The Rainy Day Earned Income Tax Credit: A Reform to Boost Financial Security by Helping Low-Wage Workers Build Emergency Savings

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Financial stability depends on emergency savings. Low-wage workers regularly experience drops in income and unexpected expenses. Households with savings absorb these financial shocks but most low-income Americans lack rainy day savings. Therefore, even a small shock, like car repairs, can result in a cascade of events that throws a low-income family into poverty. Nonetheless, existing policies address emergency savings only indirectly. However, the Earned Income Tax Credit (EITC) already functions as an imperfect, makeshift savings tool. This lump sum refund at tax time gives workers a moment of financial slack, but many EITC recipients lack emergency reserves later in the year. By creating a "Rainy Day EITC" component of the existing EITC, policymakers can help low-wage workers build up emergency savings.

Keywords: EITC, emergency savings, financial instability, income volatility

Financial stability depends on emergency savings. Low-wage workers regularly experience large drops in income and unexpected expenses (Farrell and Greig 2015; Hannagan and Morduch 2015; Morduch and Schneider 2013). A household with accessible savings can absorb the impact of these financial shocks (Cramer, King, and Schreur 2015; Gjertson 2014; Holt

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2016; Mills and Amick 2010), but a near majority of Americans lack even modest rainy day savings (Pew Research Center 2015d; Wiedrich et al. 2016). Further, evidence indicates that this short-term financial insecurity has long-term negative consequences, such as health deterioration, adverse early schooling outcomes, and reduced postsecondary educational attainment (Cramer et al. 2009; Holt 2016).

Despite its importance to both short-term financial security and long-term economic opportunity, existing public policies address emergency savings only indirectly. The Earned Income Tax Credit (EITC) program has one of the most significant impacts among low-wage workers, raising labor force participation, health outcomes, and children's educational attainment (for a summary, see Marr et al. 2015). Although it was not created to boost savings, it can function as an imperfect, makeshift savings tool (Greene 2013; Halpern-Meekin et al. 2015). For some EITC-eligible workers, the U.S. Treasury effectively serves as a savings account that is accessible once a year at tax time. The lump sum refund gives workers a rare moment of financial slack, but many EITC recipients nonetheless lack emergency reserves later in the year (Greene 2013; Halpern-Meekin et al. 2015; Romich and Weisner 2000).

To address low-income workers' absence of rainy day savings outside of tax time, this article proposes a "Rainy Day EITC" addition to the existing EITC.[1] This reform would allow taxpayers to defer 20 percent of their EITC for six months and receive a modest savings match for doing so. By taking advantage of the savings moment made possible by the lump sum refund at tax time, the Rainy Day EITC would allow low-wage workers to build emergency savings for use later in the year. The proposal would increase EITC costs by roughly 1.3 percent. The goals of this proposed policy are, primarily, to provide greater liquidity to lower-income families, allowing them to better cope with financial shocks—guarding against the risk of poverty, and, secondarily, to facilitate their pursuit of their expressed savings goals. The intention is to add an option to the set of financial management strategies low-income families deploy to avoid material hardship.

EMERGENCY SAVINGS AND FINANCIAL INSECURITY

A near majority of Americans have little to no money saved for emergencies. Measures of *liquid asset poverty* illustrate the precarious financial state of millions of Americans. Liquid assets include funds held in bank accounts, as well as in quasi-liquid accounts like IRAs. It excludes illiquid assets, such as vehicles and homes. A household is liquid asset poor if it lacks enough accessible savings to remain above the federal poverty line for three months without any income. Given a nationwide liquid asset poverty rate of 44 percent, a lack of liquid savings is an issue for a much larger percentage of the population than income poverty is (Wiedrich et al. 2016).[2] Data on liquid asset poverty reveal that a large percentage of the population is in a precarious financial situation—one unanticipated car repair or job loss away from economic crisis. Because income and consumption volatility is so common among low-wage workers, their lack of emergency savings can be a key driver of their financial insecurity (Chase, Gjertson, and Collins 2011). Household incomes are complex and often vary month to month, causing financial distress even for middle-class households with adequate annual incomes (Hannagan and Morduch 2015; Morduch and Schneider 2013). A 2015 poll found that 60 percent of Americans surveyed had experienced a substantial income drop or unexpected expense in the previous twelve months (Pew Research Center 2015a). Over the past thirty years, the lifetime risk of individuals experiencing poverty has risen, suggesting that the financial volatility families are facing puts them at risk of material hardship (Sandoval, Rank, and Hirschl 2009). Evidence also exists

1. The basic structure of this proposal was described in *It's Not Like I'm Poor* (Halpern-Meekin et al. 2015); a similar proposal was published in the *New York University Law Review* (Greene 2013).

