

B. STATISTICAL METHODS

1. Universe and Respondent Selection

No sampling or other statistical methods will be used to select the survey respondents or extrapolate or generalize the study results to a wider population. Rather, the size of the pilot sample (approximately 1000 participants in each study) has been chosen to maximize the likelihood of obtaining meaningful findings with the least possible number of participants. All eligible participants in the interventions will be invited to participate in the study, and all study participants will be asked to respond to baseline and follow up surveys. For each of the two pilots we anticipate recruiting up to 1,000 participants, divided into 4 different comparison groups of approximately 250 each.

2. Procedures for Collecting Information

The adult program research pilot is a partnership with the New York City Office of Financial Empowerment (OFE) and the University of Wisconsin-Madison Center for Financial Security (CFS) to provide, and test the impact of, access to a free, City employee checking account and one-on-one financial counseling provided by NYC's Financial Empowerment Centers (FEC) to participants in the City's Parks Opportunity Program (POP). Specifically, the research will test the outcomes of these interventions alone and in combination on (1) the beneficial use of a checking account by program participants and (2) the general financial well-being of participants. Study participation will be completely voluntary. Changes between baseline and follow-up and differences between the treatment groups will be measured using administrative data (transactional data from the checking accounts and credit reports). This data will be supplemented by survey data. Study participants will be surveyed in person on-site at POP to collect baseline information on current account use and financial situation, and again within the following year to collect indicators of intervention outcomes. Participants who have left the program early, or who are otherwise not available to take the survey onsite will receive a mail survey.

The youth program research pilot is to partner with Royal Credit Union (RCU), the Eau Claire, Wisconsin School District, and the University of Wisconsin-Madison Center for Financial Security (CFS) to provide, and test the impact of, access to RCU's credit union in school branches in some of the Eau Claire public schools and additional financial education activities, alone and in combination. Study participation will be completely voluntary, and those students who choose to participate will be surveyed in person on-site at school to collect baseline information in the form of a financial assessment evaluating financial knowledge, attitudes, and behaviors relevant to the participants' age level. The same assessment would be administered towards the end of the school term to allow for the analysis of any changes associated with the interventions. In addition, a survey will be mailed home to parents to gather key data on family demographics and financial attitudes and behavior which will be used to strengthen the analysis of student outcome data. Finally, administrative transaction data will be collected for students with youth savings accounts to assess both students' level of engagement with their accounts and changes in banking behavior over the study period.

Our findings in both pilots will provide valuable information about the effectiveness of interventions that combine financial education with access to financial products. However, the pilots test specific interventions on specific target populations. For this reason, the results of the study can provide insight into the potential effectiveness of similar interventions on similar populations, but they cannot be directly generalized beyond the study sample. In addition, while some treatments in these pilots are randomized, they are not randomized at an individual level (e.g. access to counseling in the adult pilot and access to financial education in the youth pilot). Access to the school credit union program in the youth pilot is not random, but based on Royal Credit Union's current programming in the Eau Claire schools. These pilots are therefore not pure randomized control trials, and we will use statistical strategies to control for baseline differences between the treatment groups. We hope that these pilots lay the groundwork for more extensive research in this area.

Detailed information about the two pilots is provided in the remainder of this section.

Adult Pilot

KEY RESEARCH QUESTIONS

We will examine how the effects of financial counseling in combination with access to a safe and affordable checking account differ from the effects of account access alone. In addition, we will examine the effects of intensity of account access by streamlining the account enrollment process for half the participants. We are interested in the effects of financial counseling and intensity of account access on:

- 1) The beneficial use of a checking account, and
- 2) The general financial well-being of participants.

Measuring account activity will show whether individuals are managing their accounts sustainably and using them in ways that promote financial stability. We will further measure whether participants' overall financial health improves, and to what extent, as the result of the account access and financial counseling components of the program.

