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FinTech Alternatives to Short-Term Small-Dollar Credit: Helping Low-Income Working Families Escape the High-Cost Lending Trap

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May 2017

M-RCBG Associate Working Paper Series | No. 75

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FinTech Alternatives to Short-Term Small-Dollar Credit-- Helping Low-Income Working Families Escape the High-Cost Lending Trap

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Abstract

The focus of this paper is the most promising alternative to the current short-term, small-dollar credit (“STSDC”) system serving low-income working families --the rapidly growing U.S. financial technology software –or “FinTech”--industry.

The paper begins by reviewing previous research on the underlying causes of demand for STSDC--payday loans, auto title loans, bank overdraft protection and similar financial products--by low-income working families. The author discusses evidence that rising levels of monthly income volatility are creating a new set of liquidity management problems for families, and documents the adverse impact that reliance on STSDC for liquidity support has on working families, their communities, their employers and the economy as a whole.

The paper then describes regulatory interventions in this area and concludes that, despite considerable effort and some local success, none have materially curbed the expansion—or the adverse effects-- of STSDC products nationally. The author discusses why banks are not likely to play a significant role in the STSDC market and argues that, in the anti-regulatory political environment following the 2016 election, private sector FinTech alternatives now offer the best opportunity to help low-income working Americans manage their day-to-day finances without resorting to STSDC.

The next section of the paper is an assessment of the potential for FinTech companies and products to provide a superior alternative to the current STSDC system. Using a variety of methods, the author identified relevant FinTech companies and classified them into six distinct categories. Then author contacted 50 identified companies and conducted interviews with senior management of 30 of these companies (several others were included in the study without interviews based on the prior knowledge of the author.) Based on these interviews and additional research, the author assessed individual FinTech companies and the identified categories of companies for “Utility” (defined as the ability of the products offered by a company to either provide a superior substitute for current STSDC products or an effective mechanism for consumers to avoid the use of credit products) and “Scalability” (defined as the potential for a company’s business model to support rapid penetration of the low-income working family market to serve a significant portion of low-income working families.) Using the assessments, the author distilled a detailed set of key observations about the strengths, weaknesses and challenges facing each of the FinTech categories, including the likely evolution of these categories over time.

The assessments show that FinTech companies in all of the categories, with one possibly temporary exception, are today providing products that have greater Utility than STSDC for low-income working families, and thus represent a meaningful improvement over the current STSDC system. One category—Digital Income/Expense Variability Management Solutions--- was assessed as both the most Scalable and the highest Utility category measured in the

study. A second category--Digital Credit Access/Cost Improvement Lenders—was also assessed positively in terms of both Utility and Scalability and should be able to provide significant amounts of alternative credit to low-income working families, subject to a number of important caveats. The other four categories of companies all had strengths in either Utility or Scalability, but would need to evolve further before becoming significant alternatives to STSDC for low-income working families.

The paper concludes that private sector adoption of a set of FinTech-centered alternatives to STSDC has the potential to shift a significant fraction of low-income working families away from reliance on the current STSDC system over time and to materially improve their financial resiliency and health, without the need for government financial support or new laws or regulations. The paper further argues that the employer channel is the best vehicle for disseminating FinTech products to low-income working families because of its potential to reach very large numbers of workers quickly with effective—and sometimes subsidized--liquidity and financial management solutions which also provide financial benefits to employers through reduced employee financial stress, improved employee engagement and satisfaction, lower turnover and lower absenteeism.

Based upon the author's calculations, the use of FinTech products from the studied categories, alone or in combination, would be sufficient to manage a \$700 to \$980 maximum monthly negative variance (combining below average income and above average expense) in consumer income/expense, an amount sufficient in most instances to eliminate the need for a low-income working family to use STSDC. The author's calculations further show that if these FinTech products were to become widely available, they would be able to address the Utility needs of a minimum of 4.7 million and a maximum of 15.6 million full-time workers in low-income working families. Collectively, the author believes that these FinTech products could benefit virtually all of the 10.4 million low-income working families and, indirectly, the 47 million individual members of those families, by reducing or eliminating reliance on STSDC.

The paper proposes a number of concrete steps that private sector and government employers, employee benefit providers, FinTech companies, other financial companies and non-profits can take to accelerate the adoption of superior FinTech alternatives to STSDC by low-income working Americans:

- Employers (private and public) should adopt and subsidize employee financial health benefit plans that include the highest Utility products from FinTech companies.
- Employee benefits intermediaries should support adoption of financial health benefit plans.
- FinTech companies should broaden their offerings to incorporate the product capabilities of other FinTech companies into their own product offering for low-income working Americans.

- **Non FinTech financial companies should adopt FinTech products to help improve their own customers' financial health.**
- **FinTechs and financial sector should resolve data governance Issues**
- **The non-profit sector should advocate for FinTech benefits and data governance and consider subsidizing test cases.**

The paper also sets forth public sector legislative/regulatory actions that could help accelerate adoption of FinTech alternatives to STSDC:

- **Congress should make employer contributions/subsidization with respect to Employee Financial Health Benefit Plans tax deductible.**
- **State regulators should work collaboratively to reduce the burden of 50-state licensing and compliance on FinTech companies.**
- **Federal and state banking regulators, with assistance from Congress as necessary, should make insured banking charters (national and state) available to FinTech companies with business models involving innovative digital deposit taking and other digital banking/lending activities that are (i) consistent with the purposes of banks generally but are (ii) inconsistent with the community banking format of locally-based customers and physical distribution coupled with a traditional mix of bank balance sheet and revenue components.**
- **Regulatory and statutory uncertainty about permitted uses of "alternative data" should be resolved to avoid unnecessarily restricting the provision of high Utility FinTech products to low-income working families.**

Introduction.

“Every poor person must be allowed a fair chance to improve his/her economic condition. This can be easily done by ensuring his/her right to credit.”

—Mohammed Yunus

“Most small-dollar loan borrowers can afford to put no more than 5 percent of their paycheck toward a loan payment and still be able to cover basic expenses...In the 35 states that allow lump-sum payday loans, repayment of these loans requires approximately one third of an average borrower’s paycheck.”

---Pew Charitable Trusts

“Families who lose their home to foreclosure not only forfeit their existing equity, they also lose the opportunity to build savings, since they may be locked out of affordable credit for many years. Students who get loans to finance poor quality education programs find themselves with weak job prospects and heavy debt—debt that usually cannot be discharged in bankruptcy but can be garnished from Social Security benefits. Likewise, in most states creditors of auto and installment loans can seize property and garnish wages for up to 10 years when a borrower defaults on a high-cost loan that was never affordable. Over time, the damage to individuals becomes a community problem as significant spillover effects deplete the wealth of entire neighborhoods and communities.”

—Center for Responsible Lending

“Ultimately, consumers have already rendered their verdict: they believe they benefit from the option of payday loans. So instead of restricting or eliminating payday lending markets through regulation, policymakers should seek to open them up to competition by repealing payday lending bans and regulations. The goal should be to maximize consumer choice and minimize the cost of short-term loan transactions. This will benefit economic growth generally and short-term borrowers in particular.”

---Reason.org

The day-to-day financial lives of low-income working Americans have become more and more precarious as income inequality has grown in the United States. Over the last 30 years, an increasing proportion of income has gone to the top end of the income distribution, and

particularly in the top 1-5%, while the lower end has fallen badly behind.¹ In a profound shift from the pattern of the post-World War II period, the benefits of productivity growth were not shared with labor in the form of wage increases. Stagnant real wages,² the loss of many higher paying manufacturing and clerical jobs to technology and foreign competition,³ the decline of unions,⁴ and real estate price inflation in urban areas⁵ are just a few of the many reasons that have made it challenging for many low-income working people to “make ends meet” on a consistent basis.

Battered by economic forces over which they have little control, many lower-income Americans live on the edge. For the lowest quintile of the U.S. income distribution in 2014, housing absorbed 41% percent (50% for renters) of spending and the next 30% was split between food

¹ *Average family income, by group, 1947–2010 (2011 dollars)* EPI.org [nd] Available at: <http://stateofworkingamerica.org/chart/swa-income-table-2-1-average-family-income/>

Individual wealth has become even more concentrated, with 77.2% of total wealth concentrated in the top 10% and 22% of total wealth concentrated in the top 0.1% as of 2012. Saez, E. and Zucman, G. *Wealth Inequality in the United States Since 1913: Evidence from Capitalized Income Tax Data*. National Bureau of Economic Research. 2014. P. 22. Available from: <http://gabriel-zucman.eu/files/SaezZucman2014.pdf>

² *Employed Full Time: Median usual weekly real earnings: Wage and salary workers: 16 years and over*. FRED® Economic Data: Federal Reserve Board of St. Louis Economic Research. 2016. Available at: <https://fred.stlouisfed.org/series/LES1252881600Q>

There are useful critiques of the data techniques used in standard analysis of wage levels which suggest that real wages may have increased more than suggested and that consumption in the lower end of the income distribution has increased at a higher rate than real wages. See Sacerdote, Bruce. *Fifty Years of Growth in American Consumption, Income and Wages*. National Bureau of Economic Research, 2017 <http://www.nber.org/papers/w23292.pdf>

³ Cocco, Federica, *Most US Manufacturing Jobs Lost to Technology, Not Trade*, Financial Times, December 2, 2016 <https://www.ft.com/content/dec677c0-b7e6-11e6-ba85-95d1533d9a62>

⁴ Dunn, M. and Walker, J., *Union Membership In The United States*. U.S. Bureau of Labor Statistics: Spotlight on Labor Statistics. P. 2. 2016. Available at: <https://www.bls.gov/spotlight/2016/union-membership-in-the-united-states/pdf/union-membership-in-the-united-states.pdf>

⁵ Florida, Richard. “The Incredible Rise of Urban Real Estate.” *The Atlantic: Citylab*. 2016. Available at: <http://www.citylab.com/housing/2016/02/rise-of-urban-real-estate/470748/>

and transportation, with healthcare around 7% and clothing adding another 2%, leaving only a small margin for personal insurance, pensions, education, discretionary expenses and emergency expenses such as car repairs, unexpected healthcare costs, etc.⁶ Fully 36% of households in the lowest income quintile and 29% of households in the second quintile in 2011 said that they had trouble paying the rent, buying food, paying for child care or otherwise making ends meet at least once in the last year.⁷ When the balance between income and expenses is so tight, even the smallest change in monthly income or expenses can trigger a crisis.

And crises are becoming the norm for low-income working families. As we highlight below, a newly recognized factor--the rising volatility in Americans' monthly incomes due to irregular work schedules, bonus plans and temporary bouts of unemployment--is triggering unprecedented financial management problems for people who already living on the edge. Today's low-income working families experience more than a 10% increase or decrease in income in half the months of the year⁸ along with large (25%+/-) variances in monthly expenses.⁹ This level of volatility makes the task of managing family finances becomes nearly impossible without external liquidity assistance. Those working families who fail to find a way to fill the liquidity gap when income and expenses gyrate can find themselves excluded from access to housing, jobs, bank accounts, critical utilities and participation in the credit economy.

One of the consequences of flat real incomes, increased income volatility and regular expense volatility at the lower-end of the income distribution is severe personal financial stress.

⁶ Schanzenbach, D.W., Nunn, R., Bauer, L. *et. al.* *Where Does All the Money Go: Shifts in Household Spending Over the Past 30 Years*. The Hamilton Project. [Brookings Institute] [nd] [table 1] Available at: https://www.brookings.edu/wp-content/uploads/2016/08/where_does_all_the_money_go.pdf

⁷ Siebens, Julie. *Extended Measures of Well-Being: Living Conditions in the United States: 2011*. US Census Bureau: Household Economic Studies. 2013. [figure 4] Available at: <https://www.census.gov/prod/2013pubs/p70-136.pdf>

⁸ Consumer and Community Development Research Section of the Federal Reserve Board's Division of Consumer and Community Affairs. *Report on the Economic Well-Being of U.S. Households in 2015*. Board of Governors of the Federal Reserve. 2016. P. 18. Available at: <https://www.federalreserve.gov/2015-report-economic-well-being-us-households-201605.pdf>

⁹ Farrell, D. and Greig, F. *Weathering Volatility: Big Data on the Financial Ups and Downs of U.S. Individuals*. JPMorgan Chase Institute. 2015. p. 3. Available at: <https://www.jpmorganchase.com/corporate/institute/document/54918-jpmc-institute-report-2015-aw5.pdf>

Research demonstrates that financial stress does real damage by shortening lives, worsening health¹⁰ and impairing decision-making—especially financial decision-making—among stressed people.¹¹ And financial stress is not just a problem for individuals and families-- it affects employers' bottom line too, as distracted and anxious employees have higher rates of turnover, absenteeism and generally perform worse on the job.¹²

The financial services industry has responded to the financial insecurity of low-income families by creating new forms of high-cost, short-term, small-dollar credit (“STSDC”) products that provide quick and easy liquidity injections for cash-strapped borrowers. These products, which include payday loans, auto title loans, bank overdraft protection and the like—have become a “de facto” liquidity support system for families dealing with the consequences of income disparity and volatility. They are easily accessible to consumers in lower-income neighborhoods lacking many other types of financial services. As we discuss in more detail below, these STSDC product (which are with one major exception provided by non-bank lenders) are expensive, poorly designed and demonstrably damaging to the lives of many of the consumers who use them. While these products clearly satisfy urgent short-term consumer needs, the negative

¹⁰ “How financial stress can harm your health.” *Foxnews.com*. 2/4/15. Available at: <http://www.foxnews.com/health/2015/02/04/how-financial-stress-can-harm-your-health.html>

¹¹ Maron, Dina Fine. “Poor Choices: Financial Worries Can Impair One’s Ability to Make Sound Decisions.” *Scientific American*. 8/29/13. Available at: <https://www.scientificamerican.com/article/poor-choices-financial/>

Ariely, Dan. “Poverty makes financial decisions harder. Behavioral economics can help.” *PBS Newshour*. 1/20/16. Available at: <http://www.pbs.org/newshour/making-sense/poverty-makes-financial-decisions-harder-behavioral-economics-can-help/>

Thompson, Derek. “Your Brain on Poverty: Why Poor People Seem to Make Bad Decisions.” *The Atlantic*. 11/22/13. Available at: <https://www.theatlantic.com/business/archive/2013/11/your-brain-on-poverty-why-poor-people-seem-to-make-bad-decisions/281780/>

¹²Robertson, Linda. *Moving the Needle: Raising Your Employees Financial Well-being to Lower their Financial Stress*. 34th Annual ISCEBS Employees Benefit Symposium. [nd] Available at: https://www.ifebp.org/pdf/MediaSiteAssets/Symposium%20HO/15_Symp/14B_Moving_the_Needle_Raising_Your_Employees_Financial_Wellbeing_to_Lower_Their_Financial_Stress.pdf#search=financial%20stress

Brune, Katherine W. *Single Employer Case Study: Suntrust Bank*. International Foundation of Employment Benefit Plans. [nd] Available at: https://www.ifebp.org/pdf/MediaSiteAssets/NEBD/Brune_NEBD16.pdf#search=financial%20stress

individual, social and economic costs of this type of high-cost liquidity support are well-documented. There is little or no reason to believe that regular use of STSDC supports long-term positive change in the lives of financially stressed consumers or leads to sustainable economic growth.¹³

The growth in STSDC usage and the severe recession that followed the 2008 financial crisis brought increasing government and regulatory attention to the negative effects of STSDC on low-income families.¹⁴ This resulted in attempts by state and federal authorities to regulate some STSDC practices, culminating in the STSDC regulations proposed by the U.S. Consumer Financial Protection Bureau (CFPB) in 2016. Whatever one's view of the wisdom or efficacy of

¹³ The reasons for the emergence of these new types of STSDC products are complex and beyond the scope of this paper. However, it is worth noting at least one of the key reasons—the rise of automated credit scoring, which replaced older underwriting methods used to lend to low-income consumers with a numerical score reflecting historical credit usage and payment history. Credit scoring allowed significantly higher levels of credit risk differentiation among borrowers, which in turn led to a much greater range of risk-based interest rates that could be charged for loans. Credit scores also left many potential borrowers—those with poor or no credit scores—unable to borrow from traditional banks and finance companies. STSDC products, which do not require a credit score, were a natural outgrowth of this development.

¹⁴ During that period the U.S. federal government also sought to address underlying economic pressures on low-income families through the Affordable Care Act, increased Medicaid eligibility, increased low-income tax credits, extended unemployment benefits and minimum wage and overtime reform. Goldfarb, Zachary A., “Obama to raise minimum wage for government contract workers.” *The Washington Post*. 1/28/14. Available at: https://www.washingtonpost.com/politics/obama-to-raise-minimum-wage-for-government-contract-workers/2014/01/27/f7994b34-87cd-11e3-916e-e01534b1e132_story.html?utm_term=.b7cf1fa39a31

Holan, Angie Drobic. “A credit for workers cuts taxes for middle class.” *Politifact*. 9/18/08. Available at: <http://www.politifact.com/truth-o-meter/statements/2008/sep/18/barack-obama/a-credit-for-workers-cuts-taxes-for-middle-class/>

Onink, Troy. “You Can Get \$10,000 Per Child In College Tax Credits, Thanks To The Fiscal Cliff Deal.” *Forbes.com*. 1/16/13. Available at: <https://www.forbes.com/sites/troyonink/2013/01/16/american-opportunity-tax-credit-pay-for-college-and-pay-less-tax/#1a2395eb1a23>

Dovere, Edward-Isaac and Levine, Marianne. “Obama overtime rule could raise wages for 5 million.” *Politico*. 6/29/15. Available at: <http://www.politico.com/story/2015/06/obama-overtime-rule-wage-raise-119566>

these regulatory efforts, they reflected a political/societal view that the STSDC system was doing harm to many users and needed to be changed.

That political/societal view has now changed. The 2016 U.S. election marked the almost certain end of additional efforts to address the negative impacts of STSDC on low-income working families for the foreseeable future, at least at the federal level. The hostility of the current U.S. administration and Congress to the idea of consumer financial regulation generally and to the CFPB's regulatory efforts in particular¹⁵ has made the prospect of consumer-focused regulatory change before 2021 highly unlikely.¹⁶

This means that market-based, private-sector alternatives now offer the best opportunity to help low-income working Americans manage their day-to-day finances without resorting to STSDC. Even if government leaders someday decide to deal with the economic issues underlying STSDC use, or again attempt to moderate the negative effects of STSDC through regulation, the existence of better private sector alternatives should make their jobs easier.

The focus of this paper is the most promising source of private sector alternatives to the current STSDC system--the rapidly growing U.S. financial technology software ("FinTech") industry.¹⁷ We believe that innovative FinTech products have enormous potential to alter the

¹⁵ Section 733 of the proposed Financial Choice Act of 2017, championed by House Financial Services Committee Chairman Jeb Hensarling, contains a provision removing the CFPB's "rulemaking, enforcement or other authority with regard to payday loans, vehicle title loans or other similar loans."

¹⁶ Marte, Jonnelle. "There is a fierce tug of war over the future of the CFPB." *Washingtonpost.com: Get There*. 1/27/17]. Available at: https://www.washingtonpost.com/news/get-there/wp/2017/01/27/there-is-a-fierce-tug-of-war-over-the-future-of-this-federal-consumer-watchdog/?utm_term=.bf838f59414f

¹⁷ FinTech generally refers to technology-driven replacements for traditional financial services products and services. These range from "blockchain" solutions for bank and asset manager back offices to digital small business lending and a large variety of digital consumer financial products. FinTech providers seek to offer consumers and businesses faster, less expensive, easier to use and more satisfying ways to access needed financial services. Investment in FinTech globally has been growing at a hectic pace, reaching \$5.3 billion in the first quarter of 2016 alone, a 67 percent increase over the same period of the prior year. <https://newsroom.accenture.com/news/global-fintech-investment-growth-continues-in-2016-driven-by-europe-and-asia-accenture-study-finds.htm>. PWC estimates that cumulative investment could exceed \$150 billion in the next three years. PwC. *Blurred lines: How FinTech is shaping Financial Services*. 2016. Available at: <http://www.pwc.com/gx/en/advisory-services/FinTech/pwc-fintech-global-report.pdf>

STSDC landscape and provide better alternatives for consumers. FinTech companies are already designing market-based financial products to better address the short-term liquidity needs of low-income working Americans and products for the larger consumer market that can be adapted to the needs of low-income working people. Most FinTech innovation today is created by “start-up” companies funded by venture capital investors, although banks and other incumbent financial services providers are increasingly using their own resources to deliver FinTech capabilities for their customers.¹⁸ While many of the FinTech companies we have studied are small today, we believe that some have the potential to achieve meaningful scale.