2. Other estimates find even higher rates of this type of short-term financial insecurity (Financial Industry Regulatory Authority 2013; Grinstein-Weiss, Comer et al. 2014; Morduch et al. 2015; Pew Research Center 2015b).

that income volatility is growing, indicating that this problem is expected to only become more pressing (Hacker 2006; Nichols and Zimmerman 2008; Pfeffer, Danziger, and Schoeni 2014; Western et al. 2012).

When more affluent families experience a surprise income drop or expense, they tap into liquid assets or cut back on nonessential consumption. In contrast, when low-wage workers lack liquid savings and experience an economic shock, they cut back on essential expenses or take on debt to make ends meet (Mullainathan and Shafir 2009; Seefeldt 2015). Behavioral science researchers have described this precarious financial situation—little savings and unstable income—as a lack of “financial slack” (Lusardi et al. 2011; Mullainathan and Shafir 2009).

Despite families increasingly taking on consumer debt, consumption volatility has been rising (Dogra and Gorbachev 2016), indicating that they are unable to compensate adequately to smooth out the consequences of their income volatility. These rises in consumption volatility have been most marked for people of color and those with a high school degree or less (Gorbachev 2011). Reasons are sound to expect that volatility in family finances will have negative consequences for children’s well-being because family functioning is likely disrupted (Hill et al. 2013).

In line with this expectation, research has found that, controlling for a wide set of factors, income volatility is predictive of adolescent school disengagement, suspensions, and expulsions (Gennetian et al. 2015). The negative consequences of financial volatility for family and individual well-being are also shown by the fact that negative income shocks are predictive of food insecurity, and especially so for those with liquidity constraints (Leete and Bania 2010). Especially among those with low incomes, holding assets is protective against food insecurity (Chang, Chatterjee, and Kim 2014; Guo 2011). These consequences indicate that families are often not able to adequately cope with volatility given the current set of financial tools available to them, but that holding additional assets could help provide a bulwark against such hardships.

In their interviews with a Boston-area sample of EITC recipients, Sarah Halpern-Meekin and her colleagues found that low-income households relied heavily on earned income to meet their families’ needs: 80 percent of these households’ monthly income comes from wages (2015). This is often from administrative and service industry jobs—for example, an auto shop receptionist, Head Start staffer, fast food worker, office supply salesperson, housekeeper, or nurse assistant. The remaining 20 percent of household income comes from government benefits, help from family members, and child support payments.

Despite their dedication to work, financial uncertainty is the rule for these families. Most report experiencing substantial surprise expenses or income drops over the course of a given year, or even a given month; more than three-quarters describe such a financial shock occurring in the past three years (Tach et al., forthcoming). These financial shocks often have a ripple effect: a broken down car—and the inability to pay for repairs—precipitated a job loss, for example; the implication is that the inability to cope with a small financial problem could raise a very real risk of poverty for a working family. Similarly, in the 2013 Household Financial Survey—a survey of approximately 8,500 TurboTax users, more than 65 percent of respondents report a household member had experienced unemployment, a major car repair, or hospitalization in the six months after receiving their tax refund (Grinstein-Weiss et al. 2015). Further, nationally representative data show that rising income volatility for men appears to be driven by both growing volatility in wages and number of work hours, meaning that families must be prepared to deal with financial instability due to changes in both incomes and expenses (Dynan, Elmendorg, and Sichel 2012).

As a result, there is no average financial month for many families, but rather periods of financial slack punctuated by regular financial shortfalls. When expenses in a given month outweigh available income, families often rely on high-interest credit cards and other forms of debt. As a consequence, debt is almost universal among low-income workers, evident in both national surveys and qualitative interviews (Despard et al. 2015; Halpern-Meekin et

al. 2015; Seefeldt 2015; Weller 2006; Wiedrich et al. 2016).

In the past few decades, consumer debt has grown dramatically, especially among low-wage workers. Of the 115 EITC-recipient families Halpern-Meekin and colleagues interviewed, only five had no debt (2015). The Household Financial Survey found that credit card debt was the highest-interest source of debt among EITC-eligible workers, who held an average of $5,082 in credit card debt (Despard et al. 2015). In addition, many families also owed for missed utility payments, car loans, education loans, medical costs, mortgages, or loans from family and friends (Halpern-Meekin et al. 2015; Seefeldt 2015). Every one of the forty-five low- and moderate-income women Kristin Seefeldt interviewed in the Detroit area between 2006 and 2011, carried debt at some point (2015). Nationally, the average family spends nearly one in five income dollars on debt-related expenses each year (Weller 2006).