We hypothesize that participants provided greater account access will be more likely to take-up accounts. Bank accounts facilitate asset accumulation and access to other mainstream financial products, and reduce dependence on expensive alternative financial services (Barr, 2004; Barr and Sherraden, 2005; Belsky and Calder, 2004; Seidman and Tescher, 2003; Stegman and Faris, 2003). Therefore, we also expect that account take-up will improve participants' financial well-being. Because financial counseling offers assistance and engagement with the checking accounts, we hypothesize that the provision of counseling in combination with account access will result in better use of the account and greater financial well-being than account access alone.

PILOT & RESEARCH DESIGN

Our hypothesis will be tested within one of the nation's largest transitional employment programs, the New York City Parks Opportunity Program (POP), administered by the city's Department of Parks and Recreation. All participants enrolled in the study will be offered free

checking accounts with direct deposit and no overdraft fees. Based on current levels of take-up, we expect roughly 30 percent take-up of the checking account and direct deposit offer. The accounts will be opened on-site at POP, and all participants will receive basic information about account benefits and use, referred to as “How-To+.”

About half of the study participants will be assigned the option to attend one-on-one financial counseling during their prescribed work hours. The counseling offered to half the participants will be provided by NYC’s Financial Empowerment Centers (FECs). FEC counselors are trained to help clients individually on a range of financial needs, such as money management, budgeting, selecting safe and affordable financial products, and credit and debt management. For the purposes of this pilot, counselors will be informed of the unique needs of this client group with reference to their accounts. For example, counseling might address the unique features of the NYC account, transitioning from the use of alternative financial services, and the maintenance of accounts should clients’ employment situation change.

The study will examine the effects of financial counseling in combination with access to a checking account using an intent-to-treat research design. This design controls for selection bias by measuring the effects of access to services rather than the impacts of the services themselves (unobservable characteristics may affect both the likelihood of opening an account or attending counseling and the impact of these services). Some participants may choose not to open accounts, while a minimal number may not be qualified for accounts due to their ChexSystems reports. These participants will be offered NYC SafeStart savings accounts with ATM access (ChexSystems reports do not determine eligibility for these accounts). Participants who open a NYC SafeStart account will not be included in the study.

We will also examine the effects of intensity of account access by creating variation in account access. The account-opening process will be embedded in the program structure in some locations and not others. For about 50 percent of study participants, account-opening will occur as part of standard POP enrollment during orientation. Bank representatives will be on hand to assist participants in opening accounts as they complete other program enrollment activities. Participants at locations without the embedded process will complete POP enrollment separately from account opening. They will be told that, as an optional step, they can speak to a bank representative on-site if they are interested in opening an account.

Because enrollment in POP is not likely to be affected by the method of account enrollment, the embedded method (including bank account enrollment as part of the standard POP enrollment process) serves as a proxy for greater account access. We expect that participants offered the embedded process will be more likely to take up accounts because it is more convenient and it takes more effort to “opt out” of an offer presented as a default.

To analyze the effects of variation in account access, we will use regression discontinuity analysis to estimate the local average treatment effect (LATE). This method addresses selection bias by estimating the average impact on participants who take up accounts as a result of the embedded process as opposed to participants who would take up an account anyway, compared to non-account users.

At the end of study enrollment, the design will provide four comparison groups, which are presented in the following matrix:

	Experiment 1	
Experiment 2	Counseling offered	No counseling offered
Separate account enrollment	Separate account enrollment, counseling offered	Separate account enrollment, no counseling offered
Embedded account enrollment	Embedded account enrollment, counseling offered	Embedded account enrollment, no counseling offered

TREATMENT ASSIGNMENT

The treatment will be assigned by the borough in which a POP site is located, and time, rather than by individual, as this will reduce concerns about program participants at one site receiving different levels of service, will be more feasible for the Parks Department to implement, and will allow for less possibility of errors. During the first half of the study period, POP sites in two of the four boroughs will be chosen to offer financial counseling to participants. One borough offering counseling and one borough not offering counseling will be chosen to offer embedded account-opening. Because treatment effects may be correlated with differences between sites, the counseling assignment will be changed after approximately half the participants are recruited. At this point, the sites that did not previously offer counseling will become the sites offering counseling. To reduce the burden on Parks Department staff, the account-opening process will not be changed.