In the pages that follow, we will seek to examine in more the causes of STSDC demand and the shape of the current STSDC market, then evaluate emerging FinTech alternatives and assess their potential to reduce or eliminate reliance on STSDC by low-income working families.

We conclude that vigorous adoption of a set of FinTech-centered alternatives to STSDC by consumers and employers could shift low-income working families away from reliance on STSDC over time and materially improve their financial resiliency and health, without the need for government financial support or new laws or regulations. We believe that the FinTech products we studied would be sufficient to manage a typical low-income working family’s real monthly liquidity need and could eliminate need for use of STSDC by most or all of the 10.4 million low-income working families and their 47 million individual members.

We further conclude that the employer channel is the best vehicle for dissemination of FinTech products for low-income working families because of its potential to reach very large numbers of workers quickly with effective—and sometimes subsidized-- liquidity and financial management solutions which also provide high value to employers through reduced employee financial stress. It is our view that if employers included FinTech alternatives to STSDC in employee benefit plans, they would not only help their employees manage their personal lives, they would also reap substantial bottom-line benefits from improved employee engagement and satisfaction, lower turnover and lower absenteeism.

We finish the paper by proposing a number of concrete steps that private sector and government employers, FinTech and other financial companies, non-profits and government can take to accelerate the adoption of these superior FinTech alternatives by low-income working Americans.

For purposes of this study we focused on the needs and concerns one specific demographic group--low-income Americans who are working in full or part-time jobs, or are participating actively in so-called “gig economy” work through companies like Uber. This demographic is a

¹⁸ *The Pulse of Fintech – Q3 2016: Global Analysis of Fintech Venture Funding.*

KPMG/CBInsights. 11/16/16. p. 29. Available at:

<https://home.kpmg.com/xx/en/home/insights/2016/03/the-pulse-of-fintech-q1-2016.html>

heavy user of the short-term small-dollar credit products that are the focus of our work. We are using the definition from the Working Poor Families Project’s 2013 paper entitled “Low Income Working Families: the Growing Economic Gap”,¹⁹ which defines low-income working families as those earning less than twice the federal poverty line.²⁰ In 2011, the low-income threshold for a family of four with two children was \$45,622 (it is slightly higher today). The number of low-income working families in the United States totaled 10.4 million and the total number of people in low-income working families totaled 47.5 million in 2011, including 23.5 million children. In 2011, low-income working families made up 32% of all American working families and 71% of those low-income families were classified as “working.” In the study, families are classified as “working” if they are significantly attached to the labor force (generally, those working at least 39 weeks during the previous year). Most of these families have bank accounts. Many low-income families include more than one adult who is

¹⁹ Roberts, B, Povich, D. and Mather, M. *Low-Income working Families: The Growing Economic Gap*. The Working Poor Families Project. 2012-2013. p. 9. Available at: http://www.workingpoorfamilies.org/wp-content/uploads/2013/01/Winter-2012_2013-WPFP-Data-Brief.pdf

²⁰ *Ibid.* “The poverty line is adjusted annually for inflation and takes into account the number of people in a family: The larger the family size, the higher the poverty line. In 2010, the poverty line for a nonfarm family of four (two adults, two children) was \$22,213. A four-person family earning even one more dollar than \$22,213 in 2010 was *not* officially poor, even though its “extra” income hardly lifted it out of dire economic straits. Poverty experts have calculated a no-frills budget that enables a family to meet its basic needs in food, clothing, shelter, and so forth; this budget is about twice the poverty line. Families with incomes between the poverty line and twice the poverty line (or *twice poverty*) are barely making ends meet, but they are not considered officially poor. When we talk here about the poverty level, then, keep in mind that we are talking only about *official* poverty and that there are many families and individuals living in near poverty who have trouble meeting their basic needs, especially when they face unusually high medical expenses, motor vehicle expenses, or the like. For this reason, many analysts think families need incomes twice as high as the federal poverty level just to get by (Wright, Chau, & Aratani, 2011). Wright, V. R., Chau, M., & Aratani, Y. (2011). *Who are America’s poor children? The official story*. New York, NY: National Center for Children in Poverty. They thus use *twice-poverty* data (i.e., family incomes below twice the poverty line) to provide a more accurate understanding of how many Americans face serious financial difficulties, even if they are not living in official poverty.” https://saylordotorg.github.io/text_social-problems-continuity-and-change/s05-01-the-measurement-and-extent-of-.html

We note that all income-based poverty definitions are affected by the difference between “spending poverty” and “income poverty.” Morduch, Jonathan and Schneider, Rachel. *The Financial Diaries—How American Families Cope in a World of Uncertainty*. Princeton University Press. 2017. PP. 163-165.

responsible for meeting the household’s financial needs. In 2011, “about one-fourth of adults in low-income working families were employed in just eight occupations, as cashiers, cooks, health aids, janitors, maids, retail salespersons, waiters and waitresses, or drivers. Some of these occupations— especially those involving health care—are among the fastest-growing occupations in the country. Cashiers make up the single-largest occupational group, with nearly a million people in low-income working families in 2011.”²¹

The Rise of Income Volatility

It has long been recognized that monthly expenses are particularly volatile for low-income families, due not only to “emergencies” like car repairs and hospital payments but also to regularly occurring but unanticipated monthly increases in multiple expense categories.²² In a 2015 study of bank customers by the JP Morgan Institute (JPMI), the average participant in the bottom two income quintiles of the study experienced an expense increase of about 27% or decrease of 25% in 6 out of 12 months of the year.²³ Expense volatility of this magnitude would be enormously challenging to manage at any income level.²⁴

Other recent studies have shown that income volatility among low-income working families— long presumed to be low-- is equally significant and in many ways more challenging to deal with.²⁵ The same JPMI study showed the average participant in the bottom two income quintiles of the survey population experienced an income increase of between 11 and 14%, respectively, or an income decrease of between 9% and 11% in half the months of the year.²⁶

²¹ *Ibid.*

²² Morduch, Jonathan and Schneider, Rachel. “Mismatch: How Income and Expense Volatility Are Undermining Households.” *Stanford Social Innovation Review*. 1/12/16. Available at: https://ssir.org/articles/entry/mismatch_how_income_and_expense_volatility_are_undermining_households

²³ Farrell, D. and Greig, F. *Weathering Volatility*. p. 3.

²⁴ Farrell, D. and Greig, F. *Coping with Costs: Big Data on Expense Volatility and Medical Payment.s* JPMorgan Chase Institute. 2017. Available at: <https://www.jpmorganchase.com/corporate/institute/report-coping-with-costs.htm>

²⁵ Aspen Institute. *Income Volatility: a Primer*. Aspen Institute’s Financial Security Program: Expanding Prosperity Impact Collaborative (EPIC). 2016. Available at: <https://www.aspeninstitute.org/publications/income-volatility-a-primer/>

²⁶ Farrell, D. and Greig, F. *Weathering Volatility*. p. 3.

Even median income individuals in the study experienced fluctuations of nearly \$500 in monthly labor income across months.²⁷

The leading cause for income variability cited by those surveyed by the Federal Reserve Board was an irregular work schedule, followed by being paid through bonuses or commissions, temporary unemployment, and seasonality of work. An irregular work schedule is cited almost as much as all the other reasons combined²⁸. Among the many reasons that low-income working families are facing irregular hours are the increasing use of employee scheduling software by employers,²⁹ employer preference for part-time employees (who do not get benefits) and the rise of the “gig economy” of independent contractors with no fixed work schedules. The rising use of periodic performance bonus plans for hourly workers, which are inherently unpredictable, has added another new element to income variability.³⁰

The 2015 JPMI study also demonstrated that monthly and annual income and expense changes did not move in tandem; there was only a slightly positive correlation between changes in income and changes in expense on an annual basis regardless of income level. The study found an even weaker positive relationship between month-to-month changes in income and month-to-month changes in consumption, with a slope of 0.06 that does not explain even 1% of the variance.³¹

JPMI’s study also indicated that consumers in the first two income quintiles would require \$1,600 and \$2,800 in liquid savings to handle normal monthly income and expense fluctuations, but had less than half of that amount available in transaction accounts at any given time. This finding is consistent with other data that shows a general lack of savings or other sources of cash to help with liquidity challenges. More than half of American households earning less

²⁷ *Ibid.*

²⁸ Consumer and Community Development Research Section of the Federal Reserve Board’s Division of Consumer and Community Affairs. *Report on the Economic Well-Being of U.S. Households in 2015*. p. 18.

²⁹ This software allows employers to fit work schedules to demand far more aggressively than in the past and can produce significant variance in paycheck amounts. Mitchell, David S. *Stable and Predictable Scheduling as Antidote to Income Volatility*. Aspen Institute’s Financial Security Program: Expanding Prosperity Impact Collaborative (EPIC). 2017. p. 3. Available at: <https://assets.aspeninstitute.org/content/uploads/2017/02/Predictable-Schedling.pdf>

³⁰ Aspen Institute. *Income Volatility: a Primer*. p. 6.

³¹ Farrell, D. and Greig, F. *Weathering Volatility*. p. 8.

than \$40,000 annually are not saving anything from their income.³² Only 34% of American households earning less than \$40,000 could pay a \$400 emergency expense with cash or a credit card repaid within a month.³³ Fully 45% of the working-age population has no retirement savings account³⁴, and of those that do, 23% report dipping into their retirement accounts or borrowing from the account to cover short-term needs despite the risk of punitive tax treatment of early withdrawals.³⁵ Only 21% of Americans in the lowest quartile have a retirement account of any kind.³⁶ And only 39% of the population has 3 months of expenses saved to protect from the impact of job loss or short-term disability.³⁷

For purposes of our study of FinTech alternatives to STSDC and for ease of comparison we will simplify JP Morgan's data and assume that the maximum amount of additional liquid financial capacity that a low-income working family would need in order to fully deal with monthly negative fluctuations in income and expenses is the range between \$700 and \$980. We estimated the estimated maximum monthly amount of additional liquidity required by low-income working families by using the JPMI 2015 analysis of the liquid assets needed to survive the maximum concurrent monthly income and expense shock for the bottom two income quintiles after deducting existing deposits (\$1,000-\$1,400.) We adjusted this amount downward by 30% to take into account single month voluntary capacity of families to increase income or

³² Consumer and Community Development Research Section of the Federal Reserve Board's Division of Consumer and Community Affairs. *Report on the Economic Well-Being of U.S. Households in 2015*. p. 25.

³³ *Ibid.* p. 23.

³⁴ Rhee, Nari and Boive, Illana, *The Continuing Retirement Savings Crisis*, National Institute on Retirement Security, March 2015, p.8
http://www.nirsonline.org/storage/nirs/documents/RSC%202015/final_rsc_2015.pdf

³⁵ Lin, JT, Bumcrot, C., Ulicny, T, *et. al.* *Financial Capability in the United States: 2016*. FINRA Investor Education Foundation. 2016. Available at: [National Financial Capability Study](#)

³⁶ Rhee, Nari and Boive, Illana, *The Continuing Retirement Savings Crisis*, National Institute on Retirement Security, March 2015, p.10
http://www.nirsonline.org/storage/nirs/documents/RSC%202015/final_rsc_2015.pdf

³⁷ Consumer and Community Development Research Section of the Federal Reserve Board's Division of Consumer and Community Affairs. *Report on the Economic Well-Being of U.S. Households in 2014*. Board of Governors of the Federal Reserve. 2014. pp. 2-3. Available at: <https://www.federalreserve.gov/econresdata/2014-economic-well-being-of-us-households-in-2013-executive-summary.htm>

reduce or defer expenses.³⁸ We created our range based on two family after-tax income levels--\$24,000 with a zero percent effective tax rate and \$48,000 with a 20% effective tax rate.

Use of STSDC

In response to these liquidity pressures, many Americans—principally lower-income individuals—have turned to providers of various types of STSDC to help them handle variations in expenses and income, pay bills and avoid the consequences of rent and utilities nonpayment.³⁹ These easy to access but enormously expensive products have become essential financial management tools for many lower-income working families.⁴⁰

STSDC can be defined in various ways, but for purposes of this paper we will define it as general-purpose credit (i.e., not tied to the purchase of a product such as a car or furniture) with an original term of 9 months or less and in an amount of \$2,000 or less. That definition covers credit products that are generally referred to as payday lending, bank overdraft protection, auto title lending, deposit advance and pawn loans and excludes products such as longer-term subprime installment loans, subprime auto purchase loans, “rent-to-own” contracts, point of sale finance, secured credit cards, as well as purchase money mortgages, home equity loans and contracts for deed secured by residential real estate. While many of these other credit products serve a similar customer base, they are distinct from STSDC in that they are in most cases not useful, or used, by consumers to deal with the types of “day to day” cash flow problems of the types described in this paper.⁴¹

³⁸ This assumption is generally consistent with research results showing average reductions of between 11% and 17% of total monthly spending in reduced income months. Morduch, J., and Schneider, R. *The Financial Diaries*.

³⁹ Levy, R. and Sledge, J. *A Complex Portrait: An Examination of Small-Dollar Credit Consumers*. Center for Financial Services Innovation. 2012. p. 6. Available at: <https://s3.amazonaws.com/cfsi-innovation-files/wp-content/uploads/2017/01/31163518/A-Complex-Portrait-An-Examination-of-Small-Dollar-Credit-Consumers.pdf>

⁴⁰ Pew Safe Small-Dollar Loans Research Project. *Payday Lending in America: Who Borrows, Where They Borrow, and Why*. The Pew Charitable Trusts. 2012. pp. 14-18. Available at: http://www.pewtrusts.org/~media/legacy/uploadedfiles/pcs_assets/2012/pewpaydaylendingreport.pdf

⁴¹ There is a very strongly held view among some experts in this area that longer-term installment lending is always the best alternative to STSDC. This view is based in part on the idea that short-term loans with lump sum repayments, typical of STSDC are inherently unaffordable and that borrowing on a longer-term basis with graduated and more affordable terms is always better. The arguments for this view seem compelling. The typical payday loan can take more than one-third of a borrower’s next paycheck and auto-title loans and deposit

Perhaps the most important aspect of STSDC products is that they do not require the user to have a good (or any) credit score. Thus, individuals with damaged credit from prior defaults or individuals with little or no prior credit history (young people new to the work force and recent immigrants, for example) can access these products.

A brief taxonomy of STSDC products follows below. Interested readers can access more detail about these products through the sources cited in the footnotes.

Payday Lending. A payday loan is a fee-based cash advance, typically two weeks in term, repaid in a single lump sum by post-dated check or ACH authorization out of the customer's next paycheck, or "rolled over" for an additional fee until a subsequent paycheck. These are also sometimes also referred to as cash advance loans, check advance loans, post-dated check loans, or deferred deposit loans.

- Emerged in the 1990s⁴²
- 20,000 payday loan storefronts, many online websites
- \$38 billion lent annually (counting renewals as new loans) to 19 million payday loan customers⁴³ who pay \$9 billion per year in payday loan fees⁴⁴

advance loans an even higher percentage, while long-term loans have much smaller monthly payments. In addition, many STSDC products contain a so-called "leveraged" repayment mechanism (e.g., an automatic draw on a bank account) which coerces the borrower into rolling over the entire amount of the original loan and incurring additional fees. The Pew Charitable Trusts, comment letter on CFPB's Notice of Proposed Rulemaking for Payday, Vehicle Title, and Certain High-Cost Installment Loans, Oct. 7, 2016, <https://www.regulations.gov/document?D=CFPB-2016-0025-142716>. However, the value of longer-term installment loans as a device to handle day-to-day liquidity crises is, in the author's view, limited when the frequency of household income/expense volatility episodes that are the Key Precipitating Factors for STSDC Use (as defined later in this paper) is so high—occurring in half the months of the year in the JPMI data cited elsewhere. It appears impractical for consumers to finance these types of recurring short-term needs with repeated long-term financing.

⁴² "The Cash Advance Loans Industry – Overview." *Cashadvanceonline.net*. [nd] Available at: <http://www.cashadvanceonline.net/cash-advance-loans-industry/>

"A Short History of Payday Lending Law." The Pew Trusts. 2012. Available at: <http://www.pewtrusts.org/en/research-and-analysis/analysis/2012/07/a-short-history-of-payday-lending-law>

- Payday borrowers typically spend over \$520 in fees to repeatedly borrow \$375 over several months⁴⁵
- “A typical two-week payday loan with a \$15 per \$100 fee equates to an annual percentage rate (APR) of almost 400%”⁴⁶
- Loss rate of approximately 60% for established payday loan businesses⁴⁷

Deposit Advance Products. An advance paid directly into a bank account and repaid in a lump sum from the customer’s next direct deposit.

- Linked to bank account
- 150% to 450% APR
- \$343 median daily balance⁴⁸
- Volumes are low as fewer banks are offering product due to regulatory pressures⁴⁹

⁴³ *About the Payday Advance Industry.* Community Financial Services Association of America. [nd] Available at:

<http://cfsaa.com/about-the-payday-advance-industry.aspx>

⁴⁴ Other independent estimates of payday loan users are lower—The Pew Charitable Trusts a estimate, based on actual unique borrowers in a year (i.e., not counting rollovers or repeated borrowings) is closer to 12 million.

“Payday Loan Facts and the CFPB’s Impact” The Pew Trusts. 2016. Available at:

<http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2016/01/payday-loan-facts-and-the-cfpbs-impact>

⁴⁵ *Ibid.*

⁴⁶ “What is a payday loan?” Consumer Financial Protection Bureau. [nd] Available at:

<https://www.consumerfinance.gov/askcfpb/1567/what-payday-loan.html>

⁴⁷ Flanner, Mark, and Samolyk, Katherine. “Scale Economies and Payday Loan Stores.” *Proceedings of the Federal Reserve Bank of Chicago’s 43rd Annual Conference on Bank Structure and Competitiveness.* (May 2017) pp.233-259. The high level of charge-offs is often masked by industry-provided statistics that show low levels of defaults (e.g., 5%) on individual payday loans. But when default rates are considered cumulatively for multi-loan rollovers the losses can be ten times that rate.

⁴⁸ *Payday Loans and Deposit Advance Products: A White Paper of Initial Data Findings.*

Consumer Financial Protection Bureau. 2013. p. 27. Available at:

http://files.consumerfinance.gov/f/201304_cfpb_payday-dap-whitepaper.pdf

Bank Overdraft/Non-Sufficient Funds Protection (“bank overdraft protection”). A bank charges a fee (typically \$35 per occurrence) to cover each incident of non-sufficient funds on each item (check, debit, ACH) drawn against a checking account. Most banks provide this service to checking customers, but customers must “opt-in” to gain coverage for non-recurring debit card transactions and ATM withdrawals.⁵⁰

- Bank overdraft protection fees make up over 2/3 total bank deposit account fees, averaging \$250 per year for customers using service
- Forty-Two percent of customers incur over \$300 per year in fees⁵¹
- Eight percent of bank customers incur nearly 75 percent of all bank overdraft protection fees⁵²
- 70% of heavy overdrafters are employed and the average heavy overdrafter paid nearly a full week’s worth of annual household income in bank overdraft protection fees in the past year, and most people who expended a week of pay made less than \$25,000 annually⁵³
- Ten percent of millennials overdraft more than 10 times a year⁵⁴

⁴⁹ Douglas, Danielle, “Wells Fargo, U.S. Bank to end deposit advance loans, citing tougher regulation. *Washington Post*. January 17, 2014. Available at: https://www.washingtonpost.com/business/economy/wells-fargo-us-bank-to-end-payday-loans-citing-tougher-regulation/2014/01/17/b65f0512-7f82-11e3-93c1-0e888170b723_story.html?utm_term=.fef88e1c88f5

⁵⁰ Bank overdraft protection has traditionally not been considered a “loan” under the Truth in Lending Act, 15 USC 1601 et seq. (TILA) and its implementing Federal Reserve Regulation Z, 12 CFR Part 226

⁵¹ Consumer Banking Project. *Heavy Overdrafters: A Financial Profile*. The Pew Charitable Trusts. 2016. Available at: <http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2016/04/heavy-overdrafters>

⁵² Bakker, T, Kelly, N., Leary, J. et. al. *Data Point: Checking Account Overdraft*. Consumer Financial Protection Bureau. 2014. p. 5. Available at: http://files.consumerfinance.gov/f/201407_cfpb_report_data-point_overdrafts.pdf

⁵³ Consumer Banking Project. *Heavy Overdrafters: A Financial Profile*.