Halpern-Meekin and colleagues describe how families also often have delinquent debt, causing both financial and psychological stress, with the pressure of being repeatedly contacted by creditors seeking repayment (2015). Many families report having accrued these debts years earlier when they were young adults, inexperienced with financial products. For one working mother, a $100 debt owed to the bank for an overdraft charge turned into over $700 after years left unpaid. This story is typical—about half of all debt carried by interviewed families is long-term debt that accumulated over the years. In national data, among all individuals with a credit file, more than 30 percent have a mark of a debt going into collections on their credit reports (Ratcliffe et al. 2014). When families lack the wherewithal to address small financial problems in the short term, the problems can turn into major issues over the long term, affecting credit scores and the access to loans, employment, and ability to meet needs that accompany them. Further, Kristin Seefeldt found that many of the low- to moderate-income women she interviewed had delinquent debts that resulted in their wages being garnished (2015). This, in turn, led to problems covering everyday expenses. Seefeldt's respondents are not alone. An estimated one in ten Americans between the ages of thirty-five and forty-four have their wages garnished for debt payment (Arnold and Kiel 2014).

For low-income families, facing the demands of debt repayment is a regular, pressing issue. In interview data, families regularly report relying on low-limit, subprime credit cards with high interest rates to make ends meet, juggling multiple cards, and paying a little here and there to avoid penalties (Halpern-Meekin et al. 2015; Seefeldt 2017; Tach and Greene 2014). Although these cards can work well for building a credit history and covering expenses in a pinch, this approach to gaining liquidity is a double-edged sword. Buying on credit smooths consumption for the moment but can entail the accumulation of additional debt, and missed credit card payments are disastrous for credit scores. Plus, juggling card payments to cover monthly obligations is not always enough to get by. When families are unable to cover debt payments—a common dilemma evident in both national and interview data—they are forced to prioritize which payments to make and which debts to leave unpaid (Draut and Silva 2003; Halpern-Meekin et al. 2015; Lyons 2003; Seefeldt 2015, 2017; Tach and Greene 2014).

THE ROLE OF TAX TIME IN PROMOTING FINANCIAL SECURITY

For many families, tax time is a unique opportunity to begin paying off debt. Nationally, more than 120 million individuals receive a refund, worth an average of $3,050, each year.[3] The average tax refund for lower-income families (counting the EITC, other credits, and any overwithholding) is $4,686—the equivalent of about 20 percent of annual earned income—in one Boston-area study (Halpern-Meekin et al. 2015). This tax refund provides a much-needed financial boost to families who are typically unable to fully cover expenses every month. Between a quarter and half of tax refund dollars are estimated to go to debt repayment (Despard et al. 2015; Halpern-Meekin et al. 2015). The remainder typically is divided among current expenses such as groceries, rent, and childcare

3. Authors' calculations based on Internal Revenue Service 2016a.

(24 percent of refund dollars), durable goods such as a washing machine or a bed (21 percent), and savings, so often spent down in the months following tax time (17 percent). Approximately one in ten refund dollars is spent on extras, such as a meal at a sit-down restaurant (Halpern-Meekin et al. 2015).

The EITC is described as an income subsidy, but it often functions as a type of savings tool. During the year, families aspire to save, but the pressures on their budgets from regular income and consumption volatility often leave them coming up short (Halpern-Meekin et al. 2015), and so they hope that tax time will bring an essential boost. Notably, families are not just passive recipients of the refund. Although their knowledge of tax code is often fuzzy, parents can be deliberate in how they file their taxes (Tach and Halpern-Meekin 2014). For example, many opt to withhold extra income tax from each paycheck to guard against the risk of owing taxes and to boost their future tax refund (Tach and Halpern-Meekin 2014; see also Barr and Dokko 2006).

This strategy of increasing paycheck withholdings will lead to a larger tax refund, but it also directly reduces income in the months before tax time. Some evidence indicates that the lump sum structure of the EITC is associated with greater debt accumulation over the course of the year, with tax filers smoothing consumption by taking on debt earlier in the year, and paying off the debt at tax time (Jones and Michelmore 2016). Smoothing consumption via taking on debt can carry risks, such as the need to cover interest payments and the hit to credit scores if these debts are not repaid in full and on time.

In short, tax filers are using the EITC's lump sum structure to build savings, address debt, or both. This indicates that EITC recipients are already treating tax time as part of their financial toolkit, which provides support for our proposal to offer further tools to families at tax time.

EVALUATIONS OF TAX-TIME SAVINGS PROGRAMS

The lump sum tax refund is often the largest single payment a low-income household receives in a given year. The average 2014 EITC was more than $2,400, and the total tax refund—which can include the refundable portion of the Child Tax Credit and the return of any overwithholding—is often even higher (Internal Revenue Service 2016b). Two recent randomized control trials explore the possibility of using the tax system to promote emergency savings: SaveUSA and Refund2Savings. Evaluations of each of these innovations find modest but statistically significant and positive impacts on low-wage workers in terms of savings rates and amount of liquid savings.