The following chart provides an example of how the treatment could be assigned for the first half of the recruitment period and switched for the second half:

	Recruitment period			
Borough	January/February		March/April	
Brooklyn	FEC session offer	Embedded account offer	No FEC	Embedded
Bronx	No FEC	Not embedded	FEC	Not embedded
Manhattan	FEC	Embedded	No FEC	Embedded
Queens	No FEC	Not embedded	FEC	Not embedded

PILOT IMPLEMENTATION & STUDY RECRUITMENT

The study will be implemented at six of the seven POP sites across four boroughs. One POP site will be excluded because Banco Popular, the financial institution providing the free checking accounts, does not have branches in the area. POP participants at this site will be offered NYC Direct Deposit accounts with another financial institution. However, since we will not be able to obtain account data for these individuals, they will not be included in the study.

New POP participants will be offered accounts and recruited into the study as they begin POP. New enrollees will be offered accounts and provided basic information about account terms and features during their POP orientation day. Banco Popular staff will be present on site to facilitate this process. Participants will fill out direct deposit forms while opening their accounts and receive their account number that day.

Study recruitment will occur about 2 weeks later, after POP participants are assigned to their work site. At this time, POP participants will receive the How to + education and study offer. Participants will be offered a small incentive (a \$25 gift card) as a token of appreciation for participating in the study. They will be offered another \$25 gift card if they have a NYC checking account. Study participants who did not open accounts previously will be offered a second opportunity to open accounts and receive this incentive.

When the study recruitment period begins in January 2012, POP participants who enrolled in December will be offered accounts and asked to join the study during their POP professional development day. Because these participants will not be offered accounts during the POP orientation process, the intensity-of-account-access component of the research is not relevant to this subgroup.

MEASUREMENT

In order to answer the key research questions as stated above, we propose to track outcomes in two categories:

Outcomes associated with beneficial account use

- Number of monthly transactions
- Account use for bill payments
- Account longevity
- Use of direct deposit
- Average monthly balance
- Number of returned (bounced) checks

Outcomes associated with financial well-being

- Debt levels
- Delinquencies
- Percent use of available revolving credit
- Take up of other affordable, mainstream financial products or services (e.g. establishing credit)

- Savings levels
- Use of alternative financial services
- Financial knowledge (knowledge assessments)
- Financial attitudes (e.g. future orientation, perceived financial well-being, sense of financial control and satisfaction)

We expect that individuals receiving counseling in combination with account access will be more likely to make regular deposits, use the account for bill payments, maintain the account, maintain positive balances, and avoid fees (compared to either intervention alone). We also expect that individuals receiving counseling in combination with account access may be in a better position to improve their financial health. We hypothesize counseling reduces debt, incidence of delinquencies, and use of alternative financial services; facilitates healthy credit maintenance and other mainstream product use; and increases savings. Individuals receiving counseling would be more likely to have greater financial knowledge and exhibit financial attitudes that promote and reflect healthy financial behaviors.

We also hypothesize that individuals who take up accounts will be in a better position to increase their savings, reduce their use of alternative financial services (and therefore possibly reduce debt), improve their financial knowledge and attitudes, and take up other mainstream financial products.

DATA COLLECTION

The outcomes of interest will be measured using a combination of administrative and self-reported data. Administrative data will be collected from a variety of sources for up to 24 months after study recruitment. The Parks Department will provide demographic, employment, income, and benefits data. Although the program length is six months, POP staff members continue to follow-up with participants for up to two years. Banco Popular will share account data for participants who signed the bank's data release form. Data regarding debt levels, delinquencies, credit utilization rate, and credit establishment will be collected by OFE by conducting "soft pulls" of study participant credit reports at intake and after about 3-6 months, 9-12 months, and 21-24 months (credit reports for all study participants will be pulled at the same time, generating some variation in follow-up period). The FECs will provide data regarding study participants' financial counseling attendance and treatment.