⁵⁴ Sullivan, Bob. “1 in 10 Millennials Overdraft More Than 10 Times a Year.” *Credit.com*. 1/22/15. Available at: <http://blog.credit.com/2015/01/1-in-10-millennials-overdraft-more-than-10-times-a-year-106673/>

- Banks with over \$1 billion in assets charged customers \$11.16 billion in bank overdraft protection fees in 2015, accounting for 8.0% of profits. Small banks also offer these products so the banking industry total is considerably larger.⁵⁵ Total fees typically make up 2% or more of total bank revenue.⁵⁶
- Bank practices frequently maximize incidence of fees in the daily settlement process by reordering transactions from large to small (thereby triggering an initial overdraft with one of the larger checks and adding additional fees from the smaller checks rather than paying most of the small checks before the overdraft occurs), by charging individual fees for each overdraft and by charging the same fee for all overdrafts regardless of size.
- Put in lending terms, if a bank customer “borrows” \$24 through an overdraft for three days and pays an overdraft fee of \$34, the theoretical APR on the “loan” would be 17,000%.

Auto Title Loans. A small loan secured by the title to a car, truck, or motorcycle that the borrower already owns. The lender holds the legal title to the vehicle in exchange for a loan amount. If the loan is repaid, the title is returned to the borrower. If it is not repaid, the vehicle may be repossessed and sold.⁵⁷

⁵⁵ *How a Set of Small Banks Compares on Overdraft: An analysis of programs, fees, and terms at 45 financial institutions.* The Pew Charitable Trusts. 2016. p. 6. Available at: http://www.pewtrusts.org/~media/assets/2016/12/sm_overdraft_report_f.pdf

The Wall Street Journal has cited a much higher total industry figure: “So-called overdraft fees totaled \$33.3 billion in 2016, up about 2.5% from 2015 and by 5.4% from 2011, according to Moebis Services Inc., an economic-research firm.” Andriotis, AnnaMaria and Rudegear, Peter. “Bank Overdraft Fee Revenue Bounces Back” *The Wall Street Journal*. 3/16/17. Available at: <https://www.wsj.com/articles/bank-overdraft-fee-revenue-bounces-back-1489656603>

⁵⁶ Andriotis and Rudegear. “Banks Feel Pinch From Declining Overdraft Fees” *The Wall Street Journal*. 6/16/15. Available at: <https://www.wsj.com/articles/banks-feel-pinch-from-declining-overdraft-fees-1434493786>

⁵⁷ Small-dollar Loans Project. *Auto Title Loans: Market practices and borrowers’ experiences.* The Pew Charitable Trusts. 2015. pp. 3-4. Available at: <http://www.pewtrusts.org/~media/assets/2015/03/autotitleloansreport.pdf>;

- 8,000 auto title loan storefronts, many websites
- \$1,000 average loan size
- Single payment or short installment term
- \$3 billion in fees annually for \$2+ billion in auto title loans extended to more than 2 million customers
- Typical APR of 300%

Pawn Loans. Small loans collateralized by personal items such as jewelry, watches, cameras etc.⁵⁸

- \$6 billion in revenues annually
- 10,000 pawn stores
- \$150 average pawn loan size, 1-4-month term, 20-25% per month, 15% default rate
- 7.4% of population has used pawn loans

Not surprisingly, as lower quintile incomes have stagnated and income and expense volatility have grown, the business of providing STSDC has become enormous and, by all accounts, profitable, attracting many new entrants over the years.⁵⁹

Why Do Consumers use STSDC?

According to research by the Center for Financial Services Innovation (CFSI), consumers use STSDC principally to manage recurring expenses such as utility bills, rent, and food, which can

Consumer Financial Protection Bureau. *CFPB Finds One-in-Five Auto Title Loan Borrowers Have Vehicle Seized for Failing to Repay Debt*. 2016. Available at: <https://www.consumerfinance.gov/about-us/newsroom/cfpb-finds-one-five-auto-title-loan-borrowers-have-vehicle-seized-failing-repay-debt/>

⁵⁸ National Pawnbrokers Association. *Pawn Industry Statistics*. [2016.] Available at: <https://assets.nationalpawnbrokers.org/2016/05/PawnFacts.pdf>

National Pawnbrokers Association. "Pawnbrokers Report Trends & Steady Industry Growth." *Pawn Shops Today*. [2015.] Available at: Available at: <https://www.pawnshopstoday.com/trends/>

⁵⁹ First Cash Express, a publicly traded STSDC company, has a market capitalization of around \$2.5 billion and an ROTCE of around 25% as of the date of this paper. See: <http://ir.firstcash.com/sec-filings>

be thought of as day-to-day household obligations.⁶⁰ Approximately 42% of users of STDC borrowed to pay utility bills, and 41% borrowed for general living expenses such as food and clothing.⁶¹

CFSI's research also confirmed prior findings showing that STSDC borrowers are generally less educated, have lower incomes, and tend to live in larger households in the southern U.S. Many users also report financial difficulties and indicate lack access to more traditional forms of credit.⁶²

The CFSI survey also revealed that most STSDC consumers (66%) had no personal savings to look to as a source of cash flow assistance. Of those with savings, 45% still needed to use STSDC after using all their savings and the other 55% (19% of all STSDC users) used some of their savings or did not use their savings at all.⁶³

CFSI's research offers insights into the top reasons for the consumer's funds shortage that precipitated STSDC use. The top four reasons are noted below (respondents could give more than one answer):

1. Timing Mismatch. Bill or payment due before paycheck arrived (38%)
2. Unexpected Expense. Unexpected expense (medical, car breakdown) (30%)
3. Unexpected Income Drop. Unexpected drop in income (lost job, hours cut, benefits cut) (28%)
4. Negative Cash Flow. General living expenses consistently more than income (33%)

⁶⁰ CFSI's study differentiated between what it described as "STC" or short-term credit and "VSTC" or very-short term credit. VSTC, as defined, is probably the closest analogue to the definition of STSDC used in our study (although it excludes auto title lending because some auto title loans have longer terms), but we have for purposes of this discussion treated both STC and VSTC as equivalents to STSDC unless the context requires otherwise.

⁶¹ Levy, R. and Sledge, J. p. 12.

For a slightly different take, see: McKernan, S.M., Ratcliffe, C., and Quackenbush, C. *Small Dollar Credit: Consumer Needs and Challenges*. Urban Institute. 2014. Available at: <http://www.urban.org/sites/default/files/publication/33716/413278-Small-Dollar-Credit-Consumer-Needs-and-Industry-Challenges.PDF>

⁶² Levy, R. and Sledge, J. p. 6.

⁶³ *Ibid.*

In this study, we refer to the first three of these reasons for a funds shortage causing use of STSDC— timing mismatch, unexpected expense, or unexpected income drop” -- as the “Key Precipitating Factors for STSDC Use.”

We have chosen to exclude the fourth category—consistent negative cash flow—from our study on the basis that no existing STSDC solution, and therefore no alternative to STDC, can be expected to ameliorate fundamental consumer insolvency for more than a brief period. Any effort to affect that problem will require changes beyond the scope of this paper.⁶⁴

It is worth noting that CFSI’s respondents who used STSDC also reported taking other actions to deal with their financial problems. These included reducing spending generally, going without certain basic needs (food, clothing), deferring or skipping some bills, working more/earning more money and, unfortunately, using multiple loan products.

Finally, CFSI’s study showed that STSDC consumers most valued the speed of delivery, accessibility, and clarity of terms associated with the loan products they used when making the decision to borrow.⁶⁵

Adverse Effects of Current STSDC System on Consumers, Communities and Employers

While the STSDC system provides immediate needed assistance to consumers who are facing daunting levels of income and expense volatility, the short-term benefits appear to come at a high cost in terms of longer-term financial instability.⁶⁶

There are some commonalities among the different STSDC products that may explain why they are damaging many consumers. First, borrower and lender incentives in STSDC are fundamentally misaligned, because the lender can succeed even if borrower fails to repay the obligation. So long as the borrower pays fees and/or high interest long enough, the ultimate repayment of the original loan principal isn’t necessary to generate profit. That is why STSDC products, while ostensibly short-term, often need to be “rolled over” a few times or used

⁶⁴ The number of respondents indicating that they use STSDC to compensate for Negative Cash Flow—or to put it more bluntly, personal insolvency—is particularly troubling as the use of any credit in this circumstance is likely, as CFSI notes, to result in a “debt trap” from which there is little chance of escape.

⁶⁵ Levy, R. and Sledge, J. p. 6.

⁶⁶ Keiler, Ashlee. *Abusive Lending Practices Can Lead to Negative Long-term Consequences for Borrowers, Communities*. Consumerists.com. 2015. Available at: <https://consumerist.com/2015/06/16/abusive-lending-practices-can-lead-to-negative-long-term-consequences-for-borrowers-communities/>

repeatedly in order for the lender to make a profit and why they can be profitable for the lender when the ultimate default rate on these products is so high. This incentive structure is very different from a traditional lender/borrower relationship, where the borrower and lender are aligned in both success and failure-- both the borrower and the lender will only succeed if the borrower repays the principal on the loan.

Secondly, demand for STSDC is inelastic.⁶⁷ This is due to the “urgent” nature of the borrowing and very poor competitive price discovery for borrowers at point of sale. STSDC competition is largely based on convenience rather than price or terms, which means that STSDC customers are “price takers” in almost all cases.

A third commonality shared by most STSDC products is the existence of a so-called “leveraged” payment mechanism whereby the lender can directly draw against the borrower’s bank account to secure payment unless the borrower renews the loan. When combined with lump sum repayments that can reach up to 50% of the borrower’s next pay check, “leveraged” payment mechanisms make it highly likely that an initial short-term loan will be renewed several times.⁶⁸ This difference is significant because state regulatory and rate treatment of these loans are often dependent on their ostensibly “short-term” nature.

The negative consequences of STSDC use, which affect both performing defaulting borrowers, have been well documented⁶⁹ and can include:

⁶⁷ Avery, Robert B., Samolyk Katherine A. *Payday Loans versus Pawn Shops: The Effects of Loan Fee Limits on Household Use*. Board of Governors of the Federal Reserve System/The Consumer Financial Protection Bureau. 10/9/11. P. 6. Available at: http://web.law.columbia.edu/sites/default/files/microsites/transactional-studies/files/10PDL_averysamolykpayday.20110909_0.pdf

⁶⁸ Payday, Vehicle Title, and Certain High-Cost Installment Loans (proposed June 2, 2015) Consumer Financial Protection Bureau. p. 173. Available at: http://files.consumerfinance.gov/f/documents/Rulemaking_Payday_Vehicle_Title_Certain_High-Cost_Installment_Loans.pdf .

⁶⁹ Wolff, Sarah D. *The Cumulative Costs of Predatory Practices: The State of Lending in America & its Impact on U.S. Households*. Center for Responsible Lending. 2015. p. 29. Available at: <http://responsiblelending.org/sites/default/files/uploads/13-cumulative-impact.pdf>;

Melzer, Brian T. “The Real Costs of Credit Access: Evidence from the Payday Lending Market,” *Quarterly Journal of Economics*. February 2011. (2011) 126 (1): 517-555. Available at: <https://academic.oup.com/qje/article-abstract/126/1/517/1902774/The-Real-Costs-of-Credit-Access-Evidence-from-the?redirectedFrom=fulltext>

- **Debt traps**--A long period of increasing indebtedness on an ostensibly short-term loan due to consumer renewal or “rollover” of the initial debt and incurrence of additional fees, or a high number of loans taken out per year, indicate the presence of a debt trap. As noted above, one of the most pernicious aspects of many STSDC products is the fact that the first STSDC loan is often unprofitable for the lender. Only after one or more rollovers does the loan become an economically positive transaction for the lender. “Leveraged” payment mechanisms and lump sum repayment help make these rollovers a frequent reality.
- **Excessive loan fees and interest**—up to 400+% annual percentage rates (“APRs”) for most payday, auto title, deposit advance and pawn loans and equivalent amounts for bank overdraft protection fees. Despite arguments that these astronomical rates are necessary because of inherent credit risks and servicing costs, research suggests that payday loan businesses, for example, can continue to function while charging far lower rates than charged today through more efficient distribution strategies.⁷⁰
- **Closure of bank account** due to unpaid bank overdraft protection fees or deposit advance product balances
- **Costs resulting from default.** If a borrower defaults absolutely on STSDC credit the adverse results include those typical for other types of consumer loan defaults, including wage garnishment, loss of transportation or other pledged assets, loss of access to housing, insurance, cable and cellphone plans, and problems with future employment due to adverse credit checks.⁷¹

There are also costs that extend beyond the individual consumers involved in the STSDC transaction. Frequently, third parties step in to help find a solution for the borrower when he or she can't manage repayment personally. Friends and family are a frequent source of

Sherter, Alain. “1,000% Loans? Millions of Borrowers face crushing costs.” *Moneywatch*. CBS News. 2016. Available at:

<http://www.cbsnews.com/news/1000-loans-millions-of-borrowers-face-crushing-costs/>

⁷⁰ *Trial, Error, and Success in Colorado's Payday Lending Reforms*. Pew Charitable Trusts. 2014. Available at:

http://www.pewtrusts.org/~media/assets/2014/12/pew_co_payday_law_comparison_dec2014.pdf

⁷¹ One in seven job seekers with blemished credit has been passed over for employment after a credit check. Traub, Amy. *Discredited—how employment credit checks keep qualified workers out of a job*, Demos (n.d.) <http://www.demos.org/discredited-how-employment-credit-checks-keep-qualified-workers-out-job>

repayment assistance⁷² but bring with them a significant risk of “contagion” as the assistance-giver can often find him or her caught in a debt problem. A significant portion of the federal Earned Income Tax Credit (or EITC) payments for low-income taxpayers is likely used to repay STSDC every year,⁷³ hardly the best use of taxpayer funds to assist working people⁷⁴. Charities are also frequently called upon to help deal with the human toll of STSDC repayment problems. Communities also suffer where a significant amount of economic activity is concentrated around STSDC outlets (think of neighborhoods with a payday lender, a title lender, a check casher and an income tax preparer (for EITC) on every corner but with no supermarket in sight.)

The macroeconomic costs of the diversion of productive resources to support an inefficient and expensive system of STSDC are significant. One study found that the money payday loan borrowers spent on fees and interest led to a net drain of nearly \$1 billion and over 14,000 jobs from the economy in 2012.⁷⁵ A 2014 Howard University study of Payday lending in four Southern states noted that high costs Payday loans strip away a significant portion of disposable income from low- and middle-income families and, through a multiplier process, cause larger adverse effects on both the local and state economies in the hundreds of millions of dollars per annum, with the impact concentrated in the most vulnerable areas.⁷⁶

⁷² Siebens, Julie. *Extended Measures of Well-Being: Living Conditions in the United States: 2011*. Household Economic Studies, U.S. Census Bureau. 2013. Pp. 7-8. Available at: <https://www.census.gov/prod/2013pubs/p70-136.pdf>

⁷³ Mendenhall, R., Edin, K. and Crowley, S. *et. al.* “The Role of Earned Income Tax Credit in the Budgets of Low-income Families.” *Social Service Review*. 2012. pp. 10-11. Available at: <http://users.nber.org/~kling/eitc.pdf>

⁷⁴ Policy makers have from time to time discussed ways to spread out EITC payments over time as a potential substitute for STSDC. Jagoda, Naomi, “Dem Senator Urges Expansion of Tax Credit for Low-income Workers.” *TheHill.com*. 06/07/16. Available at: <http://thehill.com/policy/finance/domestic-taxes/282477-dem-senator-urges-expansion-of-tax-credit-for-low-income>

⁷⁵ Wood, Michael. “Payday Lending Cost the Economy 14,000 Jobs in 2011” National Association of Consumer Advocates. 2013. Available at: <http://www.consumeradvocates.org/blog/2013/payday-lending-cost-economy-14000-jobs-2011>

⁷⁶ Kurban, H., Diagne, A.F. and Otabor, C. *Economic Impact of Payday Lending in Economically Vulnerable Communities: Alabama, Florida, Louisiana and Mississippi*. Howard University Center on Race and Wealth. 2014. p. 31. Available at: <http://coas.howard.edu/centeronraceandwealth/reports&publications/1214-the-economic-impact-of-payday-lending-in-economically-vulnerable-communities.pdf>

As noted above, employers also pay a significant price—in terms of reduced productivity, absenteeism and turnover-- for the financial stress caused by employee reliance on the STSDC system. While research in this area is still incomplete, there are very strong indicators that link employee performance and corporate financial results to levels of financial stress and financial health.⁷⁷

There is, surprisingly, no long-term study on the costs and benefits of the current STSDC system to individual borrowers or on the impact that regular reliance on STSDC has on the financial health of borrowers over time.⁷⁸ Most academic research to date has been unable to conclude whether STSDC has any positive or negative impact on consumer welfare.⁷⁹ Industry-sponsored research has largely focused on surveys of “customer satisfaction” which are inherently suspect given the funding of the survey and the coincidence of the survey with the satisfaction of an urgent consumer need at the point of sale.⁸⁰ More generalized policy support for aspects of the

⁷⁷ Tringali, Victor M. and Giandonato, Joseph, “Views: 5 ways a financial health component can boost a wellness plan.” *Employee Benefit Advisor*. 6/20/16. Available at: <https://www.employeebenefitadviser.com/opinion/5-ways-a-financial-health-component-can-boost-a-wellness-plan>;

Garman, E.T., Leech, I.E., and Grable, J.E. *The Negative Impact Of Employee Poor Personal Financial Behaviors On Employers*. Association for Financial Counseling and Planning Education. 1996. Pp. 164-165. Available at: <https://afcpe.org/assets/pdf/vol-717.pdf>

Meyer, Cynthia. “The ROI of Workplace Financial Wellness.” *Financialfinesse.com*. 2016. Available at: <https://www.financialfinesse.com/2016/10/19/the-roi-of-workplace-financial-wellness/>

⁷⁸ There is much to debate. For example, Mullainathan and Eldar argue that the cumulative impact of economic stress on cognitive capacity and specifically on people's need to focus on the emergency at hand, rather than the bigger picture ("tunneling") leads to poor decisions on things like STSDC. Mullainathan, Sendhil, and Eldar Shafir. 2013. *Scarcity: why having too little means so much*.

⁷⁹ Shapiro, Robert. *The Consumer and Social Welfare Benefits and Costs of Payday Loans: A Review of the Evidence*. Sonecon. 2011. p. 15. Available at: <http://www.sonecon.com/docs/studies/Report-Payday-Loans-Shapiro-Sonecon.pdf>

⁸⁰ “Harris Poll: Payday Loans and the Borrower Experience.” Community Financial Services Association of America. [nd] Available at:

current STSDC system has largely come from “libertarian” think tanks sponsored by allied corporate interests.⁸¹ The best-known academic economic defense of payday lending is Gregory Elliehausen’s 2009 study for the Board of Governors of the Federal Reserve and George Washington University, which concludes that payday loans are benign sources of debt financing for credit-rationed consumers.⁸² Other academics have sometimes concluded that the problems with payday lending are a function of insufficient competition rather than structural flaws with the product or with market solutions.⁸³ And recently Lisa Servon from the New School has used her anecdotal experiences working in a payday lending store to draw attention to how personal service and “transparency” (meaning fees instead of interest) are key reasons why consumers use STSDC and similar services.⁸⁴

Regulatory Interventions

Federal and state regulatory efforts to curb some of the adverse effects of the current SDSTC system have been uncoordinated and largely ineffective due among other things to:

- Confusion and conflict about federal and state regulatory jurisdiction and oversight responsibility for various types of credit providers

<http://cfsaa.com/about-the-payday-advance-industry/survey-payday-loans-and-the-borrower-experience.aspx>

⁸¹ Summers, Adam B. *Payday Lending: Protecting or Harming Consumers?* Reason Foundation. 2013. Available at: http://reason.org/files/payday_lending_regulation.pdf
See http://www.sourcewatch.org/index.php/Reason_Foundation.