The SaveUSA pilot was launched in 2008 in New York as $aveNYC and expanded as SaveUSA to several cities between 2011 and 2013. The program partnered with Volunteer Income Tax Assistance sites, at which low-income filers can have their taxes prepared for free, to boost emergency savings. Tax filers at these sites were given the option to participate in the program, which supported savings accumulation. In two sites, New York City and Tulsa, participants who were interested in participating in the tax-time savings program were randomly assigned to either the SaveUSA or control group. SaveUSA group members were required to open a SaveUSA savings account, and nearly 100 percent did so. These group members pledged to save at least $200 of their tax refund into their SaveUSA account, and they were also asked to retain a portion of their deposit until the following year. Those who fulfilled the pledges received a 50 percent savings match of up to $500. Control group members did not have access to a SaveUSA account but were free to save their tax refund in other accounts (Azurdia and Freedman 2016).

Participants in the SaveUSA group were significantly more likely to save and to save more than tax filers in the control group who were not offered access to the SaveUSA account. At the forty-two-month follow-up, individuals in the treatment group with short-term savings in any account increased roughly 8 percentage points over the savings rate in the control group; the average total savings was $522 (30 percent) higher in the treatment group. The evaluation found positive effects on some aspects of financial security, such as level of emergency savings, but it found no effects on debt holdings, material hardship (such as food in-

security), or other indicators of financial security. Some analysts argue that these results support the pursuit of increased tax-time savings options (Black and Cramer 2011).

Refund2Savings (R2S) is the largest savings experiment conducted in the United States, with a sample of about nine hundred thousand tax filers (Grinstein-Weiss, Comer, et al. 2014; Key et al. 2015). Researchers partnered with Intuit to use TurboTax to overcome the "psychological, behavioral and institutional barriers that limit the accumulation of savings" (Grinstein-Weiss et al. 2015, 11). The intervention was low-cost and low-touch. Low-income TurboTax users were randomly assigned to a control group with no intervention or a treatment group, which was nudged to split their tax refunds so that at least a portion was directed into a savings account. The experiment tested the impact of various defaults and messages on savings behavior.

The R2S intervention significantly increased the rate of savings, the amount of savings, the rate of splitting refunds between accounts, and the amount of tax refund savings held for at least six months when compared with the control group. Though statistically significant, the effect sizes were modest. In the highest impact iteration, those depositing their refund into a savings vehicle increased by two percentage points (8 percent in the control made a deposit versus about 10 percent in the treatment group). The intervention nearly doubled the rate of splitting refunds into savings for those in the treatment group, but this represents an increase from 1.3 percent to 2.5 percent. Average savings were higher in the treatment group as well ($224 versus $197); among those who chose to save, the difference was larger between the control and treatment groups ($387 versus $695). The likelihood of retaining some savings six months later was 5 percentage points higher in the treatment group (25 percent versus 30 percent).

In short, evaluations of past tax-time savings programs have found that low-income tax filers are more likely to choose to save at tax time with incentives and nudges, though the impact from these programs has been modest and the data are not nationally representative. Two reasons may explain these modest impacts. First, in the case of the SaveUSA experiment, both the treatment and control groups were composed of tax filers who had indicated interest in the SaveUSA tax-time savings program. The measured impact of the SaveUSA program therefore represents the difference between offering tax filers who intend to save the option of a matched savings SaveUSA account and offering them more traditional savings options. SaveUSA did not measure the impact of offering matched savings accounts to a broader population. Second, in the case of R2S, although the program targeted a broader population, the intervention was limited to low-touch, behavioral nudges, with no additional incentive to participate in the program. R2S demonstrated that simply offering savings options to a general population of low- and moderate-income tax filers can increase the number of people who are saving and the total amount of savings. A program targeted to a broader population, like R2S, that provides a matched savings account, like SaveUSA, may achieve a positive impact at a greater scale than seen in either experiment separately. Such a program would combine a financial incentive similar to SaveUSA's while encouraging participation among a broad group of tax filers.

THE RAINY DAY EITC PROPOSAL

Federal policymakers and researchers have proposed several tax-based policies to address budget volatility and the lack of emergency savings among low-wage workers. In general, these proposals pursue one of three strategies: rewarding workers with a credit *after* they have developed emergency savings; allowing workers to access a portion of their expected future tax refund early; or encouraging workers to defer a portion of their refund in order to build emergency savings (Holt 2015). However, these strategies have potential limitations.

First, for the cash-strapped, deferring resources to savings—especially when done via set-asides from paychecks—can mean that present expenses are unmet, thereby accumulating debt or incurring material hardship. Therefore, facilitating the development of emergency savings during times of financial slack is essential. Second, asking low-wage workers to bank on a future tax refund by ne-

cessity requires that either they or the government take on some risk; if the amount they receive as an advance exceeds their actual refund, either they must make up the difference or the government must take the loss. Among other reasons, this is why the Advanced EITC was not widely used and the policy ended (Holt 2009, 2015; U.S. Government Accountability Office 2007). Finally, the tax system feels opaque to many, including low-income filers (Tach and Halpern-Meekin 2014); therefore, the easier and more straightforward it is to pursue savings goals, the more likely they should be able to act on them. Our proposed Rainy Day EITC policy follows this third approach and seeks to make the process of choosing to build emergency savings at tax time simple.