Self-reported data will be collected using surveys. A baseline survey assessing current banking status and financial situation, behaviors, and attitudes will be administered onsite during study recruitment. A follow-up survey assessing account use, financial health indicators, and financial knowledge, behavior, and attitudes will be administered onsite five months following enrollment. Participants who have left the program early, or who are otherwise not available to take the survey onsite will be surveyed by phone and/or mail. We expect about 50 percent of participants to leave the program early.

Survey questions will be adapted from previously-fielded questions used in the literature and prior CFS and OFE research. The mail survey will be designed, tested, and implemented with the assistance of the University of Wisconsin Survey Center and OFE's evaluation specialists. The survey will be fielded to maximize the response rate; up to four mailings and a pre-incentive to

return the survey will be sent to participants. This strategy reduces response bias resulting from differences between participants who return the mail survey and those who do not. Any remaining bias will be analyzed and the data will be balanced using statistical techniques. Response rate to the mail survey is 40 percent. Between the on-site and mail survey, we expect the total response rate will be about 70 percent.

The administrative data will provide the most reliable pre- and post-treatment measures. These data will be supplemented with survey data. Some survey data are collected pre- and post-treatment. However, other measures collected in the follow-up survey are not collected at baseline. We are either using these data as controls or will employ statistical strategies to control for baseline differences.

The three- to six-month time frame for measuring outcomes provides the time necessary for participants to use their accounts, attend counseling, and demonstrate changes in financial knowledge, attitudes and behavior. Previous research by OFE has shown that some financial outcomes, such as changes in debt levels, can be observed over this time period. We expect that a five or six month follow-up will demonstrate more significant results. However, credit report data will be collected earlier for some participants to ensure that data is available for analysis within the first year. Because participants will be recruited on a rolling basis, a year may be required to obtain five-month survey data for the full sample. However, some survey data, in addition to administrative data collected periodically over the six-month time frame will be available for analysis within the first year.

Tracking data from Banco Popular, the FECs, and credit reports for up to 24 months could reveal more significant, longer term impacts. Extending data collection beyond the first year would also provide an opportunity to observe participants' account use and financial well-being after completing the Parks program. The account features negotiated by the City for its employee checking accounts continue when City employment ends, as long as customers complete a minimum of five transactions per month. Observing impacts once the added account protections are no longer in place may inform government efforts to design model transactional accounts for low-income individuals.

The following table outlines the adult pilot data collection and sources:

Data Source	Account Use (outcomes)	Financial Well-Being (outcomes)	Additional Data Points (controls)
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<p>Bank data</p> <p><i>up to 24 months</i></p>	<ul style="list-style-type: none"> • Number of monthly transactions • Account use for bill payments • Account longevity • Use of direct deposit • Average monthly balance • Number of returned (bounced) checks 		
<p>Credit reports</p> <p><i>baseline, 3-6 months, 9-12 months, & 21-24 months</i></p>		<ul style="list-style-type: none"> • Debt levels • Delinquencies • Percent use of available revolving credit • Take up of other affordable, mainstream financial products or services (e.g. establishing credit) 	
<p>Follow-up survey</p> <p><i>approximately 6 months</i></p>		<ul style="list-style-type: none"> • Financial knowledge (knowledge assessments) • Financial attitudes (e.g. future orientation, perceived financial well-being, sense of financial control and satisfaction) • Financial behavior (e.g. use of alternative financial services, saving behavior) 	

Intake survey <i>baseline</i>		<ul style="list-style-type: none"> • Financial attitudes • Financial behavior • Baseline banking status • Banking history 	<ul style="list-style-type: none"> • Demographics
POP administrative data <i>up to 24-months</i>			<ul style="list-style-type: none"> • Demographics • Employment information • Income information • Benefits information
Financial Empowerment Center administrative data			<ul style="list-style-type: none"> • Number of counseling sessions • Service plans • Milestones achieved

DATA ANALYSIS

As discussed earlier, the data will be analyzed using an intent-to-treat research design. Specifically, we will measure the effects of the counseling and account offers rather than take-up. Using a difference-in-differences model, we will compare outcomes among the four sample groups. This will demonstrate whether the counseling offer affects the use of accounts and whether the counseling offer in combination with account access improves participants' financial health more than account access alone.