Ronald Mann has also published numerous articles which are cast doubt on some of the factual assumptions used to justify regulatory action. Mann, Ronald. "Assessing the Optimism of Payday Loan Borrowers." *Supreme Court Economic Review* 21, no. 1 (2014)
Available at: <http://www.journals.uchicago.edu/toc/scer/2013>

⁸² Elliehausen, Gregory. *An Analysis of Consumers’ Use of Payday Loans*. The George Washington University School of Business. 2009. pp. 60 – 63. Available at:
http://www.cfsaa.com/portals/0/RelatedContent/Attachments/GWUAnalysis_01-2009.pdf

⁸³ DeYoung, Mann, Morgan, *et. al.* [sic] “The Myths of Payday Lending.” Foundation for Economic Education. 10/21/15. Available at:
<https://fee.org/articles/busting-the-myths-of-payday-lending/>

⁸⁴ “The Unbanking of America,: Book Release and Talk with Professor Servon.” Inside Penn Wharton PPI. 1/30/17. Available at:
<https://publicpolicy.wharton.upenn.edu/live/news/1686-the-unbanking-of-america-book-release-and-talk>

- Concerns about the consequences of limiting forms of credit on which so many Americans have become dependent
- Successful industry lobbying efforts to protect successful and profitable business models
- A product-by-product approach to regulation which has been undermined by the so-called “Balloon Effect,” as efforts to regulate one type of STSDC product diverts demand into other, less regulated, STSDC products⁸⁵

It is also worth noting, although the topic is beyond the scope of this paper, that decades-long efforts by both government and private sector institutions to improve consumer financial decision making through “financial literacy” education have been almost completely ineffective.⁸⁶

State regulators today are still the primary overseers of all STSDC providers other than banks. State regulatory intervention in the STSDC market in the US in the 20th and 21st century has varied widely in approach and effectiveness and, today, the regulation of STSDC products remains a patchwork of conflicting statutory regimes.

According to the Pew Charitable Trusts, in 2014 most Americans, --55%-- lived in the 28 states that imposed virtually no limits on payday lending. Payday loans were essentially unavailable in the 14 states and the District of Columbia that currently impose a 36% or less APR cap on payday lenders--a rate level too low, according to lenders, to support storefront payday lending.⁸⁷ Eight other states imposed some limits on payday loan rates and practices, but payday lenders continue to lend actively in their states.⁸⁸ Generally, online payday lenders must

⁸⁵Bhutta, N., Goldin, J., and Homondoff, T. “Consumer Borrowing after Payday Loan Bans.” *The Journal of Law and Economics*, 59(1): 225-259. 2/16. Available at: <http://wagner.nyu.edu/impact/research/publications/consumer-borrowing-after-payday-loan-bans>

⁸⁶Olen, Helaine. “The Quest to Improve America’s Financial Literacy Is Both a Failure and a Sham.” *Pacific Standard*. 1/7/14. Available at: <https://psmag.com/the-quest-to-improve-america-s-financial-literacy-is-both-a-failure-and-a-sham-5961809eb71d>

⁸⁷ *How State Rate Limits Affect Payday Loan Prices*. The Pew Charitable Trusts. 2014. Available at: http://www.pewtrusts.org/~media/legacy/uploadedfiles/pes/content-level_pages/fact_sheets/stateratelimitsfactsheetpdf.pdf

⁸⁸ State Payday Regulation. In 2014, the Pew Charitable Trusts published an analysis that classified state legal regulation of payday lenders into three categories, “Restrictive,” “Hybrid,” and “Permissive:”

comply with the state law where the borrower makes his or her application, which means that borrowers in a prohibited state would have to apply from a location in a permissive state (or use an online offshore or tribal lender which is evading regulation entirely) to get a loan.⁸⁹

“Restrictive states either do not permit payday lending or have price caps low enough to eliminate payday lending in the state. This rate cap is often 36 percent Annual Percentage Rate (APR). Generally, payday loan storefronts are not found in these states. This category includes states where deferred presentment transactions (post-dated checks) are not authorized, are not specifically exempted from general state laws on usury, or are explicitly prohibited by state statute. Twenty-nine percent of Americans live in the 14 states and the District of Columbia that have a **Restrictive** payday loan regulatory structure.

Hybrid states have relatively more exacting requirements, with at least one of the following three forms of regulation: (1) rate caps, usually around 10 percent of the borrowed principal, which are lower than most states but still permit loans to be issued with triple-digit APRs; (2) restrictions on the number of loans per borrower, such as a maximum of eight loans per borrower per year; or (3) allowing borrowers multiple pay periods to repay loans. Storefronts that offer payday loans exist in substantial numbers in these states, though the market may be more consolidated and per-store loan volume may be higher here than in less restrictive states. Sixteen percent of Americans live in the eight **Hybrid** states.

Permissive states are the least regulated and allow initial fees of 15 percent of the borrowed principal or higher. Most of these states have some regulations, but allow for payday loans due in full on a borrower’s next payday with APRs usually in the range of 391 to 521 percent (\$15 to

\$20 per \$100 borrowed for a two-week loan). Payday loan storefronts are readily available to borrowers located in these states. Most Americans—55 percent—live in the 28 **Permissive** states.”

Available at: http://www.pewtrusts.org/en/multimedia/data-visualizations/2014/~media/data%20visualizations/interactives/2014/state%20payday%20loan%20regulation%20and%20usage%20rates/report/state_payday_loan_regulation_and_usage_rates.pdf

⁸⁹ Division of Banks, Consumer Affairs and Business Regulation. “Payday Loans” Massachusetts Office of Consumer Affairs & Business Regulation. 2017. Available at: <http://www.mass.gov/ocabr/banking-and-finance/loans-and-mortgages/payday-loans.html>

Thompson, Connie. “State regulators: Most online payday lenders illegal” *Komonews.com*. 1/12/15. Available at:

A 2012 study by the Consumer Federation of America disclosed a similarly patchwork system of state laws covering auto title lenders, who were operating actively in 21 states in a product format that allows lending at triple digit APRs. Pawn lending is generally not subject to significant rate regulation.⁹⁰

Research and advocacy groups such as the CFSI, The Pew Charitable Trusts and the Center for Responsible Lending have been active in recent years, with some success, promoting reforms at

<http://komonews.com/news/consumer/state-regulators-most-online-payday-lenders-illegal>

⁹⁰ *State Auto Title Lending Regulation*. A, a 2012 study by the Consumer Federation of America (CFA) described the regulatory landscape for auto title loans in a similar fashion:

“State laws determine whether car-title loans are authorized, the terms of the loans, and consumer protections for the loan or repossession of the vehicle if a borrower cannot repay in full when the loan is due. CFA categorizes the legal status of car-title lending, depending on whether this loan product is specifically authorized, whether title lending operates through legal loopholes, or are effectively prohibited.

Permit: 17 states permit car-title loans at triple-digit APRs: Alabama, Arizona, Delaware, Georgia, Idaho, Illinois, Mississippi, Missouri, Nevada, New Hampshire, New Mexico, South Dakota, Tennessee, Texas, Utah, Virginia, and Wisconsin. Of these states, Delaware, Idaho, Illinois, Missouri, Nevada, New Mexico, South Dakota, Utah, and Wisconsin set no cap on the cost of a car-title loan.

Loophole: Car-title lenders operate in four additional states by structuring loans to fall outside of state credit law definitions. For example, title loans are available in California and South Carolina for larger amounts to avoid the small loan rate cap. Kansas title loans are structured as open-end credit, since Kansas has no rate cap for open-end credit from licensed lenders. In Louisiana, car-title lenders make loans for more than \$350 and terms exceeding two months to avoid state law restrictions.

Restrict: The remaining states authorize car-title loans at lower rates and likely do not have car-title lenders operating in the state, prohibit by statute or do not permit car-title lending under existing credit laws.”

Consumer Federation of America. *Car Title Loans Regulation*. 2012. Available at: <http://www.consumerfed.org/pdfs/Resources.CTL.StateLawTermChart12.2.12.pdf>

both the state and federal levels to reduce the burden of the STSDC system on consumers.⁹¹ While some state legislatures and voters have taken additional independent action over the last decade to curb “abusive” STSDC practices,⁹² and some parts of the STSDC industry have contracted as a result, the impact on the national market for these financial products has been relatively modest.

Federal law and regulations covering STSDC have been limited in scope and seem likely to remain so for the foreseeable future. In 2006, Congress passed the Military Lending Act, which in part forbade lenders from charging more than 36 percent APR on short-term loans (defined as loans of 91 days or shorter) to active military personnel or their families. According to the CFPB, that provision has been widely evaded by lenders, who responded by offering loans slightly longer than 91 days.⁹³

More recently, the federal Consumer Financial Protection Bureau (CFPB) proposed regulations limiting certain business practices of payday, deposit advance, auto title and similar lenders,⁹⁴

⁹¹ These efforts include distributing research results, white papers and personal advocacy in state legislatures and with federal elected and regulatory officials, in a manner reminiscent of the very successful efforts of the Russell Sage Foundation to reform consumer installment lending practices in the early decades of the 20th Century. See Trumbull, Gunnar. *Consumer Credit in France and America—Credit and Welfare*. Cambridge University Press, 2014.

⁹² Volz, Matt. “Montana Voters Approve Payday Loan, Real Estate Tax Initiatives.” *Missoulian*. 11/3/10. Available at: http://missoulian.com/news/local/montana-voters-approve-payday-loan-real-estate-tax-initiatives/article_d22c9e9c-e716-11df-94b5-001cc4c03286.html

Farmer, Liz. “Facing 62% Interest Rates, South Dakota Voters Regulate Payday Lending.” *Governing: The States and Localities*. 11/9/16. Available at: <http://www.governing.com/topics/elections/gov-south-dakota-payday-lending-ballot-measures.html>

⁹³ Consumer Financial Protection Bureau. *CFPB Report Finds Loopholes In Military Lending Act Rules Rack Up Costs For Servicemembers*. 2014 Available at: <https://www.consumerfinance.gov/about-us/newsroom/cfpb-report-finds-loopholes-in-military-lending-act-rules-rack-up-costs-for-servicemembers/>

⁹⁴ In 2016, the CFPB, using newly granted authority under the Dodd-Frank Act, proposed regulations to prohibit certain practices by payday lenders, car title lenders, bank providers of deposit advances and providers of high-rate installment loans. See Rosenblum, Jeremy T. *CFPB issues proposed payday/auto title/high-rate installment loan rule*. Consumer financial services group at Ballard Spahr: CFPB Monitor. 2016. Available at: <https://www.consumerfinance.com/2016/06/02/cfpb-issues-proposed-paydayauto->

[titlehigh-rate-installment-loan-rule/](#) Specifically, the CFPB proposal included the following protections for users of STSDC:

- **Full-payment test:** STSDC lenders would be required to determine whether the borrower can afford the full amount of each payment and still meet basic living expenses and major financial obligations. The proposal also made it more difficult for lenders to push distressed borrowers into reborrowing or refinancing the same debt and capped the number of short-term loans that could be made in quick succession.
- **Principal payoff option for certain short-term loans:** Notwithstanding the “full payment test,” consumers could borrow a short-term loan up to \$500 without meeting the test as part of the principal payoff option that is “directly structured to keep consumers from being trapped in debt.”
- **Less risky longer-term lending options:** The proposal would permit STSDC lenders to offer two specified longer-term loan options, including a credit union loan product and a designated type of installment loan, in the latter case only if they agreed to limits on interest rates, fees and the number of loans offered per year.
- **Debit attempt cutoff:** In an attempt to limit multiple bank overdraft protection charges by STSDC borrowers, STSDC lenders would be subject to limitations on the number of attempts at debiting the consumer’s account to collect payment for any loan covered by the proposed rule.

Consumer Financial Protection Bureau. *Consumer Financial Protection Bureau Proposes Rule to End Payday Debt Traps*. 2016. Available at:

<https://www.consumerfinance.gov/about-us/newsroom/consumer-financial-protection-bureau-proposes-rule-end-payday-debt-traps/>

The CFPB’s proposed regulations followed an extensive fact-finding effort by the CFPB and generated extensive public comment from industry and consumer advocates. The response to the proposal was generally negative, with industry objectors complaining that the proposal was unduly complex, burdensome to apply and would leave many consumers without an effective way to manage their finances [De Rugy, Veronique. *Hurting the Poor Is No Way to Help Them: Payday Lending Rules Edition*. 2016. Available at:

<http://www.nationalreview.com/corner/436155/payday-lending-restrictions-cfpbs-latest-crusade-against-poor-americans> and consumer advocates arguing that the proposal did not do enough to ensure that borrowers could afford these types of loan.

<http://www.uspirg.org/news/usp/joint-statement-opposing-exceptions-cfpb-payday-rule>The final regulation has not yet been issued and, at the time of this writing, the CFPB's future-- and the future of the CFPB itself-- are in doubt. Marte, Jonnelle. “There is a fierce tug of war over the future of the CFPB.” *Washingtonpost.com: Get There*. 1/27/17 Available at:

https://www.washingtonpost.com/news/get-there/wp/2017/01/27/there-is-a-fierce-tug-of-war-over-the-future-of-this-federal-consumer-watchdog/?utm_term=.bf838f59414f

and has indicated an interest in regulating bank overdraft protection practices.⁹⁵ Both of these initiatives faced considerable opposition from lenders and in some cases from consumer advocates who felt the proposals did not go far enough.⁹⁶ As discussed above, given the political environment in which this paper is being written—with the political party holding the Presidency and a majority in both houses of the U.S. Congress philosophically committed to an anti-regulation policy-- the prospect of further federal regulation in this area is unlikely. In addition, the many ongoing challenges to the CFPB's existence, governance structure and powers make it unlikely that either the proposed short-term credit regulation or rules on overdrafts will ever go into effect.

Banks are subject to a degree of Federal regulation when they offer bank overdraft protection and deposit advance Products. In 2009, the Board of Governors of the Federal Reserve System (FRB) amended Regulation E⁹⁷ to prohibit institutions from charging bank overdraft protection fees for ATM and one-time debit card transactions, unless the consumer opts in or affirmatively consents to the institution's overdraft services.⁹⁸ Aside from these rules, Federal laws do not

⁹⁵ Consumer Financial Protection Bureau. *CFPB Study of Overdraft Programs: A white paper of initial data findings*. 2013. Available at: http://files.consumerfinance.gov/f/201306_cfpb_whitepaper_overdraft-practices.pdf

Bomey, Nathan. "Agency: TCF National Bank tricked customers on overdraft fees." *USAtoday.com*. 1/19/17. Available at: <http://www.usatoday.com/story/money/2017/01/19/consumer-financial-protection-bureau-cfpb/96772082/>

⁹⁶ The Pew Trusts argue forcefully that only "percentage of income" repayment limits are effective in curbing payday loan abuse—a view not reflected in the CFPB proposal. <http://www.pewtrusts.org/en/research-and-analysis/analysis/2016/06/01/proposed-payday-lending-rule-would-leave-borrowers-vulnerable> Bourke, Nick. *Proposed Payday Lending Rule Would Leave Borrowers Vulnerable*. Pew Charitable Trusts: Small Dollar Loans. 2016. Available at: <http://www.pewtrusts.org/en/research-and-analysis/analysis/2016/06/01/proposed-payday-lending-rule-would-leave-borrowers-vulnerable>

⁹⁷ Regulation E (12 CFR 1005) is the consumer protection regulation that implements the Electronic Fund Transfer Act of 1978 (EFTA) (15 USC 1693). Regulation E provides a basic framework that establishes the rights, liabilities, and responsibilities of participants in electronic fund transfer systems such as automated teller machine transfers, telephone bill-payment services, point-of-sale (POS) terminal transfers in stores, and preauthorized transfers from or to a consumer's account (such as direct deposit and social security payments).

⁹⁸ (74 Fed. Reg. 59033 (November 17, 2009) and 75 Fed. Reg. 31665 (June 4, 2010)).

establish any maximum amounts of fees, including bank overdraft protection fees, which national banks can charge on an account. State laws generally impose no limits on state banks for competitive reasons.

While some of the larger consumer banks, under pressure from consumer groups, the CFPB and other bank regulators, have made positive changes to some of their practices—for instance eliminating “high to low” transaction ordering, the practice which was the subject of the most criticism by consumer advocates—the Pew Charitable Trusts most recent study showed that most of the largest U.S. banks with consumer checking accounts continue to charge at least \$35 each time an overdraft is incurred, more than 40 percent of these banks process transactions from largest to smallest by dollar amount, and nearly 80 percent allow overdrafts on ATM and debit point-of-sale transactions.⁹⁹

Bank deposit advance products, a type of consumer loan, are regulated to the same extent as other bank-provided lending products, and are not subject to specific limitations on rate. However, federal bank regulators have in recent years imposed “guidance” which effectively

⁹⁹ Bourke, Nick. “Most Large Banks Fail to Meet Overdraft Best Practices.” Pew Charitable Trusts: Consumer Banking. 2016. Available at: <http://www.pewtrusts.org/en/about/news-room/press-releases/2016/12/20/most-large-banks-fail-to-meet-overdraft-best-practices>

limits other product features typically relied on by the banks that provide these loans.¹⁰⁰ As a result most large banks have exited this product.¹⁰¹

All in all, none of these regulatory interventions have materially curbed the expansion of STSDC products nationally. This result is not surprising given that the Key Precipitating Factors for STSDC Use remain urgent for consumers regardless of the regulatory environment, and the “Balloon Effect” means that product-by-product regulation appears unable to curve aggregate use of STSDC products.¹⁰²

What About the Banks?

One key question remains. Where are the banks in all this? After all, virtually all STSDC users are bank customers (with the exception of pawn loans, STSDC products require a bank account to work.) But banks generally don’t provide products that compete with STSDC, other than bank overdraft protection. Why aren’t the banks, which already have all the data they might need to assess the financial lives of their depositors as well as the advantage of much less expensive funding, providing lower-cost and less damaging alternatives to STSDC?

¹⁰⁰ Federal Deposit Insurance Corporation. *6714-01-P Guidance on Supervisory Concerns and Expectations Regarding Deposit Advance Products*. 2013. Available at: <https://www.fdic.gov/news/news/press/2013/pr13105a.pdf>

“Federal regulators are ...including a “cooling-off period” that prevents borrowers from taking more than one deposit advance during a monthly pay cycle....Another key concern is that banks determine a customer’s ability to repay before making a loan, a standard underwriting practice in all other types of lending. Regulators recommended reviewing at least six months of customer’s banking activities. If a customer’s account is routinely overdrawn, banks should hold off on extending credit, the agencies say.”

Douglas, Danielle. “Regulators put tougher restrictions on bank payday loans” *Washington Post*. 11/21/13. Available at: https://www.washingtonpost.com/business/economy/regulators-put-tougher-restrictions-on-bank-payday-loans/2013/11/21/44c86316-52d3-11e3-a7f0-b790929232e1_story.html?tid=a_inl&utm_term=.a3223a6e8196

¹⁰¹ Douglas, Danielle, “Wells Fargo, U.S. Bank to end deposit advance loans, citing tougher regulation.