Structure of the Rainy Day EITC

The proposed reform builds on the existing EITC structure, providing an option for families to defer a portion of their EITC for use later in the year. We describe the key features of the Rainy Day EITC as well as the reasoning behind these key features.

Opt-In

Workers will be able to opt into the program on their tax returns. Although an automatic, opt-out program would likely achieve higher take-up rates, take-up is not the only determinant of a successful program. Deferring a portion of the EITC may not be the optimal financial strategy for some tax filers, such as those who depend on their tax refunds to pay past due bills or reduce costly debt (Despard et al. 2015). In addition, an opt-in approach is less paternalistic because it does not assume that saving via this government-provided mechanism is the best choice for tax filers. For these reasons, providing the option to defer, rather than making it a default, was preferable, even at the expense of take-up. To increase the take-up rate, policymakers should invest in adequate education and outreach about the Rainy Day EITC to tax preparers, taxpayers, and tax software companies.

Standardized Deferral Percentage

Those who opt in would receive 80 percent of their EITC at tax time and save 20 percent of their EITC as a deferred payment. We considered but rejected two alternatives: allowing multiple pre-set deferred amounts or allowing taxpayers to choose their own deferred amount. These options would increase program flexibility, but they would also increase both administrative complexity and difficulty in explaining the program to potential participants. Because policy success is contingent on the buy-in of relevant administrative entities, such considerations are essential (see, for example, Kettl 2006; McLaughlin 1987), especially given that the Internal Revenue Service (IRS) is already stretched in its capacities (National Taxpayer Advocate 2013, 2014; GAO 2014).

We arrived at the 20 percent deferral because we wanted to maintain a substantial lump sum refund, given that recipients express a desire for this feature (Barr and Dokko 2006; Halpern-Meekin et al. 2015). Further, as we explain, this would put many families within reach of covering the median expense shock—$1,000—faced by low-income households (Pew Research Center 2015c), and, for most, this would easily replace the cost of the average size payday loan (just under $400; Pew Research Center 2012).

Fifty Percent Savings Match

For every EITC dollar deferred, the taxpayer would receive fifty cents in additional benefits when the Rainy Day payment was received later in the year. The 50 percent match is in line with SaveUSA's incentive, and evidence shows that using larger savings match rates to increase participation has diminishing returns (Duflo et al. 2005). This is also an attempt to balance the desire to provide a savings incentive against the necessity of limiting program costs. Further, the savings match puts additional dollars in the pockets of low-income families, providing additional protection against material hardship.

Single Lump Sum Deferred Payment

Households will receive the remaining 20 percent of their EITC plus their 50 percent savings match as a single payment six months after the tax return is filed. To avoid predatory practices by for-profit tax preparers or other organizations, policymakers should enact regulations ensuring that actors charging high fees to front

the deferred payment early do not victimize low-income tax filers. Even in the absence of a Rainy Day EITC program, such predatory tax-preparer practices are common, such as in the form of "Refund Anticipation Loans" and, more recently, "Refund Anticipation Checks" (Rothstein and Black 2015). The proposal also addresses this concern by providing an "escape hatch" to allow families to access their deferred money early, with no penalties.

We considered but rejected two alternatives: providing the Rainy Day payment in monthly installments, and spreading it across a more limited number of periodic payments (for example, quarterly). Given the existing volatility of low-income household budgets, we expected that monthly payments would be so small as to not cover many of the financial shocks families experience. The option of periodic payments was rejected in the interest of administrative simplicity. Similarly, the six-month deferral period was deemed the simplest way to split the two EITC payments over time. With most EITC recipients filing their taxes in February (Goodman-Bacon and McGranahan 2008), the Rainy Day portion of the EITC will therefore be disbursed in August, just as parents are paying for back-to-school expenses.

Delivery Via Direct Deposit

The Rainy Day payment will be deposited into the same account used for the initial direct deposit of the filer's tax refund. Roughly 90 percent of EITC recipients receive their refund through direct deposit transfers (Perantie, Oliphant, and Grinstein-Weiss 2016). Using tax filers' existing method for receiving their tax refund transfer is the simplest way to disburse the new deferred payment. To further increase both take-up and bank account ownership, the Rainy Day EITC could be coupled with an option to open an eligible account, such as a Treasury-run prepaid card, directly on the tax form at tax time.

In some cases, the Rainy Day program participant's direct deposit account will become inactive before receiving the Rainy Day payment. Administrators can address this issue using existing processes for handling direct deposit accounts made inactive between filing a tax return and receiving a refund; this could include sending a paper check to the tax filer if a direct deposit fails.

Escape Hatch

Participants who opt in at tax time but require their funds before the Rainy Day EITC payment later in the year could choose to receive their deferred amount early, but they would forgo some or all of the 50 percent match if they did so.[4] Given budget volatility, Rainy Day EITC participants must have the option of accessing their deferred refund early if emergency needs arise. This feature should also increase take-up because participants will know they can still access their EITC dollars in the event of an emergency.