We will use site fixed effects to control for the time period in which a participant was recruited (because time period partially determines the treatment assignment). Because some participants may be recruited midway through completing POP, and some participants may leave POP early, we will control for the length of time spent in the program after receiving an account.

In addition to estimating the effects of the intent to treat, we may also estimate the effect of treatment on the treated. If the participants who open accounts and/or attend counseling are significantly different from those who do not, we may use a propensity score approach to provide estimates of the average treatment effect.

We will compare the study sample to the full population of POP participants to determine if study recruitment bias has occurred. As mentioned earlier, we will also control for differential response rates to the follow-up survey, and estimate differential non-response to individual survey questions.

SAMPLE SIZE AND DETECTABLE EFFECTS

We aim to recruit 1,000 participants into the study. We expect an acceptance rate of 40 percent based on past experience with the study population, and plan to recruit participants until the desired sample size is achieved

Assuming 250 in each comparison group, the following are examples of approximate minimum detectable differences between the groups:

- \$120 difference in savings
- 7% difference in the proportion of individuals who have bounced at least one check in the last 6 months
- 10 percentage point difference in amount of available credit
- \$1,800 difference in revolving debt
- \$2,600 difference in amount past due
- Unit difference in the number of bills in collections
- Third of a deviation difference in self-reported financial knowledge and actual financial knowledge (based on a sample of 175 since we expect a survey response rate of 70 percent)
- 16% difference in proportion of individuals who feel they have little or very little control over their financial situation (based on a sample of 175 since we expect a survey response rate of 70 percent)

THESE EFFECTS WERE ESTIMATED USING PRIOR STUDIES WITH SIMILAR POPULATIONS (2-TAILED TEST, POWER=0.8, ALPHA=0.05). .RESEARCH ETHICS

Researchers will follow strict ethical standards for human subjects research while implementing these pilots. All consent, data collection, and confidentiality protocols have been approved and will continue to be monitored by the UW-Madison Institutional Review Board (IRB).

RESEARCH TIMELINE

December 2011

- Finalize IRB protocol for authorization for human subjects research
- Finalize pilot implementation plan
 - o Finalize MOU and terms with Banco Popular
 - o Finalize MOU between Department of Parks and Recreation and OFE
 - o Hire personnel
 - o Develop and finalize How-To + education
 - o Develop and finalize training and materials for hired personnel
 - o Train personnel

- o Randomly assign treatments to each POP site by borough

January 2012-April 2012

- Pilot implementation
- Recruit study participants and collect baseline data (baseline credit report and baseline survey)

February 2012

- Complete preliminary literature review for final report

March 2012

- Re-assign treatments at each site (specific date to be determined depending on study recruitment rates)
- Draft 1st quarter research report

February-May 2012

- Finalize 5-month follow-up survey
- Obtain IRB approval for survey

June 2012

- Start fielding 5-month follow-up survey

July 2012

- 1st follow-up credit report pull (3-6 month follow-up)
- Complete coding of data to be presented in Year 1 report

August-September 2012

- Analyze preliminary data

August- October 2012

- Draft Year 1 report (outline due Aug 27, final paper due October 26)

January 2013 (contingent on future funding)

- 2nd credit report pull (9-12 month follow-up)

January 2014 (contingent on future funding)

- 3rd credit report pull (21-24 month follow-up)
- Complete 24-month follow-up data collection
- Analyze data and draft findings

Youth Pilot

KEY RESEARCH QUESTIONS

This study will examine whether elementary school students (specifically 4th and 5th graders) learn more from personal finance instruction when they have the opportunity to open and use a savings account through a credit union branch in their school. Classrooms will be assigned to education across schools with and without existing credit union branches.