¹⁰² Bhutta, N., Goldin, J., and Homondoff, T. “Consumer Borrowing after Payday Loan Bans.” *The Journal of Law and Economics*, 59(1): 225-259. 2/16. Available at: <http://wagner.nyu.edu/impact/research/publications/consumer-borrowing-after-payday-loan-bans>

The justification from the banking industry for this failure to meet customer needs is that regulatory pressures, publicity risks derived from the role of bank subprime lending in the 2008 crisis and the fear of public shaming from aggressive enforcement actions make any type of “subprime” consumer lending at high interest rates impossible for an insured bank. Some banks say that they would offer alternatives to STSDC to their own customers if they could avail themselves of a regulatory “safe harbor” for specific products and practices that would protect them from backlash.¹⁰³

While the issues of bank risk appetite and bank regulatory reform outside of the FinTech sphere are beyond the scope of this paper, there seems little doubt that, if the regulatory “cloud” were lifted and banks elected to engage in lower-cost forms of short-term, small dollar lending, they could provide much-needed liquidity support a subset of their customers. But the question of whether banks really would enter this market in size is an open one. Some banks have indicated an interest in providing small-dollar credit, and that desire should be taken seriously.¹⁰⁴ However, bank forays into high-risk consumer lending in the mid-20th and early 21st century generally had poor success, and there is a long history of banks entering and then exiting the business.

Banks typically invest in these businesses during the earlier parts of the credit cycle when losses are low, growth is high and bank funding creates a financial advantage, but don’t have the

¹⁰³ “ABA Urges CFPB to Protect Small-Dollar Loans by Banks” *ABA Banking Journal*. 10/10/16. Available at:

<http://bankingjournal.aba.com/2016/10/aba-urges-cfpb-to-protect-small-dollar-loans-by-banks/>

<http://bankingjournal.aba.com/2016/10/aba-urges-cfpb-to-protect-small-dollar-loans-by-banks/>

¹⁰⁴ Reiling, David. “A <https://www.fordfoundation.org/ideas/equals-change-blog/posts/a-revolution-in-small-dollar-lending>” Ford Foundation. 4/20/16. Available at:

<https://www.fordfoundation.org/ideas/equals-change-blog/posts/a-revolution-in-small-dollar-lending/>

Foster-Keddie, Kevin. “CFPB Plan Will Halt Traditional Lenders’ Small-Dollar Loan Progress.” *American Banker*. 6/16/16. Available at:

<https://www.americanbanker.com/opinion/cfpb-plan-will-halt-traditional-lenders-small-dollar-loan-progress>

Hayashi, Yuka. “CFPB Presses Banks, Credit Unions to Offer ‘Small-Dollar Loans’” *The Wall Street Journal*. 2/9/16. Available at:

<https://www.wsj.com/articles/cfpb-plans-to-complete-new-payday-loan-rules-soon-1455033481>

stomach to stick with them when levels of non-performing assets and credit losses emerge in the latter part of the credit cycle. The reasons for bank caution are sound—high volatility businesses like subprime consumer lending, if allowed to grow too large, can negatively affect bank credit ratings, increase borrowing costs, invite regulatory interventions and reduce a bank’s price-earnings ratios and stock price. The author of this paper was personally involved in scores of acquisition and disposition transactions over 25+ years involving banks and higher-risk consumer finance lenders, mortgage lenders, manufactured housing lenders, insurance premium finance lenders and auto lenders, and frequently observed this pattern.

Finally, it must be acknowledged that the banks have a major financial stake in the current STSDC system in the form of overdraft protection products, which produce 2+ percent of bank revenues.¹⁰⁵

Methodology

Our research methodology followed a six-stage path.

Stage 1. Identification of FinTech companies potentially relevant to study goals. We used a variety of methods to identify potentially relevant FinTech companies.

- a. Knowledge of author. We initially identified companies known to the author of the study, who is an acknowledged expert in financial services and FinTech has been following developments in this area for several years.
- b. Knowledge of experts. We sought input from experts, which included individual employees of the CFPB, CFSI, The Pew Charitable Trusts, and venture capital and other firms active in FinTech investing.
- c. “Tech Crunch” and other literature search. We searched the databases of Tech Crunch and similar venture-focused sites to identify companies.

¹⁰⁵ Andriotis, AnnaMaria and Rudegear, Peter. “Banks Feel Pinch From Declining Overdraft Fees.”

The author of this paper has suggested that banks would be better off reforming their overdraft practices in exchange for relief from the impact of the “Durbin” interchange fee restrictions included in the Dodd-Frank Act. Baker, Todd. “How to Solve the Bank Fee Conundrum Hurting Consumers. *American Banker*. 2/17/17. Available at: <https://www.americanbanker.com/opinion/how-to-solve-the-bank-fee-conundrum-hurting-consumers>

- d. Internet search. There is a well-developed ecosystem of online publications and conference materials covering the FinTech business. We searched the Internet for announcements, press reports, analytic pieces and other information that could lead us to previously unidentified companies.

While it is probable that we failed to identify some FinTech companies that could be relevant to the study (particularly very early stage companies), we have a high degree of confidence that we have identified the most significant companies relevant to the study goals as of the time of our research.

Stage 2. Initial Classification of potentially relevant FinTech companies. We began with a website review of all the identified companies to classify them into categories based on the information available on the websites.

Our taxonomy included several categories (and thus, companies) that we ultimately determined were not relevant to our study. The categories ultimately deemed the most relevant to the study (the “Relevant FinTech Categories”) were:

a) **Digital Credit Access/Cost Improvement Lenders**

- Companies that lend money to consumers for short-term needs but seek to do so in a less costly/better structured manner than traditional STSDC and/or lend at a lower cost to people with “thin file”¹⁰⁶ or “damaged file”¹⁰⁷ credit profile

b) **Digital Credit Builder Lenders & Service Providers**

- Companies that lend money to consumers for short-term needs but which, through their lending activities, primarily seek to help consumers improve their credit score to be able to access “standard” lower-cost credit in the future
- Companies that are not lenders but focus on providing services to help (i) lenders identify credit-worthy consumers who would not otherwise be able to access credit on standard terms, and/or (ii) consumers improve their credit score to be able to access “standard” lower-cost credit in the future

c) **Digital Financial & Cash Flow Management Software Solutions**

¹⁰⁶ “Thin File” *Investopedia*. [nd] Available at: <http://www.investopedia.com/terms/t/thin-file.asp>

¹⁰⁷ Rotter, Kimberly. “Guide: How to fix your credit.” *Creditsesame.com*. 2016. Available at: <https://www.creditsesame.com/blog/credit/guide-how-to-fix-your-credit/>
<https://www.creditsesame.com/blog/credit/guide-how-to-fix-your-credit/>

- Companies that provide mobile financial management software applications and online services to guide consumers toward financially healthy behaviors and outcomes, sometimes in conjunction with other services

d) **Alt Digital Banks**

- Companies that, although technically not banks, facilitate mobile transaction deposit solutions for consumers through bank partners, often in conjunction with other services

e) **Digital Income/Expense Variability Management Solutions**

- Companies that provide employers with liquidity and/or financial “smoothing” solutions to help employees manage income & expense variability

f) **Digital Savings Solutions**

- Companies providing mobile apps that facilitate consumer savings for liquidity management and other purposes

The categories of FinTech companies that were ultimately eliminated from the study included (1) companies engaged in FinTech-enabled longer-term installment lending to consumers with damaged credit and low- to mid-range credit scores on standard terms (i.e. lenders who did not either improved access, modified terms or lower costs to consumers), (2) bank online issuers of secured credit cards, (3) FinTech-enabled credit union loan products, (4) online “point of sale” lenders who provided immediate credit for online purchases, and (5) other FinTech companies with businesses that, while in many cases focused on a similar demographic, did not directly address the day-to-day small-dollar cash flow needs of low-income working families. The basis for the exclusion in each case was as follows. We concluded that standard high-cost installment loans, while a potentially valuable tool in consumer financial management, were longer-term liabilities and generally a poor fit for the day-to-day, small dollar, cash flow mismatch needs of low-income working families caused by repeated episodes of income and expense volatility. We concluded that bank-issued online secured credit cards, where the consumer makes a bank deposit equal in most cases to the amount of credit available to the consumer, did not provide significant assistance to most low-income working families that lack any savings with which to fund the card. We concluded that, although credit union small-dollar loan products could potentially be helpful to a subset of our target consumer population who were credit union members, an analysis of the credit union business and these alternatives was beyond the scope of our study. We concluded that “point of sale” lending for online purchases was also out of scope, given the limited utility of this type of lending to “day to day” small-dollar cash flow needs. The final group of FinTech companies that were excluded from the study include many interesting business models that could be useful and relevant to low-income working families—for examples companies focused on automating child support and food stamp payments, simplifying the cancellation of unwanted online subscriptions, provision of banking services to the unbanked, arranging online rent payment, student lending for millennials and provision

veterinary loans—but which we determined not to be directly relevant to resolving the day to day short-term small dollar cash flow variability needs which are the focus of our study.¹⁰⁸

Stage 3. Contact and Telephonic Interviews. We contacted all of the companies (50 total) in the Relevant FinTech Categories through email and/or social media mail (primarily LinkedIn messaging). We conducted interviews with senior management of 30 of these companies during the period from January-April 2017. In nine cases, the author of this paper had sufficient knowledge about particular companies obtained through information available outside the purview of this study. In those cases, formal interviews were deemed unnecessary. Eleven other companies declined to participate in the study or never scheduled an interview or otherwise responded following initial contact.

Figure 1: Relevant FinTech Categories and Companies¹⁰⁹

¹⁰⁸ For reasons of scope, we also did not consider the potential for insurance-based alternatives to STSDC—an area with significant potential but, to our knowledge, no companies actively selling products as of the time of our research.

¹⁰⁹ The author has, since March of 2017, served as a Senior Advisor to Aspiration Partners LLC, the operator of one of the Alt Consumer Banks on the list. Aspiration was not interviewed by the author in connection with this paper.

Digital Credit Access/Cost Improvement Lenders	Digital Credit Builder Lenders & Services	Financial/Cash Flow Management Apps	Income/Expense Variability Management	Alt-Consumer Bank	Savings Solutions
Personify (Applied Data Financial)	SelfLender	DoubleNetPay	Even Responsible Finance	Varo Money	Acorn
Opportun	Lenny	Moven	FlexWage	Simple	Digit
LendingPoint	Lendstreet	MyFin	PayGoal	Aspiration	Earn
FS Card	Finova	Mint	Ziero Finance	Chime Banking	Long Game
Elevate	Payoff	Earnup	Active Hours	Clearbanc	SmartyPig
Float	Revolution Credit	Prism	PayActiv	Bee (One Financial)	Qapital
FIG Loans	Ecredit Hero	Albert	Nowsta		
Lendup	Bloom Credit	Wage Goal (NTFS)			
Ascend	ecredable	Qwil			
	Guaranty Bank	DoubleCheck Solutions			
	Neo				
	Happy Mango				

Appendix A includes a website link for each listed company and brief description of each company's business and products.

The interviews we conducted with executives of companies in the Relevant FinTech Categories covered the following general topics: history of the company and founders, nature of products and product capabilities, target consumer (or business) segments, unique selling proposition for business, use of data in unique ways to identify/reach customers or otherwise conduct business, marketing/distribution focus, challenges in reaching target consumer (or business) segments, sources of revenue currently and in future, applicability of business model to low-income working families today or by expansion of current model and related challenges, predicted size of addressable customer base, plans to scale business and challenges to scale, funding ability (debt and equity) as a constraint on business, stage of current equity funding (seed, venture capital, institutional, etc.) regulatory status, issues and challenges, and openness to partnerships with existing financial services providers, non-profits and government. We also sought specific information relevant to the "Utility" and "Scalability" factors discussed below. Many study participants voluntarily shared other information about their companies. Study participants could designate certain information about their business

plans as confidential, subject to our ability to use the data for purposes of the study and present confidential data in formats that would not disclose the identity of the company in question.

Based on what was learned in the interviews, several FinTech companies were reclassified into categories that more accurately reflected the evolving nature of their business models.

Stage 4. Initial Assessment of Companies and Products. Based on our research and interviews, we assessed individual FinTech companies in the Relevant FinTech Categories across two dimensions:

- “Utility” which we defined as the ability of the products offered by a company to either (a) provide a superior substitute for current STSDC products in managing Key Precipitating Factors for STSDC Use, or (b) provide an effective mechanism for consumers to avoid the use of credit products of any kind in managing Key Precipitating Factors for STSDC Use. For purposes of category (a) above we considered a product to be “superior” substitute if it provided substantially equivalent functionality at a significantly lower price or with a product structure that would be likely to avoid debt traps and other adverse outcomes.

In considering a company’s Utility in either of the two alternative meanings noted above, we took into account a time element, in that several companies described their products as part of an explicit multi-step path for the consumer culminating in Increased Utility through (i) the ability to access a superior substitute for STSDC (i.e., lower cost payday-type credit or credit on standard terms and pricing) and/or (ii) financial resilience through improved financial capacity to avoid STSDC. We also took into account whether a company’s products were explicitly marketed to, or directed towards, low-income working families and, if not, whether they appeared to be adaptable to that customer segment.

- “Scalability,” which we defined as the potential for a company’s business model to support rapid penetration of the low-income working family market to serve a significant portion of low-income working families. In assessing Scalability, we considered various impediments to scale, including operational capability, technology, funding, regulatory structure, and length of sales cycle. We focused heavily on key revenue and expense drivers of the business model and on our assessment of whether the company appeared capable of generating an appropriate return on capital once Scale was reached.

In considering a company’s Scalability we also assessed whether, and to what extent, external assistance or subsidy—from employers, non-profits or government—would be required to serve a significant portion of low-income families either of the two dimensions noted above, or to accelerate the scaling process.

In certain cases, we were able to assess a company’s Utility, but not its Scalability,

from publicly available information despite our inability to interview company management.

It is important to acknowledge that our assessments, although data-based, was influenced heavily by the judgment and experience of the author. We received information at various levels of detail from different companies, and relied on our experience in interpreting and weighing much of the data we received.

Figure 2 shows data relating to our Utility assessments for certain products offered by companies in the Relevant FinTech Categories. We assessed Utility based on our estimate (calculated as described above) that between \$700 and \$980 in additional liquidity would be needed for low-income working families at the \$24,000 and \$48,000 per annum earnings level to survive a maximum concurrent monthly income and expense shock. We concluded from this exercise that these FinTech products, alone or in combination, appear sufficient in most cases to manage negative monthly variances in income/expenses for low-income working families.

Figure 2: Utility--Estimated Maximum Amount of Monthly Liquidity Need: \$700-\$980

FinTech Product	Category	Potential Monthly Utility	Utility Yes/No/Partial?
Digital Earned Income Payroll Advance	Digital Income/Expense Variability Management Solutions	\$450/\$900/\$1350/ \$2,000 @ \$24,000 annual \$800/\$1,600/\$2,400/\$3,200 @48,000 annual Amounts available depend on when borrowing occurs in monthly pay cycle	Yes, particularly later in pay period
Digital Income Smoothing Advance	Digital Income/Expense Variability Management Solutions	\$270 @ \$24,000 annual \$480 @ \$48,000 annual Advance capacity is 15% of after tax monthly income assuming 15% monthly wage variance	Yes, Partial, but only for income shortfall
Digital Payday Alternative or Revolving Credit	Digital Credit Access/Cost Improvement Lenders	\$250->\$2,000	Yes, but often highest cost product
Digital Unsecured Credit Card	Digital Credit Access/Cost Improvement Lenders	\$500-\$1,000	Yes, Partial at low end of credit line
Digital Very Short Installment (6 months or less)	Digital Credit Access/Cost Improvement Lenders	\$100->\$2,000	Yes
Digital Emergency Savings Account	Digital Savings Solutions	\$90-\$540 @ \$24,000 annual \$160-\$960@ \$48,000 annual (5% of after-tax monthly income at 1 month and 6 months)	Yes, Partial, but gradual buildup of impact
Digital Financial Management Application	Digital Financial & Cash Flow Management Solutions	\$90-\$540 @ \$24,000 annual \$160-\$960 @ \$48,000 annual (5% of after-tax monthly income at 1 month and 6 months)	Yes Partial, but gradual buildup of impact

Stage 5. Assessment of Relevant FinTech Categories. Using our assessments of individual FinTech companies, we extrapolated our results into assessments of the Relevant FinTech Categories across the same two dimensions of Utility and Scalability.

We distilled key observations from the interview and assessment process about each of the Relevant FinTech Categories to further inform our conclusions and recommendations:

a) **Digital Credit Access/Cost Improvement Lenders**

- I. Companies that lend money to consumers for short-term needs but seek to do so in a less costly/better structured manner than traditional STSDC and/or lend at a significantly lower cost to a subset of people with a “thin file” or “damaged file” credit profile.
- II. The companies in this category vary considerably in size and experience, ranging from mature lenders with established track records covering several years to new startups with little history.
- III. The products provided range from products similar to payday loans to various types of short-term (and in some cases longer-term) installment loans, credit cards and lines of credit. In all cases, the pricing of these products, although high in absolute terms, appeared clearly superior to STSDC alternatives. Average APRs charged by individual companies ranged from as high as 145% to as low as the 20-30% range for different lending products from different companies in this category. Some lenders charged APRs for loans to new customers that were as high as some STSDC products, although generally rates charged by these lenders declined over time if the customer performed and improved his or her credit profile.
- IV. Product design features were generally superior and loan underwriting processes frequently appeared designed to be compliant with the proposed CFPB rules on short-term credit. One critical distinction between these lenders and STSDC providers is that they report loan performance to credit bureaus, allowing borrowers to build a credit record. This is a significant benefit in the U.S., where taking on debt is the only path to a credit score.¹¹⁰ An adequate credit score can lead to credit on standard terms and, as we have seen, is critical in other areas as many employers, insurers, landlords and cable and telecom providers require credit scores in order to do business with consumers.¹¹¹

¹¹⁰ Morduch and Schneider. p. 119

¹¹¹ Traub, Amy.

- V. Another important characteristic shared by many of these lenders is a focus on progressive credit improvement and cost reduction through performance over time. Lenders that follow this model offer an initial borrowing at a rate nearly as high as STSDC, but reduce the rate, and otherwise improve loan terms, as the borrower pays the initial loan and takes on and pays subsequent loans. In one case, the opportunity for rate reduction is built into the initial loan itself---if the borrower takes actions that improve his or her loan profile during the loan term, the rate on the loan is reduced.
- VI. The combination of lower costs and improved product and underwriting features led to an assessment of relatively high Utility for this category of companies.¹¹² There are some caveats, however. Some of the companies in this category are still very “high cost” lenders in absolute terms, which compromises Utility, although all provide their loans at lower cost (sometimes significantly so) than current STSDC providers. And, as described above, many offer progressively lower-cost products for good borrowers. In addition, some of the products these companies offer are installment credit longer in tenor than STSDC, which makes these products less effective in addressing repeated, smaller liquidity shortages.
- VII. In most cases, these companies were lending directly to consumers under state lender licenses. Others used, or were considering using, a bank partner to originate loans sourced by the company. The bank then immediately sold those loans to the company. The use of a “fronting bank” partner allows the lender to avoid otherwise applicable state law interest rate limits, although there are ongoing legal controversies in this area.¹¹³

¹¹² In the author’s view, non-borrowing Utility solutions to the Key Precipitating Factors for STSDC Usage are generally preferable to borrowing-based solutions. See Baker, Todd H. “High Cost Credit Better than No Credit? Not Necessarily.” *American Banker*. 5/31/16. Available at: <https://www.americanbanker.com/opinion/high-cost-credit-better-than-no-credit-not-necessarily>. However, as the purpose of this paper is to assess the marginal benefits of specific alternatives to STSDC in terms of Utility and Scalability, the inquiry is limited to those questions, leaving the larger question of when high-cost borrowing is inherently damaging to another time.