Benefits of the Rainy Day EITC

As discussed, low-wage workers often experience volatile income and expenses, causing financial stress and material hardship. Without emergency savings to cover financial shocks, these workers regularly build up costly debt over the course of the year. This financial cycle is expensive, making it difficult for low-wage workers to move beyond living paycheck to paycheck (Gjertson 2014). Breaking out of this cycle, therefore, offers possibilities for the comforts of firmer financial footing and upward mobility.

Currently, no federal program aims at boosting emergency savings. For some families, the EITC functions as a makeshift savings tool but an imperfect one. Families use much of their tax refund to pay off debt, invest in long-term assets, and build savings (Despard et al. 2015). But within a few months of receiving the refund, most have exhausted much of the emergency savings they built up at tax time (Halpern-Meekin et al. 2015). The following months see a familiar pattern of unexpected expenses or income shocks, ballooning debt and missed bill payments. These workers need support to

4. To avoid creating a benefit cliff, policymakers may want to ensure that the amount of match forfeited is proportional to the amount of time it has been deferred. For instance, if a filer opts out of the program three months after tax time—halfway through the six-month deferral—she would receive half of the full match amount.

maintain a financial cushion beyond tax time; such a cushion is essential as part of a safety net to protect working families from being economically crippled by a financial shock.

The Rainy Day EITC would take advantage of the tax time moment. Low-income taxpayers view tax time as an opportunity to create a more secure future (Halpern-Meekin et al. 2015; Tufano, Schneider, and Beverly 2008). The program is targeted at the optimal period for this sort of financial decision making, when scarcity has just been relieved (Mullainathan and Shafir 2013). The Rainy Day EITC takes advantage of this moment by giving households a tool to hedge against future expenses and income fluctuations. It is most likely to have poverty alleviation functions for lower-earning filers among the EITC-recipient population, because their larger EITC benefits mean they will be able to set aside a larger dollar amount (plus a 50 percent match) than their higher-income counterparts in the phase-out section of the EITC benefit structure.[5]

For those who opt in to the program, the Rainy Day EITC guarantees that they will have some emergency savings that lasts beyond their initial tax refund. Using the average EITC as a base, the deferred portion would be $480; adding the 50 percent match means that the amount would grow to $720 in a Rainy Day EITC six months after tax time. Given that nearly half of Americans report that they would not have enough liquid savings to cover a $400 emergency expense (Larrimore, Dodini, and Thomas 2016), this Rainy Day payment represents a sizable emergency fund that could be used to make ends meet. As described, this amount could more than replace the size of the average payday loan and covers nearly three-quarters of the median expense shock that low-income families face.

Current private market solutions to the problem of inadequate emergency savings tend to come in the form of payday loans and similar financial products. They do offer a way to combat food insecurity (Fitzpatrick and Coleman-Jensen 2014), but they cost lower-income Americans billions of dollars annually (Standaert and Davis 2016). Although some workers may avoid relying on these predatory financial products by splitting their tax refunds themselves or building emergency savings without new tax-time interventions, the ongoing use of these products indicates an existing need. Because the introduction of regulations limiting the availability of payday loans may increase food insecurity, such regulations could be paired with other avenues to liquidity—such as the Rainy Day EITC—for low-income families (Fitzpatrick and Coleman-Jensen 2014). By buoying low-income workers' financial security, the Rainy Day program could help them avoid predatory lending products. In short, to the extent that government has an interest in reducing the negative externalities associated with budget volatility and the use of predatory financial products, it should consider using tax time to boost emergency savings.

DEMAND FOR RAINY DAY EITC AND ESTIMATED COST

Estimates of the Rainy Day EITC program cost depend on take-up rates. Workers who do not opt into the program would receive no savings match and so would not contribute to the cost of the proposed program expansion. A generous rough estimate of the initial cost, based on reasonable administrative costs and with a take-up rate based on the SaveUSA program, would be roughly 1.3 percent of the current cost of the EITC. We arrived at this estimate using the upper end take-up rate of the SaveUSA program, 13 percent.[6] We assumed that the typical

5. A single parent with two children earning $18,000 would receive an EITC worth $5,572 (in 2016); this would mean $4,458 received at tax time and $1,114 deferred for six months, with a $557 match. The family would be below the poverty line before EITC receipt. With the EITC and match, the family would then be at 118 percent of the federal poverty line. In contrast, a single parent with two children earning $36,000 would receive an EITC worth $1,816 ($1,453 received at tax time and $363 received six months later, plus a $182 match); her EITC receipt would not affect this higher-earning parent's poverty status, though it would influence her family's material well-being.