The research design will provide four comparison groups:

	Financial education	No financial education
Credit union in school	Credit union in school + Financial education	Credit union in school + No financial education
No credit union in school	No credit union in school + Financial education	No credit union in school + No financial education

This design will allow us to address the following research questions:

- Do students gain financial knowledge and understanding by participating in a financial education curriculum?
 - Do student learn more when they also attend a school with a credit union branch?
- Are students more likely to open a bank account and/or make deposits if they are participating in a financial education curriculum?

We expect that financial education will increase financial knowledge and understanding. We also expect that students in schools with credit unions may learn more from financial education lessons than students receiving education alone. These students have a greater opportunity to apply their learning by making regular deposits into a savings account. We also expect that in schools where a credit union program has a significant presence, even students without accounts will benefit. The availability and visibility of banking services might increase the perceived relevance of the financial education curriculum and improve learning among students without accounts. Finally, we hypothesize that students with a credit union branch in their school will be more likely to participate in the credit union program (by opening accounts and/or making deposits) when they learn about financial topics in class.

PILOT SITE

The study will be implemented in elementary schools in Eau Claire, Wisconsin during the spring 2012 semester. Eau Claire, located in western Wisconsin, has a population of about 66,000, making it the state's 9th largest city. About 5 percent of households in Eau Claire are unbanked, while about 17 percent are underbanked.¹ These values are slightly higher than the state average (about 4 percent and 16 percent respectively), but lower than the national averages of 8 percent and 18 percent.

Credit Union School Banking Program

Royal Credit Union (RCU) operates student branches in six of the district's 13 elementary schools as part of its School Sense program. RCU has 21 offices (18 in Wisconsin and three in Minnesota), 120,000 members, and over \$1 billion in assets, making it one of the largest credit unions in the area. It is the top home lender in Wisconsin's Eau Claire and Chippewa counties and offers a range of services, from health savings accounts and business services to credit counseling.

RCU's School Sense program began in 1993 at the request of an elementary school principal who had received an inquiry from a parent about in-school savings programs. The program has expanded to 14 elementary schools, three middle schools, and three high schools in the region.

Modeled after the Save for America program, School Sense allows children and a parent or guardian (joint member) to open a savings account with RCU, which furnishes the required \$5 initial deposit (account terms are listed in Appendix B). Joint members must apply online or in-person at RCU offices to open the account, but from then on children can make deposits and withdrawals at school. RCU also hosts Kids Club – a youth savings program similar in structure to School Sense – out of its offices.

School branches are operated once or twice a week and are set up as tables outside the cafeteria. Teachers collect deposits from their students and deliver them to RCU staff. Deposits can be of any amount, and elementary school students can withdraw up to \$20 at a time with a joint member's signature. Students are encouraged to identify a savings goal and to track progress toward that goal.

Student tellers (4th and 5th graders at the elementary level, and all grades in middle and high schools) process the deposits with RCU staff at lunchtime. These tellers are hired through a true-to-life process; students fill out an application and interview for a position. Students walking to lunch can discuss their accounts with the tellers. They can also redeem small prizes, earned every fourth deposit, at this time. Often, students who do not have accounts inquire about the program and are advised to discuss opening an account with their parents.

RCU has demonstrated a strong commitment to working with local schools in western Wisconsin, and has a well-established relationship with the Eau Claire Area School District. During the 2010 to 2011 school year, 2,100 student members made nearly 16,000 deposits. At the six Eau Claire elementary schools with an RCU branch, students made about 5,100 transactions and deposited over \$65,000 during the year. For every 500 deposits made at a school

¹ CFED estimates derived from a model based on the 2009 FDIC Survey and 2005-2009 American Community Survey. Retrieved from <http://webtools.joinbankon.org/community/profile?state=WI&place=Eau%20Claire>.

site, RCU donates \$250 to the school. These donations amounted to almost \$6,200 during the 2010 to 2011 school year.