¹¹³ There are ongoing legal controversies relating to the use of banks for this purpose. Olthoff, Mark A. “Recent Supreme Court Action Creates Uncertainty in Financial Industry: *Madden v. Midland Funding*” *The National Law Review*. 2016. Available at: <http://www.natlawreview.com/article/recent-supreme-court-action-creates-uncertainty-financial-industry-madden-v-midland>

“Colorado Attorney General Pursues ‘True Lender’ and ‘Madden’ Actions Against Major Non-Bank Online Lenders.” Pepper Hamilton, LLP. 4/3/17. Available at:

- VIII. Distribution was primarily mobile or web-based, although one company still uses a large store network in Hispanic areas to source most of its volume.¹¹⁴
- IX. All the companies in this category use some form of “alternative data” to identify potential customers and in their loan origination and, often, servicing and collection, processes. This alternative data is used in addition to the traditional data sources from credit bureaus that underlie FICO¹¹⁵ scores. The companies generally believe that alternative data helps them to identify a subset of “thin file” or “damaged credit” consumers with low (or no) FICO scores whom the companies believe are qualified for more traditional credit products with lower overall borrowing costs, as well as improving their ability to detect fraud—traditionally a major problem for online lenders. The use of alternative data appears to be essential to this business model.
- X. “Pre-screening” of customers (which means determining in advance from available data which individuals are likely to qualify for credit) is generally viewed as essential by these companies, especially as non-pre screened online loan origination channels are often viewed as “adversely selected” for credit purposes, resulting in higher losses for loans originated through that channel.¹¹⁶ Frequently, channels such as direct mail, telephone, social media, standard advertising and partner-based marketing were used to drive high-potential “pre-screened” customers to the online application process. The level of pre-screening is often tied to the business model of the lender. Lenders who charge lower rates need to pre-screen more carefully in order to keep losses lower, while higher-rate lenders can lend to a wider range of borrowers with less strict screening methods. This may affect the Scalability of the business models of the more selective lenders.

<http://www.pepperlaw.com/publications/colorado-attorney-general-pursues-true-lender-and-madden-actions-against-major-non-bank-online-lenders-2017-04-03/>

¹¹⁴ Because of this, the company in question is sometimes viewed as not a true “FinTech” company, although it uses technology heavily in its credit decisioning and continues to build out online and mobile capabilities.

¹¹⁵ “What is a Credit Score?” *Myfico.com*. [nd] Available at: <http://www.myfico.com/credit-education/credit-scores/>

¹¹⁶ Weiss, Gregor N. F. and Pelger, Katharina and Horsch, Andreas, Mitigating Adverse Selection in P2P Lending – Empirical Evidence from Prosper.com (July 29, 2010). Available at SSRN: <https://ssrn.com/abstract=1650774> or <http://dx.doi.org/10.2139/ssrn.1650774>

- XI. The availability of funding, and the cost of funding, for originated loans is a major potential constraint for individual lenders in this category (as it is for all non-bank lenders) although it appears that the more established companies with lending track records currently have access to adequate funding from banks and institutional lenders including hedge funds. Given the high absolute rates charged for loans, more established lenders in this category appear to be able to generate sufficient net interest income to ensure profitability even with high expected defaults and losses, and therefore currently have adequate access to funding. However, funding availability for finance companies is a function of capital market conditions and credit performance. As of the date of this paper, none of these lenders (with one partial exception) have completed a full consumer credit cycle or managed through a protracted capital markets disruption. This means that the funding capacity of these companies have not been challenged by an extended period of high defaults and credit losses. A further discussion of this issue appears below.¹¹⁷
- XII. In nearly all cases, companies in this category were accessing bank checking account data from consumers in order to improve their ability to select borrowers, service and collect loans and initiate transactions in the account to make loan payments. Access to the consumer's checking account was typically arranged through a third party service such as Plaid or Yodlee which provides lenders with consumer transaction history, balance data, income history, identify verification and account authentication, as well as the ability to automatically draw from the account to make loan payments. Access to this data was often critical to lending, servicing and collections decisions.
- XIII. There currently is no legal requirement for a bank to allow a FinTech company to access customer data held by the bank, directly or through third parties. The question of "data right," "data sharing" and ownership and control of financial data held by banks is a contentious one, with FinTech companies and banks both collaborating in areas of mutual interest¹¹⁸ and lobbying against one another

¹¹⁷ See also Baker, Todd. "Marketplace Lenders are a Systemic Risk." *American Banker*. 8/17/15. Available at: <https://www.americanbanker.com/opinion/marketplace-lenders-are-a-systemic-risk>

¹¹⁸ Barba, Robert. "Why the JPM-Intuit partnership is a big step for data sharing." *American Banker*. 1/25/17. Available at: <https://www.americanbanker.com/news/why-the-jpm-intuit-partnership-is-a-big-step-for-data-sharing>

where interests diverge.¹¹⁹ The CFPB, under the authority of Section 1033 of the Dodd-Frank Act, is currently seeking public comment about consumer access to consumer financial information, including access by entities acting with consumer permission, in connection with the provision of products or services that make use of that information.¹²⁰ The resolution of this question will have a profound impact on all the FinTech companies we studied.

- XIV. Regulatory issues for these companies are typical to all non-bank lenders, and include compliance costs associated with state licensing, limits imposed on rates and fees by state laws, costs associated with using a bank as originator to avoid state rate restrictions, compliance with ECOA, FCRA, TILA, FDCPA and other federal consumer protection laws.¹²¹ Because state laws differ in many respects, some of these companies must tailor their products to individual state rules.
- XV. While individual companies in this category may find their growth limited by the funding available to their individual enterprise for the reasons noted above, and some companies will also be inherently less scalable by limiting their lending to a relatively small group of pre-screened customers who can qualify for lower rates, the category as a whole was assessed to have a good degree of Scalability in the current environment. We see no reason why companies in this category could not collectively provide \$10 billion+ annually in loans over time, which would be less than a quarter of the currently outstanding payday and auto title balances noted above¹²² and—to use an apt historical comparison-- about one-seventh of

¹¹⁹ Yurcan, Bryan, “FinTech companies form lobbying group focused on data sharing.”

American Banker. 1/19/17. Available at:

<https://www.americanbanker.com/news/fintech-companies-form-lobbying-group-focused-on-data-sharing>

¹²⁰ Bureau of Consumer Financial Protection Bureau. *Request for Information Regarding Consumer Access to Financial Records*. 2016. Available at:

http://files.consumerfinance.gov/f/documents/112016_cfpb_Request_for_Information_Regarding_Consumer_Access_to_Financial_Records.pdf

¹²¹ Manbeck. And Franson, M. *The Regulation of Marketplace Lending: A Summary of the Principal Issues (2015 Update)* Chapman & Cutler, LLP. 2015. pp. 16 & 18. Available at:

<https://www.aba.com/Tools/Offers/Documents/ChapmanRegulationofMarketplaceLendingWhitePaper040815.pdf>

¹²² To provide a comparison, in 2000 total unsecured consumer finance receivables (except real estate and auto) held by non-bank finance companies were \$ 94.2 billion. Dynan, K.E., Johnson,

the outstanding loans managed by Household, Inc., the largest U.S. “traditional” non-prime consumer finance company, in 2000, before the build up to the 2008 financial crisis.¹²³ The largest of the companies that we interviewed already has over \$400 million in loans outstanding.¹²⁴ This assessment was tempered by our view that funding availability for the entire category (and other non-bank lenders) is likely to be heavily reduced, and costs of borrowing increased, during a severe credit downturn or financial markets dislocation. For that reason companies in this category were assessed as having lower Scalability than otherwise would be the case.

b) Digital Credit Builder Lenders and Services

- I. Companies that lend money to consumers for short-term needs but which, through their lending activities, primarily seek to help consumers improve their credit score to be able to access “standard” lower-cost credit in the future.
- II. Companies that are not lenders but focus on providing services to help (i) lenders identify credit-worthy consumers who would not otherwise be able to access credit on standard terms, and/or (ii) consumers improve their credit score to be able to access “standard” lower-cost credit in the future.
- III. No lender in this category agreed to an interview for this study. Based on other sources of information described above, it appears that the lenders in this category focus on customers between those targeted by Digital Credit Access/Cost Improvement Lenders and “standard” FICO-based consumer lenders.¹²⁵ While these companies are lending, in some form, to their customers, they are doing so specifically to assist customers raise their credit scores enough

K.W. and Slowinski, S.M. *Survey of Finance Companies, 2000*. Federal Reserve Bulletin. 2002. Available at:
<https://www.federalreserve.gov/pubs/bulletin/2002/0102lead.pdf>

¹²³ United States Securities and Exchange Commission. *Annual Report Pursuant to Section 13 ot 15(d) of the Securities Exchange Act of 1934*. 2000. Available at:
<http://www.getfilings.com/o0000950131-01-500247.html> [Note 4 to Financial Statements]

¹²⁴ United States Securities and Exchange Commission. Amendment No. 6 to Forms S-1 Registration Statement Under The Securities Act of 1933: Elevate Credit, Inc. 2017. Available at:
<http://www.nasdaq.com/markets/ipos/filing.ashx?filingid=11432756>

¹²⁵ By “standard” in this context, we mean prime or near-prime lenders using traditional credit scoring and charging lower market rates.

to become eligible for “standard” FICO-based consumer credit. For example, one company in this category will lend money to a consumer, with the loan proceeds deposited in a restricted bank account, which becomes available to the borrower only after it pays off the installment loan. The lender takes essentially no risk and the customer’s payment performance is reported to the credit agencies. If the loan is repaid in a timely manner, the customer’s credit score should increase and his or her cost of borrowing should decrease.¹²⁶

- IV. A key revenue source for these lenders is fees charged to a “standard” lender for preferred access to customers who have successfully used the companies’ “digital credit builder” products. Essentially they are being paid for identifying marginal credits that have improved their credit scores by working with the lender.
- V. We were unable to definitively assess either Utility or Scalability of the lenders in this category due to our inability to interview the companies in this category, although based on our external research we believe that that potential for Utility is moderate and Scalability is limited, unless these companies either become full-service lenders themselves or are absorbed into existing full-service lenders.
- VI. Non-lender companies in this category were largely (i) developing alternative data-based credit scoring solutions to identify “thin file” customers with potential to receive standard credit, and/or (ii) identifying consumers with the characteristics identified by the alternative data-based credit scoring solutions, and (iii) marketing the credit scoring solutions and/or customers to existing lenders. Several of the companies also market directly to consumers by offering services like a mobile financial management applications or a useful “alternative” credit score, as a way to gather financial data used to identify and score consumers, who then are approached by partner lenders.
- VII. These non-lending companies appear to demonstrate Utility by helping some consumers qualify for lower cost credit on improved terms but their Scalability appears dependent upon whether their alternative data-based credit scoring solutions are robust enough to be incorporated into many other lenders’ credit processes.
- VIII. Many companies in this category were accessing consumer bank checking account data from consumers in the manner described above. This access is critical to their business.

c) Digital Financial & Cash Flow Management Software Solutions

¹²⁶ <https://www.selflender.com/>

- I. Companies that provide mobile financial management software applications and online services to guide consumers toward financially healthy outcomes, sometimes in conjunction with other services.
- II. These companies have generally demonstrated strong ability to acquire customers through social media and other online channels by providing valuable financial management services to mobile-savvy consumers.
- III. As a general matter, the financial management services offered by companies in this category include assistance in managing and paying bills, avoiding bank overdrafts, maintaining savings and achieving personal financial goals. Frequently, insights from behavioral economics and psychology are used in designing the user experience to “nudge” consumers and maximize the likelihood that consumers will make good financial decisions. These companies were generally assessed highly for Utility because of their real potential for assisting low-income working families manage income and expenses and avoid use of STSDC products.
- IV. All companies in this category were accessing consumer bank checking account data from consumers in the manner described above. This access is critical to their business.
- V. The biggest challenge that these companies face is accessing sustainable sources of revenue. In most cases, the company’s mobile application is free for consumers and does not itself generate revenue for the company. As a result, it appears that these companies will, if they wish to continue as stand-alone businesses, need to adopt business models which either (i) generate revenue from fee-based partnerships with other financial services providers such as lenders, banks or investment firms (some have already done this), (ii) generate revenue from the company providing deposit, loan or investment services itself, or (iii) charge the consumer a fee for the service.
- VI. These companies share consumer “trust” issues with companies in the Alt Digital Bank and Digital Savings Solutions categories. This is especially so if they enter into fee-based partnerships with third party providers for lending or investment services. Customer acquisition for these companies can be costly due to the need to provide multiple human touch points to convince customers to do financial business with an unknown startup.
- VII. Despite the high level of Utility demonstrated by their products, it appears likely that the revenue challenge faced by these companies will lead them to combine with companies in other categories or expand their services into other categories as described above. The very valuable product they provide seems particularly well suited to inclusion in the business model of companies in the Alt Digital Bank, Digital Savings Solutions, Digital Credit Access/Cost Improvement Lenders

and Income & Expense Variability Management Solutions categories. This leads to a limited view of the Scalability of most of these enterprises in their current form.

d) Alt Digital Banks

- I. Companies that, although technically not banks, facilitate mobile transaction deposit solutions for consumers through bank partners, often in conjunction with other services.
- II. The business model of companies in this category involves providing “front end” banking services to consumers exclusively through consumer-friendly and easy to use mobile and/or online interfaces, supported by bank partner infrastructure.
- III. Because of regulatory barriers in the U.S., these companies are currently unable or unwilling to become regulated banks themselves. They must therefore provide any deposit-related and payment services through a regulated bank or other financial intermediary, and compensate, or be compensated by, that intermediary for the costs and benefits of the services provided. As a general matter, companies in this category were therefore focused on managing issues of costs and control associated with their bank suppliers. Because demand deposits generate both fee income (from debit card interchange¹²⁷ and bank overdraft protection fees) and a smaller amount of “spread” income (due to the funding value of low cost and highly stable consumer deposits) for the bank partner, the bank partner is willing to compensate the Alt Digital Bank for deposits and accounts gathered through the mobile banking application.¹²⁸

¹²⁷ Due to the so-called Durbin Amendment contained in the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), Pub. L. No. 111-203, 124 Stat. 1376 (2010), which resulted in regulations that cap debit card interchange fees charged by banks with more than \$10 billion in assets, these partnerships are generally entered into with smaller banks.

¹²⁸ Deposits gathered by a bank in this way are generally considered “brokered deposits” for purposes of various bank regulations. 12 CFR Section 337.6. Among other restrictions, when a bank with under \$10 billion in assets has more than a 10% ratio of brokered deposits to total assets, the bank’s deposit insurance premiums may rise substantially. Available at: <https://www.fdic.gov/news/news/financial/2016/fil16042b.pdf>

Federal Deposit Insurance Corporation. *Identifying, Accepting and Reporting Brokered Deposits: Frequently Asked Questions*. 2016 Available at:

<https://www.fdic.gov/news/news/financial/2016/fil16042b.pdf>
<https://www.fdic.gov/news/news/financial/2016/fil16042b.pdf>

These companies can also, if desired, provide loans (either directly or through partnerships with other lenders) to their customers, although this requires appropriate state and federal licensing and compliance. In making loans directly, they lack a key advantage of banks in that they cannot use the deposits generated by the company's mobile application to fund loan balances, and must rely on other, higher cost, sources of funding if they wish to make and hold loans. They can also provide financial management applications and offer other traditional bank and investment products to their customers through third-party partnerships, again subject to appropriate licensing and compliance.

- IV. Companies in this category have an offsetting benefit in that the cost of customer acquisition and service delivery through exclusively digital channels— at scale-- is generally much lower than the cost of traditional banking acquisition and service delivery.
- V. Challenges for these companies include building trust for a purely digital banking product, managing expenses associated with supporting multiple touch points (mobile, online, phone) for customers, maintaining the viability of the value sharing model with bank partner as a revenue generator. They will also face funding challenges if they become lenders.
- VI. In their current state, these companies do not demonstrate significant Utility for purposes of our study. Because they rely in most cases on demand deposits to generate income (through payments by the partner bank of a portion of that bank's debit card interchange, bank overdraft protection and spread income from the deposits), they generally focus on a demographic with higher income potential, more assets and higher debit card spending than most low-income working families. They also do not currently provide any loan products that could substitute for STSDC and serve low-income working families' liquidity management needs. However, as competition intensifies and these companies seek to expand and add additional sources of revenue over time, we believe that some Alt Digital Banks may reposition their customer focus and add products more suitable for the low-income working family demographic, like those provided today by companies in the Digital Financial & Cash Flow Management, Digital Savings Solutions, and Digital Credit Access/Cost-Improvement Lender

Brokered deposits also have negative consequences at larger (above \$50 billion in assets) banks where they can significantly increase liquidity requirements and therefore reduce profitability.

Ireland, Oliver I. *Liquidity Coverage Ratio: A Quick Reference*. Morrison & Foerster. 2015.

Available at:

<https://media2.mofo.com/documents/150225userguideliquiditycoverage.pdf>

categories.

- VII. A compelling case can be made that, over time, the Alt Digital Banks will consolidate both the Digital Financial & Cash Flow Management and Savings categories entirely due to their superior revenue model and the customer acquisition and retention benefits of the added capabilities for the Alt Digital Banks. This would become even more likely if the regulatory environment changed to allow them to become FDIC-insured banks themselves. The opposite could also occur if companies in those other categories add Alt Digital Bank capabilities. It remains an open question whether, absent becoming (or being acquired by) regulated banks themselves, Alt Digital Banks can effectively achieve scale in their businesses given increased investment by existing banks in mobile delivery and their continued reliance on (and payment for) the services of the existing banking and financial services infrastructure underlying their products. The experience of the so-called Neo Banks in the United Kingdom suggests that, even with a formal bank charter, this may be challenging.¹²⁹

e) Digital Income/Expense Variability Management Solutions

- I. Companies that provide employers with liquidity and/or financial “smoothing” solutions to help employees manage income & expense variability.
- II. The companies in this category were, with one exception, providing solutions through employers (or quasi-employers of independent contractors receiving 1099 income in the “gig economy” such as Uber) as a form of employee benefit.
- III. The solutions fell into two broad categories: (i) inexpensive alternatives to STSDC borrowing through the advance of earned but unpaid wages to employees or independent contractors, prior to a scheduled payday, on demand, and (ii) income stabilization solutions to support predictable employee income by “topping up” wages in below average pay periods and repaying the advance in above average periods. In many cases, the companies we interviewed were working on adding other financial management tools to their solutions to further support employees’ “financial health.”

¹²⁹ Partington, R. and Khan, J. “Neobanks Chasing U.K.’s Biggest Lenders Face Battle for Survival” *Bloomberg Technology*. 9/28/16. Available at: <https://www.bloomberg.com/news/articles/2016-09-28/neobanks-chasing-u-k-s-biggest-lenders-face-battle-for-survival>

- IV. One critical advantage these companies offer is that their products can be delivered without significant credit risk either to the FinTech company or the employer. This is particularly true in the case of the companies advancing already earned but unpaid wages through software imbedded in the employer's payroll/benefits system, that generally have first call on the employee's paycheck. The one company providing an income stabilization solution has a small degree of risk from employees who leave employment with a negative balance associated with a previous "top up" of wages, but this risk is also ameliorated by direct access to the employer's payroll system to secure repayment.
- V. As a result of the very low credit risk created by their products, companies in this category are able to charge fees much lower than any company that lends its own money to low-income employees, and bears the repayment risk. These companies typically either charge employers a user-based program fee for the service or charge employees a usage-based fee. In most cases, the cost of the service is paid, or subsidized, by the employer. One company charges employees \$5 per \$500 in earned but unpaid wages advanced (this is sometimes employer-subsidized), which can be compared to the typical \$15 per \$100 charged by a payday lender. Other companies' fees are entirely borne by the employer—the employee pays nothing to use the service.
- VI. Both approaches were assessed as high Utility, with the first category (advance of earned but unpaid income) providing a clearly superior substitute for STSDC and the second category (income stabilization) assisting with avoidance of the need for STSDC products.
- VII. Companies were generally promoting their products/services as a way for employers and quasi-employers to help employees manage income and expense variability, avoid STSDC and thus improve employee "financial health" or "financial fitness," which is an area of focus in the employee benefits arena.¹³⁰ Expected benefits for the employer included improved employee performance, lower turnover and lower absenteeism.¹³¹

¹³⁰ Taylor, Susan Johnston. "5 Employee Benefit Trends to Watch in 2016." *US News & World Report*. 12/15/15. Available at: <http://money.usnews.com/money/personal-finance/articles/2015-12-15/5-employee-benefit-trends-to-watch-in-2016>

¹³¹ Tringali, Victor M. and Giandonato, Joseph.