6. The take-up rates in the four SaveUSA experiment cities ranged from 6 to 13 percent.

Rainy Day EITC participant would have an average-sized EITC. For each participant, the cost of the program would be 10 percent of the cost of their EITC benefit—50 percent of the 20 percent of the EITC deferred. We further assumed administrative costs equal to 1 percent of Rainy Day EITC expenditures, comparable to administrative costs of the current EITC (Internal Revenue Service 2008). In 2015, given an EITC expenditure of $66.7 billion, a Rainy Day EITC in that year would have cost roughly $867 million (1.3 percent of EITC benefit expenditures).[7]

However, the take-up rate for the Rainy Day EITC may be higher than other tax-time savings programs targeted at low-income workers in the past. A survey of 2,675 EITC-eligible tax filers found that the overwhelming majority (82 percent) said they would choose to participate in a program with the Rainy Day EITC's features were it available (Perantie, Oliphant, and Grinstein-Weiss 2016). If this level of interest corresponds to a similar level of participation, it would represent a more than five-fold increase in participation rate over the SaveUSA program. At this high level of participation, the Rainy Day EITC in 2015 would have increased EITC expenditures by roughly 8.2 percent over 2014 expenditures. Although substantially larger than the 1.3 percent estimate described, such an increase in EITC expenditures would not be historically extraordinary. Between 1985 and 2011, there were fourteen instances of year-on-year increases in EITC expenditures in excess of 8 percent (Tax Policy Center 2014).

DISCUSSION AND ALTERNATIVES

The Rainy Day EITC proposal is designed to address a specific liquidity problem: millions of lower-income tax filers receive a substantial refund payment early in the year but find themselves without emergency savings later in the year. The proposal addresses this problem by creating a short-term, subsidized savings tool that will be appropriate for some, but not all, of these tax filers. The Rainy Day EITC is not the only potential solution to this problem. We considered several alternatives or amendments, along with practical and political concerns for each. This type of policy tool cannot erase the occurrence of many of the underlying forces that create financial shocks in the lives of low-income families, like the need for car repairs, a divorce, or the loss of wages; rather, the Rainy Day EITC seeks to offer a way of dealing with these shocks when they occur. In this section, we consider three alternatives and amendments to the proposed Rainy Day EITC: increasing the base EITC and converting the Rainy Day EITC to an opt-out enrollment system; expanding eligibility for the program to tax filers who are not eligible for the EITC; and expanding the scope of the program to support medium- and long-term savings.

Alternative 1: Increase the Base EITC and Make the Rainy Day EITC Opt-Out

One potential alternative to the proposal would be to convert the program from opt-in to opt-out enrollment while increasing the size of the base EITC by 10 percent. Such a program would hold harmless all existing EITC participants by preserving their existing benefit levels (and then providing higher benefits in the form of a match for those who do not opt out); we would expect this to increase Rainy Day EITC participation.

For example, an EITC recipient who would have received a $2,000 EITC before the new program was implemented would have two choices under the new regime. She could choose to opt out of the program and receive $2,200 at tax time, a 10 percent increase. Or, she could take no action, be automatically enrolled in the deferral program, receive $2,000 at tax time, and receive a $300 Rainy Day payment six months after filing.

Such a program would have two benefits and a downside. Using an opt-out enrollment system, the program would presumably result in a higher take-up rate than an equally generous opt-in program. Furthermore, by increasing the size of the baseline EITC, no participants would see a reduction in their tax-time refund payment relative to prior years. However, the opt-out enrollment system would be more pater-

7. This amount would be lower, depending on the use of the escape hatch among those who opt in but then withdraw their Rainy Day EITC early, forfeiting some or all of the match money.

nalistic than the opt-in model. Rather than providing an optional tool that low-income workers could use if attractive, an opt-out model presumes that EITC-eligible workers are best served by deferring a portion of their tax refund. Nonetheless, this approach does overcome the need for tax preparers and tax filers to have a strong understanding of the program necessary to choose to participate under an opt-in system.

Because of its higher take-up and the increase in the size of the baseline EITC, the program would be significantly more expensive. Increasing the size of the EITC by 10 percent would have amounted to $6.56 billion in 2015. Assuming an increased participation rate of between 20 and 90 percent as a result of the opt-out enrollment, the entire reform would cost between $8 billion and $13.05 billion—an increase over existing EITC expenditures of between 12.2 and 20 percent.

Alternative 2: Expand the Rainy Day EITC to All Filers

Another alternative structure for the program would be to expand access to all tax filers, rather than limiting the program only to EITC-eligible tax filers. In 2016, across the general tax filer population, approximately 73 percent of tax filers received a refund, worth an average of $2,860 (Internal Revenue Service 2016c). Such a program would have several benefits and at least one downside depending on how it was structured.

