream banks' potential gains from children's savings are the long term relationships and potential future investments that children will make in young adulthood and beyond. In other words, children are potential future investors who can and do remain connected to mainstream banks and diversify their asset portfolios. A few studies have tested whether having savings accounts in childhood relates to connectedness to mainstream banking institutions in young adulthood by having savings accounts. However, few known studies test whether children's savings accounts relate to other assets. To our knowledge, this is one of the first studies to test children's savings accounts as a foundation for diverse investments.

Children are potential future investors who can and do remain connected to mainstream banks and diversify their asset portfolios.

What Financial and Nonfinancial Assets do Young Adults Own?

The most commonly owned assets amongst young adults in 2009 were savings accounts, vehicles, and credit cards while smaller percentages owned stocks, bonds, and homes. This finding is not surprising given that these percentages are consistent with the patterns of asset ownership among adults (Bricker, Kennickell, Moore, & Sabelhaus, 2012). One exception is home ownership. About 69 percent of the average adult population from the Survey of Consumer Finances owns their own home (Bricker, et al., 2012); however, a sizable percentage of adults (39 percent) are between ages 45 and 65—much higher than the young adult population in our study. We would not expect a majority of young adults with an average age of 23 to own their own homes because home is a nonfinancial asset typically acquired later in life. According to the National Association of Realtors (2011), the average age of first time home buyers is 32. However, only 38 percent of young adults under age 35 report owning their own homes, which is more in line with the percentage of young adults in our sample (8 percent; Bricker, et al., 2012). Perhaps what is surprising from our sample is that young adults are beginning to acquire their own homes at this early age.

The most commonly owned assets amongst young adults were savings accounts, vehicles, and credit cards while smaller percentages owned stocks, bonds, and homes. However, substantial gaps exist along lines of race and class. Twice as many white young adults owned stocks than black young adults. Four times as many white young adults owned bonds than black young adults.

We also find gaps in asset ownership along lines of race and class. Whites had a sizable percentage point advantage over blacks in all financial and nonfinancial assets owned in young adulthood. Ninety-four percent of white young adults owned savings accounts compared to 71 percent of black young adults—a percentage point gap of 23. A percentage point gap of 31 existed for both ownership of credit cards and vehicles. Twice as many white young adults owned stocks than black young adults. Four times as many white young adults owned bonds than black young adults. In total, white young adults owned about one more asset than black young adults. Young adults who had ever enrolled in college by 2007 owned assets more often than those who had never enrolled in college. Percentage point gaps were similar with regards to household income. Young adults from high-income households had an advantage

for all assets compared to those from low-to-moderate income households. Over twice as many young adults from high-income households owned credit cards compared with their low-to-moderate income counterparts. About seven times more young adults from high-income households owned stocks and bonds. Young adults also had an advantage when they had savings accounts as children. Those with savings accounts in childhood more often owned every type of financial and nonfinancial asset and more total assets compared to their counterparts without savings accounts in childhood.

Connections with Mainstream Banking Institutions

We find that children's savings accounts are significantly related to their savings accounts in young adulthood, suggesting that they have indeed maintained a connection with mainstream banking institutions. These findings hold true even after controlling for their later employment and college enrollment. This relationship is consistent with previous research that uses PSID data to examine savings accounts at baseline in mainstream banking institutions (Friedline, Elliott, & Chowa, 2013; Friedline, Elliott, & Nam, 2011). Friedline, Elliott, and Nam (2011) analyze a sample of 1,003 young adults ages 17 to 23 from the PSID with propensity score analysis and logistic regression. They find that young adults are about two times more likely to have savings accounts when they had accounts as children.

Children with savings accounts may develop relationships and maintain connections with mainstream banking institutions over time. Young adults were two times more likely to own savings accounts when they had savings accounts as children compared to those who did not..