PILOT DESIGN

We plan to recruit 4th and 5th grade study participants across the 13 elementary schools in Eau Claire. Each school has two or three classes per grade, with about 1,500 4th and 5th graders total across the 13 schools. We estimate that at least 750 students will enroll in the study based on an expected parental consent rate of about 50 percent, though we aim to recruit 1,000 participants.

Personal finance instruction will be offered in class, randomized by classroom, as part of the regular curriculum. The instruction will be standardized across the schools in each district. We have identified a preferred curriculum, Financial Fitness for Life (FFFL), which offers 15 high-quality, activity-oriented lessons that comprehensively address personal finance knowledge and skills relevant to the age group under study (see Appendix C for more information about FFFL). We would use the curriculum developed for students in grades 3-5, focusing on the lessons addressing savings, financial decision-making, and money management. These are topics relevant to students' use of saving accounts. We will adapt the curriculum to be delivered in five 45-minute lessons.

The lessons will be delivered by teachers or RCU educators, all trained by UW-Madison faculty. Teachers who choose to deliver the material themselves will attend a 2-3 hour training session during a professional development in-service day and will be compensated for their time. Teachers may also choose to have the material delivered by RCU educators, who will attend the same training session. RCU has experience implementing financial education programs for students, either in the classroom or as part of training sessions for student tellers.

District administrators feel strongly that all students should benefit from the financial education component of this study. Therefore, students in the no financial education control group will receive similar financial education content after the study's follow-up assessment has been completed.

MEASUREMENT

The impacts of treatment will be measured and compared across the four comparison groups primarily using a simple assessment test provided at the start and end of the study period. The test will assess financial knowledge, attitudes, and behaviors relevant to the participants' age level. The FFFL curriculum includes nationally benchmarked assessment tests, which will be used for the knowledge portion of the assessments. With at least 175 participants in each group (while we are aiming for a full sample of 1,000, we expect to recruit at least 750), we should be able to detect at least a 2-point difference in score on the financial knowledge assessment using a 2-tail test (power=0.8, alpha=0.05).

Between the baseline and follow-up assessments, the financial education program will be administered and students in schools with branches will have weekly opportunities to access their accounts (e.g. every Wednesday). This provides multiple opportunities for students to be exposed to accounts or work with their own accounts over the course of the spring term.

We will obtain demographic data, as well as data regarding parents’ financial behaviors and attitudes, through a brief baseline survey provided to parents when they consent to their child’s participation in the study. If authorized, the school district will provide data on school attendance and grades to serve as additional controls. We will also collect RCU banking data reflecting the intensity of students’ engagements with their savings accounts, if they have them. Proposed data to be obtained from RCU for each study participant includes:

- Date account was opened
- Number of deposits over the study period
- Dollar amount of deposits over the study period
- Whether the student is an RCU teller in their school
- Prizes redeemed by each student for deposits over the study period²

The following table outlines data collection and sources for the youth pilot:

Data source	Outcomes	Additional data points (controls)
Student assessments <i>Pre-/post-intervention</i>	<ul style="list-style-type: none"> • Financial knowledge • Financial attitudes • Financial behavior 	
Parent survey		<ul style="list-style-type: none"> • Demographics • Parent financial attitudes • Parent financial behaviors
RCU data <i>Duration of study period</i>	<ul style="list-style-type: none"> • Whether the student has an RCU account • Date account was opened • Number of deposits over the study period • Dollar amount of deposits over the study period • Prizes redeemed by each student for deposits over the study period 	<ul style="list-style-type: none"> • Whether the student is an RCU teller in their school³

² Students with RCU accounts receive a card which is stamped each time a deposit is made. Cards can be exchanged for prizes after four stamps are received. However, by “saving up”, kids can redeem larger prizes for 8, 12, and 16 stamps. Tracking this information indicates students’ time preference.

³ Student tellers are “hired” by RCU to assist staff in processing transactions and marketing accounts to students.