Garman, E.T., Leech, I.E., and Grable, J.E. Pp. 164-165.

- VIII. Companies in this category generally were concerned about the long sales cycle associated with corporate purchases of their products/services. Companies were pursuing different distribution strategies to reach employers, including direct sales, integration with payroll providers, integration with employee benefit providers and integration with “time and attendance” software providers.
- IX. Companies were also focused on delivering the simplest possible integration of their solution with employer or partner systems and keeping the timing short and the cost of installing the products/services as low as possible. Another area of focus was education and the promotion of the product to employees once it is made available through the employer. Companies generally felt that the implied employer endorsement helped speed employee adoption of their products.
- X. All companies in this category were accessing consumer bank checking account data from consumers in the manner described above. This access is critical to their business.
- XI. Regulatory issues were not generally viewed as a significant concern at the present time, as the companies had generally structured their solutions in a manner which, in the companies’ view, do not require state licensing as lenders or loan brokers despite some “loan-like” aspects of their customer interactions.
- XII. These companies generally were assessed very highly for Scalability as a single large installation could assist several hundred thousand low-income employees, although the long corporate sales cycle means that individual companies in this category would likely add consumer customers slowly and in “chunks.” Nevertheless, the potential is large. If 25% of the employees of Wal-Mart, Yum! Brands, McDonald’s, UPS, Kroger, Target and Home Depot ¹³² were to use the services of these companies in place of STSDC, it would remove close to 1.2 million individuals from the STSDC system. Adoption by the U.S. military would also bring quick scale. If 30% of active military and reserve personnel (who totaled more than 2.1 million in 2016) were to use these companies’ services, it would remove another 630,000 individuals from the STSDC system.
- XIII. It also seems probable that these companies will seek to become “center posts” for a broader set of employer-sponsored financial health benefits and will add additional FinTech products that employers could offer to assist employees with financial challenges. Among these products could be some currently provided by

¹³² “U.S. Largest Employers List” *Statisticbrain.com*. 2016. Available at: <http://www.statisticbrain.com/u-s-largest-employers/>

the Digital Financial & Cash Flow Management, Digital Savings Solutions and Alt Digital Bank categories.

f) Digital Savings Solutions

- I. Companies providing mobile apps that facilitate consumer savings for liquidity management and other purposes.
- II. Companies in this category use a variety of methods, including free financial management software, psychological/behavioral “nudges” and “gamification” strategies, to attract customers and assist them in setting and reaching savings goals through mobile interfaces. Like the Alt Digital Banks, these companies are generally unable to become regulated banks themselves. They must therefore provide any deposit-related services through a third-party regulated bank, and compensate, or be compensated by, that intermediary for the costs and benefits of the services provided. Because savings deposits generate “spread” income (due to the lower cost and higher stability of deposits compared with other funding) for the bank partner, the bank partner is willing to compensate the Digital Savings Solutions provider for any deposits gathered through the mobile application. Unlike the demand deposit accounts gathered by Alt Digital Banks, savings accounts do not generate debit interchange or bank overdraft fee income for the partner bank, which is generally a larger source of revenue.
- III. All companies in this category were accessing consumer bank account data from consumers in the manner described above. This access is critical to their business.
- IV. Because of the simple, “savings only” indirect business model, these companies should theoretically be able to operate at lower cost levels than many of the other companies in the study. However, these companies also share “trust” issues with companies in the Alt Digital Bank and Digital Financial & Cash Flow Management Software Solutions categories. Customer acquisition for these companies can thus be costly due to the need to provide multiple human touch points to convince customers to do financial business with an unknown startup. One of the companies in this category is using “gamification” to attract savers less expensively by providing “lottery-like” prizes for positive savings behavior. This approach—or other novel approaches— could potentially obviate the “trust” and cost of customer acquisition issues.
- V. The Utility of accruing savings through one of these companies is high, as long as it does not merely substitute for existing savings through traditional bank channels. This is particularly so if savers are encouraged to view additional savings through one of the Digital Savings Solutions companies as “revolving

savings”¹³³-- a short-term liquidity tool for managing Key Precipitating Factors for STSDC Use rather than a “long-term” retirement-focused asset.¹³⁴

- VI. The Scalability of these companies appears to be limited by two things. First, as a general matter, companies in this category, which rely on the support of traditional banks to deliver the deposit products they offer to customers, were focused on managing issues of costs and control associated with their bank suppliers. Revenue is entirely based on the amount third-party bank partners are willing to pay for deposits gathered. All of these companies were founded during a period where deposits were priced at or near zero; if general interest rates rise (they appear to be on an upward trend as of the date of this paper) the value of savings deposits for third party banks and the price they will pay for access to those deposits could change radically. This issue is exacerbated by the fact that all such deposits (like those of Alt Digital Banks) are considered “brokered deposits” for bank regulatory purposes, which in many cases reduces the value of such deposits to the receiving bank.¹³⁵ Second, the savings deposit product is neither unique nor technologically complex. There is nothing preventing existing banks from reproducing the product features offered by Digital Savings Solutions providers today and using them for their own deposit gathering activities. Substitution may be more limited for companies with a unique approach (such as the “gamification” example noted above.)
- VII. It appears likely that the revenue challenge faced by these companies will lead them to combine with, or become, companies in other categories. The very valuable high Utility product they provide seems particularly well suited to inclusion in the business model of companies in the Alt Digital Bank, Digital Financial & Cash Flow Management Software Solutions and Digital Income & Expense Variability Management Solutions categories. This leads to a limited view of the Scalability of these enterprises in their current form.

Stage 6: Estimated Size of FinTech Product Market for Low-Income Working Families.

Building on our conclusion above that FinTech products from the Relevant FinTech Categories, alone or in combination, appear sufficient in most cases to manage negative variances in

¹³³ Morduch and Schneider, pp. 96-109.

¹³⁴ “The Importance of Emergency Savings.” *Military.com*. [nd] Available at: <http://www.military.com/money/personal-finance/banking-and-savings/the-importance-of-emergency-savings.html>

¹³⁵ See note 126.

income/expenses for low-income working families, we attempted to assess the potential size of the market for these products among low-income working families.

We calculated the estimated number of full-time workers in low-income working families who could reasonably be expected to benefit from products from the Relevant FinTech Categories, if those products were to become widely available. The calculations are shown in Figure 3.

Figure 3: Calculation of Addressable Market—Low Income Working Families

Relevant FinTech Category and Calculation Inputs	Base Case (in millions)	Aggressive Case (in millions)
1. Digital Income/Expense Variability Management Solutions		
# workers in companies that employ >500 or >1,000	47	55
Low-income working families as % of total	0.32	0.32
Est. # members of low-income working families employed in companies that employ >500 or >1,000	15.04	17.6
% of low-income workers experiencing income/expense volatility	0.55	0.825
Total large company low-income employees experiencing volatility	8.72	14.52
2. Digital Credit Access/Cost Improvement Lenders & Digital Credit Builder Lenders and Services		
Total thin and damaged file people in U.S.	54	70
% of thin/damaged that can be re-scored	0.35	0.7
Total re-scorable thin/damaged file	18.9	49
% working age employed	0.785	0.785
Low-income working families as % of total	0.32	0.32
Total re-scorable workers in low-income working families	4.75	12.31
3. Digital Savings Solutions		
# low-income working families	10.4	10.4
% households <\$40,000 not saving @100% and 150%	0.55	0.825
Number of full-time workers per low-income working family @100% and 125%	1.2	1.5
# workers in low-income working families without emergency savings but could save	6.9	12.9
4. Digital Financial & Cash Flow Management Solutions		
# of low-income working families	10.4	10.4
Number of full-time workers per low-income working family @100% and 125%	1.2	1.5
Total low-income working family workers who could use	12.5	15.6

digital management products

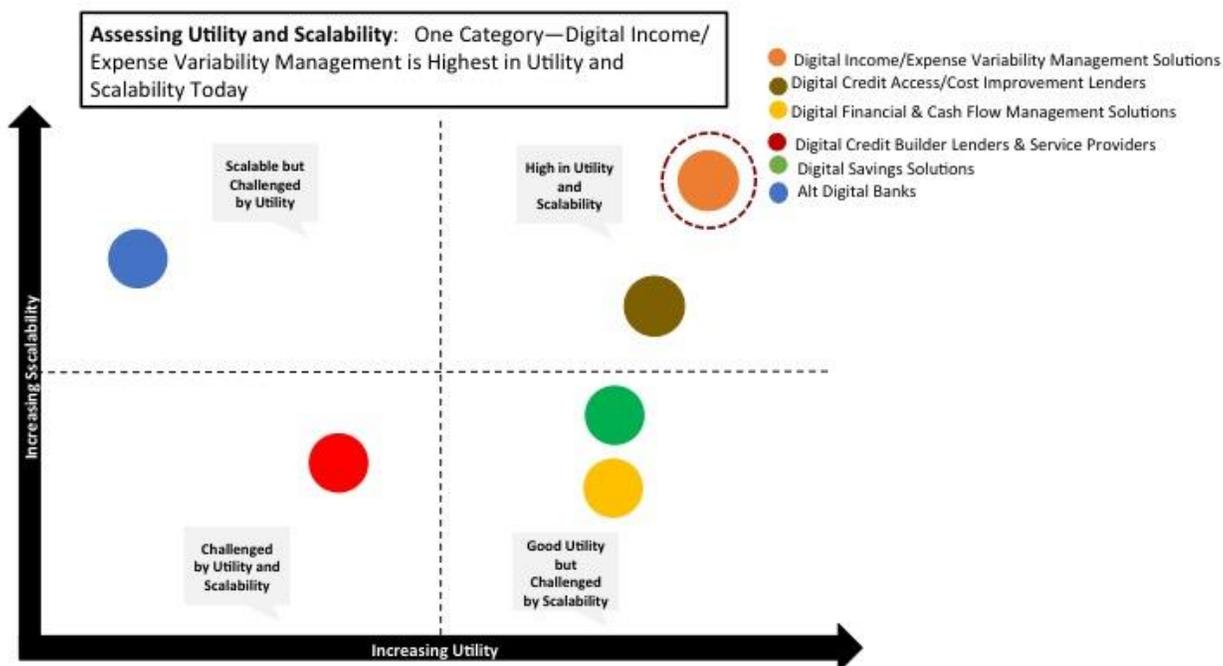
Based on these estimates, we believe that individual FinTech products would be able to address the Utility needs of a minimum of 4.7 million and a maximum of 15.6 million full-time workers in low-income working families. Collectively, we believe that these FinTech products could benefit virtually all of the 10.4 million low-income working families and, indirectly the 47 million individual members of those families.

General Conclusions.

- As described above, there is a clear need for more effective and lower cost (financial, social and economic) alternatives to the current STSDC system due to:
 - The documented liquidity and income/expense variability challenges facing low-income working families,
 - The negative personal consequences for many low-income working families who rely on STSDC to deal with liquidity issues, and the significant negative economic and social consequences of high STSDC use,
 - The largely ineffective regulatory attempts to limit the negative consequences of STSDC while continuing to provide access to liquidity support for low-income working families, and
 - The limited likelihood of additional government action in the regulatory sphere (or, for that matter, government action to change the underlying economic and social factors that lead to continuing reliance on STSDC by low-income working families) unless and until the political situation changes in the U.S.
- Private sector adoption of a set of FinTech-centered alternatives to STSDC has the potential to shift a significant fraction of low-income working families away from reliance on the current STSDC system over time and to materially improve their financial resiliency and health, without the need for government financial support or new laws or regulations.
 - We believe that the use of FinTech products from the Relevant FinTech Categories, alone or in combination, would be sufficient to manage a \$700 to \$980 maximum monthly negative variance (combining below average income and above average expense) in consumer income/expense, an amount sufficient in most instances to eliminate the need for a low-income working family to use STSDC.

- If FinTech products from the Relevant FinTech Categories were to become widely available, the individual FinTech products would be able to address the Utility needs of a minimum of 4.7 million and a maximum of 15.6 million full-time workers in low-income working families. Collectively, we believe that these FinTech products could benefit virtually all of the 10.4 million low-income working families and, indirectly, the 47 million individual members of those families, by reducing or eliminating reliance on STSDC. The importance of this conclusion is highlighted by a comparison to the total number of unique payday loan borrowers (12 million) and auto title loan borrowers (2+ million) in a typical year.
- In addition, we believe that the employer channel is the best vehicle for dissemination of FinTech products from the Relevant FinTech Categories to low-income working families because of the superior Scalability of the employer-based model as well as the potential for rapid growth and employer subsidization. The size of the addressable market for employer-based FinTech solutions is very large. In 2014, almost 65 million Americans, or a little over 41% of wage earners, worked in jobs paying between \$15,000 and \$50,000 (a reasonable proxy for low-income working families.)¹ Over 55 million individuals worked for companies with more than 500 employees (47 million of these worked for companies with over 1,000 employees.) If superior FinTech-enabled alternatives to STSDC were to reach only 15% of the workers employed by large companies, 8.25 million employees would be better off. If these alternatives reached 40% of those employees, the number helped could rise to 22 million.
- FinTech companies in all the Relevant FinTech Categories, with the possibly temporary exception of Alt Digital Banks, are today providing products that have greater Utility than STSDC for low-income working families, and thus represent a meaningful improvement over the current STSDC system.
- The FinTech companies ranged from pure B2C direct models to pure B2B, with several that could be described as B2B2C because they market their services both to employers and employees. Many different sales and distribution strategies are being followed, including word of mouth/viral, social media, direct mail, TV advertising, direct sales forces and indirect sales through third party partners. While the B2B models in the Digital Income/Expense Variability Solutions category rate the highest for Scalability, several B2B models in other categories also appeared highly Scalable. Scalability and obstacles to Scalability were a major focus of management in virtually all cases. This is typical for early stage venture-backed companies.
- One category—Digital Income/Expense Variability Management Solutions--- was assessed as both the most Scalable and the highest Utility category measured in our study. Companies in this category also appeared to have the strongest business models

Figure 4: Category Highest in Utility and Scalability



- Companies in the Digital Income/Expense Variability Management Solutions category, due to their focus on providing their products through employers as part of an employee benefit solution (a “Financial Health Benefit Plan”), appear to have the greatest potential of any category to create consistently Scalable and high Utility business models, which could reduce costs for employers¹³⁶ while having a major impact in increasing the “financial health”¹³⁷ of low-income working families. This category provides both the least expensive and most immediately useful substitutes for STSDC and an important tool to help manage the Key Precipitating Factors for STSDC Use in a manner to avoid the need for STSDC . By including FinTech alternatives to STSDC in employee benefit plans, employers would not only help their employees

¹³⁶ Meyer, Cynthia.

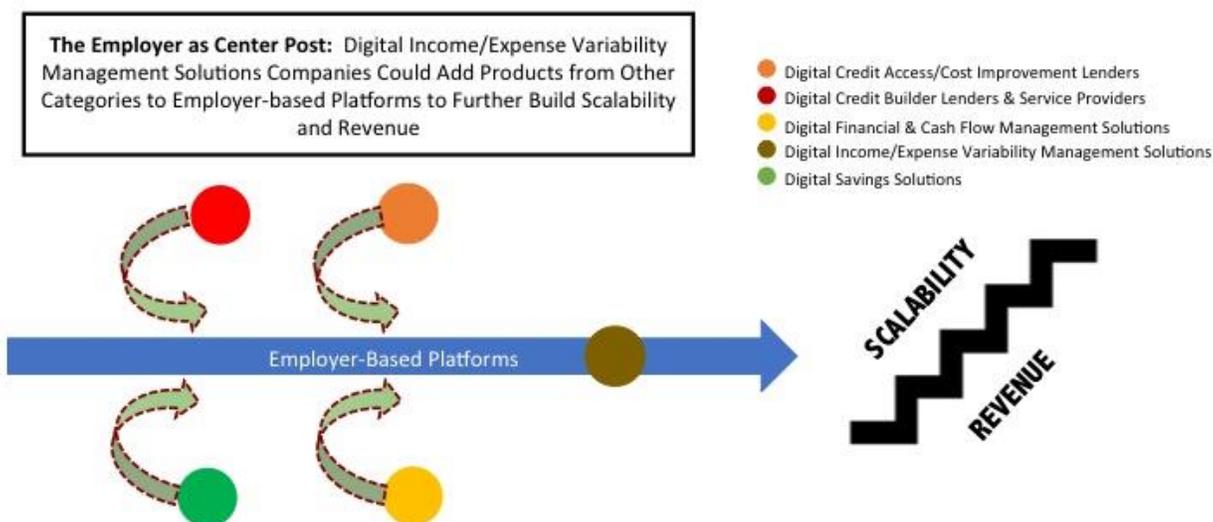
¹³⁷ CFPB Releases Tool to Help Measure Financial Well-Being. Consumer Financial Protection Bureau. 2015. Available at: <https://www.consumerfinance.gov/about-us/newsroom/cfpb-releases-tool-to-help-measure-financial-well-being/>

Parker, Sarah. *Eight Ways to Measure Financial Health*. Center for Financial Services Innovation. 2016. Available at: http://cfed.org/assets/pdfs/Data_Tracking_Presentation_Sarah_Parker.pdf

manage their personal lives, they would also reap substantial bottom-line improvements through increased employee engagement and focus, lower turnover and lower absenteeism. As a result, we believe that the employer channel is the best vehicle for dissemination of FinTech products for low-income working families.

- The employer channel also provides the opportunity for FinTech companies to grow by adding other financial products and capabilities, delivered through the Financial Health Benefit Plan, which are designed to improve employee financial health and reduce corporate costs associated with employee financial stress. The biggest challenge identified for this category is the extended sales cycle for sales of software solutions to employers (either directly or indirectly) through a B2B business model.
- In addition to high assessment for Utility and Scalability, the FinTech companies in the Digital Income/Expense Variability Management Solutions showed significant potential for becoming the “center post” of a more extensive set of financial health solutions delivered through a Financial Health Benefit Plan. It seems likely that many of the services now provided by companies in the Digital Savings Solutions, Digital Financial & Cash Flow Management Software Solutions and Digital Credit Builder Lenders and Services categories could migrate to the employer channel pioneered by companies in this category.

Figure 5: Illustration of “Center Post” Concept



- Digital Credit Access/Cost Improvement Lenders, collectively, are also assessed positively in terms of both Utility and Scalability and should be able to provide significant amounts of alternative credit to low-income working families. There are a number of caveats, however. Some of the companies in this category are still very “high cost” lenders in absolute terms, which compromises Utility, although all provide their loans at lower cost (sometimes significantly so) than current STSDC providers and most provide a path towards improved rates and terms over time. The ability of these lenders to charge consistently lower rates over time will be the test of whether they provide truly high or merely acceptable Utility to low-income working families. The companies in this group charging the lowest costs are also the most selective, which affects their Scalability. All companies in this category are also subject to material risks associated with their funding model—which is dependent on the willingness of institutional lenders of various types to advance funds-- during a credit or financial crisis. These companies have not yet demonstrated consistent credit and funding performance through an entire credit cycle. History has shown that institutional-funded lenders often suffer badly when the credit cycle turns or funding markets become unstable.¹³⁸ Individual companies in the category are likely to be limited in their individual Scalability by these funding and credit performance constraints, although the existence of multiple competing lenders should reduce the overall category risk associated with funding and credit. Interestingly, the best solution for the funding issue would be for these lenders to become deposit-taking banks, an outcome that, as noted above, does not seem likely any time in the immediate future due to regulatory and shareholder concerns.¹³⁹ Nevertheless, these companies’ business models currently appear viable and we see no reason why, absent a near-term recession or funding crisis, these companies collectively could not lend more than \$10 billion annually over time on superior terms to current STDC models, and remove an equal amount of STSDC, and related higher fees and costs, from the system.