We also find significant differences by race, employment status, college enrollment, and household net worth, all of which are consistent with previous research (Friedline & Elliott, 2011; Friedline, Elliott, & Chowa, 2013). White young adults are more likely to own savings accounts compared with black young adults—an advantage found in every study using PSID data to predict young adults' savings account ownership and controlling for children's savings (Friedline & Elliott, 2011; Friedline, Elliott, & Chowa, 2013; Friedline, Elliott, & Nam, 2011). Young adults' employment and ever enrolled in college status were respectively related to a two and seven times increased likelihood for owning savings accounts in 2009 compared to their counterparts, which is also consistent with previous research (Friedline, Elliott, & Nam, 2011; Huang, Beverly, Clancy, et al., 2011; Huang, Nam, & Sherraden, 2012). Recently, research has examined accumulating thresholds of household net worth for predicting young adults' savings account ownership. Friedline, Elliott, and Chowa (2013) examine samples of lower income young adults and find that accumulating moderate amounts of net worth improved the likelihood of owning savings accounts in young adulthood.

Young adults are also more likely to have savings accounts when their parents had savings accounts for them as children. Parents may model saving behavior to their children when they own savings accounts, which may send the message to their children and young adults that "we save" (Elliott, 2012). This modeling may make it more likely for young adults to adopt savings as a strategy for themselves. Previous research, however, has not found parents' savings for their children to be related to young adults' savings accounts. Friedline, Elliott, and Nam (2011), for instance, find that parents' savings for their children is significantly related to young adults' savings amount but not account ownership. Friedline and Elliott (2011) examine separate samples of whites ($n = 534$) and blacks ($n = 469$) and do not find parents' savings for their children to be significant in either model. Friedline, Elliott, and Chowa (2013) examine samples of lower income young adults and do not find parents' savings for their children to significantly relate to young adults' savings accounts. The most notable difference between the current study and previous ones is that we use the 2009 TA, which is the most recent wave available for examining young adults' outcomes. Previous research examined data with five years between baseline and outcome (2002 CDS to 2007 TA), compared to seven years in the

current study (2002 CDS to 2009 TA). It may be that the potential effects of parents' savings for their children take longer to emerge as significant predictors of young adults' savings accounts.

We find that children's savings accounts are significantly related to their savings accounts in young adulthood, suggesting that they have indeed maintained a connection with mainstream banking institutions. These findings hold true even after controlling for their later employment and college enrollment. This relationship is consistent with previous research that uses PSID data to examine savings accounts at baseline in mainstream banking institutions (Friedline, Elliott, & Chowa, 2013; Friedline, Elliott, & Nam, 2011). Friedline, Elliott, and Nam (2011) analyze a sample of 1,003 young adults ages 17 to 23 from the PSID with propensity score analysis and logistic regression. They find that young adults are about two times more likely to have savings accounts when they had accounts as children.

Diverse Asset Portfolios

Given that no previous studies examine the relationships between children's savings accounts and their ownership of diverse financial and nonfinancial assets in young adulthood, these findings are somewhat exploratory in nature. We find that having savings accounts in childhood is related to an increased likelihood of owning credit cards and stocks in young adulthood, as well as owning a greater number of assets. We do not find a significant relationship between children's savings accounts and their ownership of bonds, vehicles, or homes.

Young adults were two times more likely to own credit cards and four times more likely to own stocks when they had savings accounts as children compared to those who did not. They also owned significantly more total assets when they had accounts as children.

We also find differences by race and class. For several of the financial and nonfinancial assets, white young adults have an advantage over black young adults. White young adults are more likely than black young adults to own vehicles, homes, and total assets. This is consistent with results on adults' asset ownership (Bricker, et al., 2012; Oliver & Shapiro, 2006).