School district administrative data (pending approval)		<ul style="list-style-type: none"> • Grades • Attendance
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DATA ANALYSIS

A difference-in-differences approach will be used to compare how student outcomes among the four sample groups differ, demonstrating whether school credit union branches and the financial education program are associated with differences in financial knowledge and behavior, individually and in combination.

While studying schools within a single district reduces the likelihood of baseline differences between participants from each school, demographic data suggest that the Eau Claire elementary schools with RCU branches are somewhat more advantaged on average than the schools without branches. To address this, we will control for baseline school, parent, and child characteristics.

We will likely explore multiple estimation strategies, including ordinary least squares (using classroom fixed effects and clustering standard errors at the school level) and potentially hierarchical linear modeling.

We will compare the study sample to the total population of 4th and 5th graders in the Eau Claire Area School District to determine if study recruitment bias has occurred. We will also estimate and control for survey and item non-response bias.

RESEARCH ETHICS

Researchers will follow strict ethical standards for human subjects research while implementing these pilots. All consent, data collection, and confidentiality protocols have been reviewed and will continue to be monitored by the Institutional Review Board (IRB) which oversees human subjects research at the University of Wisconsin-Madison.

RESEARCH TIMELINE

December 2011-January 2012

- Submit UW-Madison IRB protocol for authorization for human subjects research
- Confirm selection of schools sites and obtain official school administrator authorization for research
- Develop/confirm financial education curriculum
- Develop baseline and follow-up assessments
- Confirm implementation plan with school administrators

February 2012

- Train teachers and RCU educators delivering the financial education lessons
- Complete preliminary literature review for final report

- Obtain parental consent for participation and collect baseline data from parent survey

March 2012

- Obtain student assent for participation and administer baseline student assessment

March-April 2012

- Administer financial education program to treatment group
- Students with access to accounts have opportunities to make regular deposits

April 2012

- Administer follow-up assessment

April-May 2012

- Administer financial education program to control group

June-September 2013

- Analyze data and draft report

3. Methods to Maximize Response

In order to achieve our desired sample size, we need to recruit participants effectively from the pool of potential participants and maximize participants' likelihood of responding to surveys.

Adult pilot

We will improve our recruitment rates by offering incentives to participate in the study. To improve the survey response rate, participants will fill out baseline surveys onsite during recruitment at the POP site, which is more convenient than responding to a mail survey on personal time. Participants who remain in the program for five months following recruitment will also be asked to fill out the follow-up survey on site. Participants who have left the program early will receive mail surveys, and the UW Survey Center will use tested techniques to maximize the response rate. This includes multiple waves of survey mailings, an enclosed \$10 Metrocard pre-incentive to return the survey, and postcard and phone reminders.

Youth pilot

Parents of potential study subjects will receive consent forms in the mail. Parent surveys will be included with the consent form mailing, increasing the likelihood that consenting parents will also complete the survey. We will improve response rates by informing parents of the study and building interest in advance of the mailing; parents will learn about the study through school newsletter articles and letters sent home with students. We will also use an enclosed \$2 pre-

incentive and a postcard reminder to increase the response rate. All students will complete the pre/post assessments (though the data will only be used when parents have consented). Teachers will be provided with detailed instructions for administering the assessments to improve responses.

4. Testing of Procedures

Adult pilot

Survey questions are similar to the questions used in the principal investigators' study evaluating the impacts of financial counseling at NYC Financial Empowerment Centers (so that results will be comparable). These questions were taken/adapted from the literature and/or developed with the assistance of survey experts at the University of Wisconsin Survey Center (UWSC). The questions were tested with a sample of POP participants before fielding.

Youth pilot

The youth pilot questions were mainly taken/adapted from the literature. The financial knowledge questions were developed by the Council on Economic Education (CEE) and correlate with the Financial Fitness for Life curriculum used in the educational intervention. These test questions have been nationally tested and benchmarked by CEE.

See attached supplemental document noting the sources of survey questions, and which were developed specifically for this study.

5. Contacts for Statistical Aspects and Data Collection

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