An expanded Rainy Day program would benefit low-income workers who are ineligible for the EITC, as well as moderate-income workers who could still benefit from assistance in building emergency savings. An expanded Rainy Day program would also be simpler to administer, eliminating the need for the IRS to distinguish between the EITC and non-EITC portions of participants' refund, while also simplifying the experience of participants. Finally, a universal approach would avoid the possibility of creating stigma for participants by ensuring all tax filers, regardless of income, can participate. In part for these reasons, Senators Cory Booker (D-NJ) and Jerry Moran (R-KS) introduced the Refund to Rainy Day Savings Act in 2016, legislation modeled on the Rainy Day EITC concept, but expanded to allow all tax refund recipients to participate.

There are two main concerns with expanding the Rainy Day program in this way: distribution and cost. The extent of the concerns depends on the granular structure of the program. If, for instance, a 50 percent savings match were made available to all refund recipients, we would expect the new program to be highly regressive, given that higher-income households are more likely to save (because they are less likely to have pressing current needs) and more likely to have large tax refunds. Likewise, expanding the program to all tax filers would multiply its cost.

However, both concerns could be addressed with relatively simple structural tweaks to the program. For instance, by limiting the 50 percent match to EITC-eligible or other low-income households, policymakers could reduce program costs and ensure financial support remains targeted to lower-income tax filers while still offering the program's structure to all. Under such a program, higher-income tax filers could participate, but would simply receive interest on their savings rather than a government-subsidized match.

Alternative 3: Support Longer-Term Savings and Asset-Building

As designed, the proposal focuses on short-term savings; it includes no options to maintain that savings over the longer term or to direct the withdrawn savings to an account other than the standard direct deposit account. However, policymakers may wish to expand the scope of the program to support long-term savings and asset development, such as higher education and homeownership. An amendment to the Rainy Day EITC could allow participants to maintain their deferred funds in a Treasury-held account on an ongoing basis instead of having those funds deposited in their direct deposit account. Alternatively, policymakers could allow direct deposits into longer-term savings accounts, such as tax-preferred higher education or retirement accounts.

Expanding the Rainy Day EITC to support such long-term savings would not be a simple tweak to the proposal. Such an amendment would convert a relatively simple program fo-

cused squarely on a liquidity problem, to a much more complicated program designed to address both liquidity and long-term asset development. In addition to increasing the complexity of administration, potential participants may have difficulty understanding the purpose of the program, which could reduce the take-up rate.

CONCLUSION

Financial insecurity is a fact of life for low-wage workers (Wiedrich et al. 2016). Millions of working Americans have trouble developing any kind of personal emergency savings fund, so they often manage the irregularity of their financial lives by taking on costly debt (Draut and Silva 2003; Weller 2006). As an escape from this perpetual financial insecurity, many workers rely on the tax system to function as a savings account of sorts—relying on their tax refund to deliver some financial cushion once a year (Halpern-Meekin et al. 2015; Tufano, Schneider, and Beverly 2008). This approach is not without its downsides, however. Financial volatility and a lack of liquidity raises families' risk of food insecurity and negative child outcomes, among other measures of well-being (Chang, Chatterjee, and Kim 2014; Gennetian et al. 2015; Guo 2011; Hill et al. 2013; Kainz et al. 2012).

The Rainy Day EITC can help some workers better maintain financial security throughout the year. The benefits of these lump sum tax refund payments are well documented (for a summary, see Marr et al. 2015), but the EITC was not designed to function as a savings program. A Rainy Day EITC option would change this, allowing workers to develop a personal emergency savings account for use later in the year. This proposal is a relatively modest expansion of the EITC, increasing current EITC expenditures by only about 1.3 percent.

A version of the Rainy Day EITC was introduced as bipartisan legislation: Senators Cory Booker and Jerry Moran introduced the Refund to Rainy Savings Act in 2016. The legislation would allow all tax filers, not just EITC recipients, to defer a portion of their tax refund for six months, and the deferred amount would accrue interest. Low-income tax filers would be eligible to participate in a new pilot program that would provide savings matches for these deferrals. The legislation would also reengineer the federal Assets for Independence matched savings program to invest in local, matched, tax time savings innovations.

The Rainy Day EITC, either as proposed in this article or as introduced in the proposed pilot form, is not a silver bullet. Without further reform of the EITC, childless workers will benefit little because they are often ineligible for the EITC and therefore receive smaller, if any, tax refunds. In addition, even for those with dependent children, this tool will be of little use to those with earnings too low to qualify them for a substantial EITC. Further, many low-income workers will need immediate access to their full tax refund and so will decline to defer a portion of their tax refund. But for those low-wage workers who regularly find themselves flush with resources at tax time and scraping to get by later in the year, the Rainy Day EITC could help them take more control of their financial lives. A tool of this type, rooted in research and provided at a modest cost, could expand economic well-being for millions of working Americans. Financial volatility is common, especially among low-income families, and it has negative consequences, including increased material hardship and poorer outcomes for children, thereby risking the future of the next generation. By providing liquidity, the Rainy Day EITC offers an additional way for families to cope with the volatility they face, putting them on stronger financial footing.

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