In addition, we find that young adults who were employed and had ever enrolled in college by 2007 are more likely to own more total assets compared to their counterparts. Previous research has not found a significant relationship between children's employment status in 2002 and their savings account ownership as young adults in 2007 (Friedline & Elliott 2011; Friedline, Elliott, & Nam, 2011). However, those studies examined employment status between the approximate ages of 12 and 17 in 2002 when smaller percentages of children are employed (roughly 25 to 17 percent). We examine employment status between ages 19 and 23 in 2007 when a greater percentage of young adults is employed (77 percent). Moreover, there are only two years (2007 to 2009) between our measure of employment and financial and nonfinancial assets compared to five years (2002 to 2007) in previous research. These differences perhaps make it more likely for employment status to be related to young adults' assets. These same studies have found that academic achievement relates to young adults' savings account ownership (Friedline, Elliott, & Chowa, 2013). Perhaps what is interesting here is that despite enrolling in college and accumulating debt through student loans, young adults may still be diversifying their asset portfolios.

We also find that household net worth relates to young adults' asset ownership. Accumulating high net worth increases young adults' likelihood of owning stocks and total assets. This suggests that young adults have a chance of diversifying their asset portfolios when their households are accumulating net worth above a certain threshold—perhaps signifying that households are also in the process of increasing and diversifying assets. Accumulating moderate net worth, however, is negatively related to stock ownership. Previous research has found that accumulating

moderate net worth is positively related to savings account ownership among lower income young adults (Friedline, Elliott, & Chowa, 2013); however, that research examines a different outcome with fewer years between children's and young adults' savings. It may be that these households lack sufficient financial resources to positively influence young adults' stock ownership even though households are in the process of accumulating net worth.

CONCLUSION

This study lends support for the assumptions that having savings accounts in childhood lays a foundation for remaining connected to the financial mainstream and for owning a diverse set of assets. It is noteworthy that the savings accounts in this study represented accounts at mainstream banking institutions, which served as a proxy for CDAs. Findings suggest that children with savings accounts at mainstream banks continue to own accounts and acquire other types of assets in young adulthood—potentially indicating demand for children's savings accounts. Mainstream banks that provide children's savings account products may gain from their long-term investments. Taken together, policy endeavors that remove barriers to children's account ownership may prove beneficial for both children and mainstream banks.

Children with savings accounts at mainstream banks may continue to own accounts and acquire other types of assets in young adulthood, lending support for a potential business case for children's savings. Mainstream banks that foster this early relationship may stand to gain from children's long-term investments. Moreover, policy endeavors that remove barriers to children's account ownership may prove beneficial for both children and mainstream banks.

We should also keep in mind that children likely need more than savings accounts in their efforts to build assets. Let us illustrate with an example from a popular film. In the 1989 film *Field of Dreams*, Kevin Costner plays a farmer named Ray who one day hears a mysterious voice in his corn field urging, "If you build it, he will come." Ray was contemplating building a baseball field in hopes that baseball legends and fans would gather to enjoy the game. Characters in the film cautioned Ray against building his baseball field out of concern no one would come. Researchers, policy makers, and mainstream banking institutions should heed a similar caution. Once children open savings accounts, this does not guarantee that they will know how to make financial decisions about their accounts, learn advantages and disadvantages of different types of assets, or plan for future investments. In fact, we know from the descriptive results in this study that some children do not have savings accounts even though they are already offered by many mainstream banking institutions. While savings accounts in childhood lay a foundation for these things to occur, they do not automatically guarantee financial capability. Future research should explore the relationship between savings accounts and financial capability so we can learn how to support children in their efforts to build assets.

In sum, the effects of children's savings go beyond their asset ownership in young adulthood and lend support for a broader rationale for children's savings. Research has explored the effects of children's savings on domains other than asset ownership. Children's savings accounts are related to higher academic achievement scores and higher college enrollment and graduation rates (Elliott, Destin, & Friedline, 2011). Given the effects of children's savings on both their educational outcomes and asset ownership, a policy like CDAs may be ideal because a single action has the potential to simultaneously improve children's lives on a number of outcomes. Children's savings may be well worth the investment—not only for children and mainstream banks, but for society as a whole.

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Children as Potential Future Investors: Report I of III

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