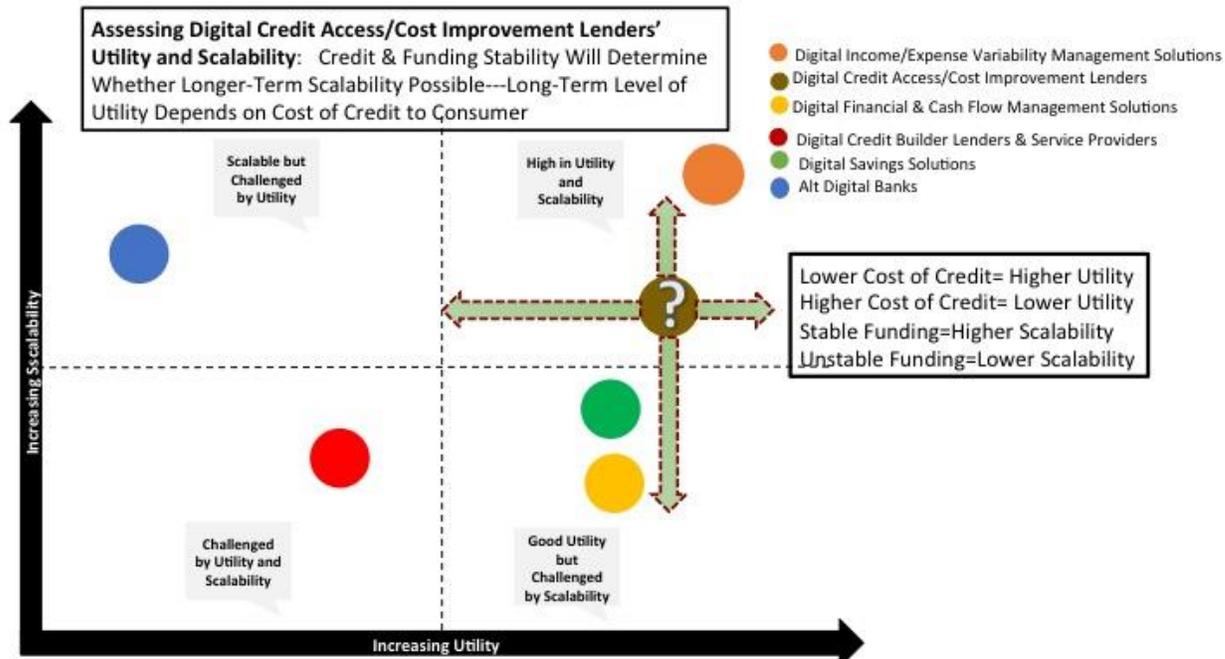
¹³⁸ Baker, Todd H. “Reality Check for Marketplace Lenders.” *American Banker*. 3/15/16.

Available at:

<https://www.americanbanker.com/opinion/reality-check-for-marketplace-lenders>

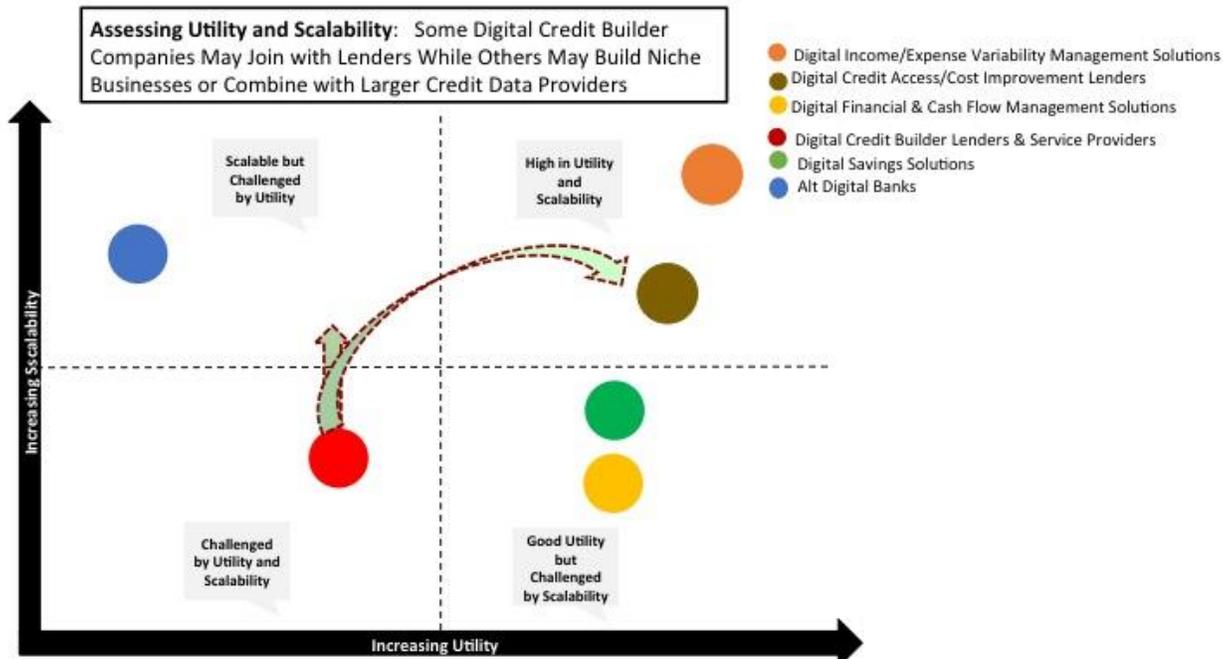
¹³⁹ Baker, Todd. *Lending Club Should Become a Bank as Fast as it Can*. *The Financial Times*, FT Alphaville. November 25, 2016. <https://ftalphaville.ft.com/2016/11/25/2180274/lending-club-should-become-a-bank-as-fast-as-it-can/>

Figure 6: Credit/Funding/Cost Uncertainty



- Our review suggests that some of the non-lending FinTech companies in the Digital Credit Builder Lenders and Services category are likely to pivot towards becoming lenders themselves or may be absorbed by existing lenders or credit information providers, as they appear to lack the consistent revenue base necessary for Scalability, or be absorbed into the Digital Credit Access/Cost Improvement Lender category. Others may succeed as moderately scaled independent businesses.

Figure 7: Evolution of Credit Builders



- Three other Relevant FinTech Categories---Digital Savings Solutions, Alt Digital Banks and Digital Financial & Cash Flow Management Software Solutions--- also appear likely to coalesce into a newly combined business category centered around an “expanded” Alt Digital Bank business model (possibly evolving into an insured bank in the future) as they broaden their product set to create new digital banking products and seek consistent sources of revenue from these new products. Companies in two of the three pre-existing categories—Digital Savings Solutions and Digital Financial & Cash Flow Management Software Solutions-- share good, and in many cases, improving, levels of Utility with low to moderate Scalability due largely to lack of revenue. In many respects, these two categories can be characterized as FinTech “products” rather than fully developed business model. Alt Digital Banks, which generally have a B2C mobile distribution model and a focus on millennial customers, are currently low Utility despite having relatively high Scalability due to a strong source of deposit-based revenue. The low Utility assessment is largely due to Alt Consumer Banks’ focus on higher income customers (who generate higher levels of interchange income than low-income working families) and the fact that they do not yet provide either loans or digital financial management solutions for low-income working families. However, if the Alt Digital Bank business model were to be combined with the models of the other two categories, the combined business model could potentially extend to cover at least part of the low-income working family population and gain significantly greater Utility while remaining Scalable.

FICO-type scores based on historical debt repayment experience.¹⁴⁰ Use of this type of data is governed by a variety of federal and state statutes, most notably the Fair Credit Reporting Act (FCRA) and the Equal Credit Opportunity Act (ECOA).¹⁴¹ None of the companies interviewed saw these regulations as unduly restricting their preferred business practices, although all appeared to believe that increased access to new types of alternative data would improve their marketing and credit outcomes.

- Regulatory complexity and compliance costs were a concern for almost all companies. In particular, companies noted the costs associated with running national digital businesses while complying with widely varying state law mandates.

Recommendations

The FinTech alternatives to STSDC described in this paper are here today and already helping some low-income working families make better financial choices. But the impact of these innovative solutions on an old and difficult problem will be limited unless they can be deployed more broadly. Only then will the benefits for low-income consumers, employers and, indirectly, governments, be felt. The risk of delay is real. Like most startup technology

¹⁴⁰ The CFPB describes such data as follows: “Alternative data includes sources such as timely payment of rent, utilities, or medical bills, as well as bank deposit records, and even internet searches or social media information—data that credit bureaus do not traditionally consider. However, a consumer who lacks a credit history but who makes timely rent and utility payments may be as likely to repay a loan as another consumer with a higher credit score.”

Brody, M.H., Lilley, S. and Tsai, J. and Tsai, J. *et. al.* “CFPB Calls for Comment on Alternative Data.” *Consumer Financial Services Review*. 2017. Available at: <https://www.cfsreview.com/2017/02/cfpb-calls-for-comment-on-alternative-data/>

Request for Information Regarding Use of Alternative Data and Modeling Techniques in the Credit Process. [Docket No. CFPB-2017-0005] Bureau of Consumer Financial Protection. 2017. Available at: http://files.consumerfinance.gov/f/documents/20170214_cfpb_Alt-Data-RFI.pdf

¹⁴¹ Bernstein, L.A., Earley, M.B., and Bons, P. “Request for Information Regarding Use of Alternative Data and Modeling Techniques in the Credit Process Alternative Data and Credit Scores: Will it Trigger CFPB Enforcement?” *The Temple 10Q*. 2017. Available at: <https://www2.law.temple.edu/10q/alternative-data-credit-scores-will-trigger-cfpb-enforcement/>

companies, FinTech companies have a relatively short window to achieve scale and demonstrate a clear path to profitability. If they fail to connect with enough customers, the power of their innovations to change a broken STSDC system will be lost.

With this in mind, we are recommending a number of specific actions private and public sector employers, employee benefit intermediaries, non-profits, and FinTech and other financial companies can and should take immediately to encourage use of FinTech alternatives to STSDC.

In addition, we are making optional recommendations for future state and federal legislative and regulatory action to facilitate the development of FinTech alternatives to STSDC. These actions would be very helpful in the long run, but are not necessary for the immediate benefits of FinTech alternatives to become apparent.

- Employers Should Adopt and Subsidize Employee Financial Health Benefit Plans. Private sector companies with large numbers of low-income working families in their employee base should adopt and promote Employee Financial Health Benefit Plans (which can be incorporated into existing retirement-focused plans as a technical matter) that include the highest Utility products from companies in the Relevant FinTech Categories. The goal of each employer should be to reduce financial stress and encourage financially healthy behaviors and thereby improve employee satisfaction, reduce turnover and absenteeism. Measurement of “hard” financial results and “soft” behavioral results will be critical to justifying these benefits, and companies should use behavioral/psychological cues to maximize participation.
 - At minimum, every Employee Financial Health Benefit Plan should include Income/Expense Variability Management Solutions.
 - Companies should also seek to include the product capabilities of companies in the Digital Financial & Cash Flow Management Software Solutions and Digital Savings Solution category in every Employee Financial Health Benefit Plan, so that the long-term benefits of better personal financial management are made available to employees, as well as the immediate benefits of liquidity support. To the extent possible, employers should make use of those products mandatory for those using other lending, savings, and income/expense management products in the Employee Financial Health Benefit Plan.
 - The employer/sponsor should subsidize employee fees if necessary.
 - Companies should make links to the highest Utility third party Digital Credit Access/Cost Improvement Lender products and Digital Credit Builder Lenders & Services products, as well as links to financial advice sites, available to employees as part of its Employee Financial Health Benefit Plan package, but should not otherwise need to subsidize or otherwise encourage usage of these products.
- Employee Benefits Intermediaries Should Support Adoption of Plans. Intermediaries in the employee benefit business—such as benefits consultants, insurance providers,

benefit managers, recordkeeping providers, time & attendance systems providers-- should include Financial Health Benefit Plans in their core offerings to corporate clients to reduce the integration burden from individualized adoption. This is in the intermediaries' business and financial interest as the addition of new benefits will require their services. Intermediaries should strengthen the financial case for Financial Health Benefits Plans by commissioning additional independent research studies analyzing the "hard" and "soft" costs and benefits of the adoption of these plans by employers.

- FinTech Companies Should Broaden their Offerings. To provide improved Utility for their products, all companies in the Relevant FinTech Categories should consider incorporating the product capabilities of companies in the Digital Financial & Cash Flow Management Software Solutions and Digital Savings Solutions categories into their own product offering. This will help consumers better control their finances and become able to manage through Key Precipitating Factors for STSDC Use without borrowing.
- Non FinTech Financial Companies Should Adopt FinTech Products. Banks, credit unions and other traditional providers of financial services should also consider incorporating the product capabilities of companies in the Relevant FinTech Categories into consumer offerings to help improve their own customers' financial health.
- FinTechs and Financial Sector Should Resolve Data Governance Issues. Given the low likelihood that the CFPB will issue final regulatory guidance under Section 1033 of Dodd-Frank Act, or that Congress will enact legislation that would resolve the ongoing controversy over access by FinTech companies (acting on behalf of their customers) to customer financial records and the use of consumer-granted transaction authority at banks, securities firms and asset managers,¹⁴² financial services providers and FinTech companies must work together collaboratively to resolve the core questions of bank customer data sharing, consumer control and security. If these issues are left unresolved, they will create major business risks for both banks and FinTech companies. The best place to start negotiations, in our view, are the financial data principles proposed by CFSI in October of 2016:

"An inclusive and secure financial data ecosystem is one in which financial institutions, data aggregators and third-party application providers coordinate to provide data to consumers that are:

¹⁴² Popper, Nathaniel. "Banks and Tech Firms Battle Over Something Akin to Gold: Your Data." *The New York Times*. 3/23/17. Available at: <https://www.nytimes.com/2017/03/23/business/dealbook/banks-and-tech-firms-battle-over-something-akin-to-gold-your-data.html? r=0>

- Available: Consumers have the ability to view their financial information within the trusted and secure third-party application of their choice. (“Availability”)
 - Reliable: Consumer financial data are timely, consistent, accurate and complete. (“Reliability”)
 - User-permissioned: Consumers provide explicit consent for access to and use of their data. Consumers can easily view, modify and revoke consent for data sharing. (“Consent”)
 - Secure: All entities follow applicable laws and industry best practices with regard to data privacy and security. (“Security”)
 - Limited to the application functionality: Only the minimum amount of data required for application functionality are collected, and the data are stored for the minimum amount of time needed. (“Minimization”)¹⁴³
- The Non-profit Sector Should Advocate for FinTech Benefits and Data Governance and Consider Subsidizing Test Cases. All nonprofits should provide Employee Financial Health Benefits incorporating FinTech solutions to their own employees to gather data and provide a demonstration of the financial health benefits of this approach. Nonprofits focused on low-income working families should commission research and conduct advocacy for adoption of such Employee Financial Health Benefit plans by employers, and support industry efforts to resolve consumer data governance issues. Where appropriate, non-profits should consider subsidizing “demonstration case” adoption of Employee Financial Health Benefit Plans by other non-profit entities.
 - Public Sector Employers Should Adopt Plans Too. Federal and State governments should make Financial Health Benefit plans incorporating FinTech solutions available to all State and Federal Employees, including soldiers and civilian military employees.
 - Public Sector Legislative/Regulatory Actions Can Also Help.
 - Congress should make employer contributions/subsidization with respect to Employee Financial Health Benefit Plans tax deductible, at least to the extent of usage by low-income working families.

¹⁴³ “CFSI’s Consumer Data Sharing Principles: A Framework for Industry-Wide Collaboration” Center for Financial Services Innovation. 2016. Available at: <https://s3.amazonaws.com/cfsi-innovation-files/wp-content/uploads/2017/01/19195017/2016-Consumer-Data-Sharing-CDAWG-One-pager-Final.pdf> p1

- State regulators should work collaboratively to reduce the burden of 50-state licensing and compliance on FinTech companies, through coordinated licensing applications, collaborative examinations and similar efforts.¹⁴⁴
- We believe that the Office of the Comptroller of the Currency's (OCC) recent efforts to follow a special Federal "FinTech Charter"¹⁴⁵ approach to licensing uninsured digital national banks, while probably legally defensible, is wrong-headed policy, not clearly supported by other federal regulators,¹⁴⁶ aggressively opposed by state regulators,¹⁴⁷ likely to be overturned by Congress if enacted in any case¹⁴⁸ and should be replaced by a different and more useful approach. Instead of seeking to evade the issue, federal and state regulators (the OCC, Federal Deposit Insurance Corporation (FDIC), the Board of Governors of the

¹⁴⁴ Clozel, Lalita. "California regulator acknowledges 'legitimate criticisms' of state licensing." *American Banker*. 2/4/17. Available at: <https://www.americanbanker.com/news/california-regulator-acknowledges-legitimate-criticisms-of-state-licensing>

¹⁴⁵ Office of the Comptroller of the Currency. "OCC To Consider Fintech Charter Applications, Seeks Comment" U.S. Department of the Treasury. 2016. Available at: <https://www.occ.treas.gov/news-issuances/news-releases/2016/nr-occ-2016-152.html>
<https://www.bna.com/occ-fintech-charter-n57982083191/>

¹⁴⁶ Brainard, Lael. "Where Do Banks Fit in the Fintech Stack?." Northwestern Kellogg Public-Private Interface Conference on "New Developments in Consumer Finance: Research & Practice." 4/28/17. Available at: <https://www.federalreserve.gov/newsevents/speech/brainard20170428a.htm>

¹⁴⁷ This issue is currently being litigated by the Conference of State Bank Supervisors. Clozel, Lalita. "State Regulators Sue OCC Over FinTech Charter." *American Banker*. 4/26/17. Available at: <https://www.americanbanker.com/news/state-regulators-sue-occ-over-fintech-charter>
Clozel, Lalita. "Curry Defends Fintech Charter After State Regulators Lawsuit." *American Banker*. 4/28/17. Available at: <https://www.americanbanker.com/news/curry-defends-fintech-charter-after-state-regulators-lawsuit>

¹⁴⁸ Benjenk, Randy. "State Banking Regulators Oppose OCC Fintech Charter." Cov Financial Services. 2017. Available at: <https://www.covfinancialservices.com/2017/01/state-banking-regulators-oppose-occ-fintech-charter/> See also Jeffries, Tara. *OCC Chief Pushes Back on Criticisms of FinTech Charter Plan*. Morning Consult. March 6, 2017. <https://morningconsult.com/2017/03/06/occ-chief-pushes-back-criticisms-fintech-charter-plan/>

Federal Reserve System and state banking regulators), with assistance from Congress as necessary, should resolve, once and for all, the question of whether insured banking charters (national and state) can be issued to FinTech companies with business models involving innovative digital deposit taking and other digital banking/lending activities that are (i) consistent with the purposes of banks generally but are (ii) inconsistent with the community banking format of locally-based customers and physical distribution coupled with a traditional mix of bank balance sheet and revenue components. It would be highly beneficial for some FinTech companies to become regulated banks, but only if they are regulated, and hold capital, in accordance with the characteristics and risks found in their own business and not based on an inapplicable “platonic ideal” of a traditional community bank. The current stalemate in de novo bank application processing for FinTech-focused banks, reportedly driven by the FDIC’s concerns about risk, the Federal Reserve’s issues with ownership concentration, and concerns about the historical performance of non-traditional banks, is hurting innovation and stifling competition that would benefit low-income working families and other consumers.

- Use of “alternative data” by FinTech companies and others should be encouraged as a matter of general policy by the relevant state and federal agencies but continued to be regulated closely to prevent prohibited discrimination. Regulatory and statutory uncertainty about permitted uses of alternative data should be resolved to avoid unnecessarily restricting the provision of high Utility FinTech products to low-income working families.

APPENDIX A

Company	Description	Products	Website
Ascend	Ascend empowers consumers to prove their real-time creditworthiness through a proprietary process called Adaptive Risk Pricing. It provides improving-credit borrowers with a choice: get a fair rate today with a path to dramatically lower rates by demonstrating financial responsibility. By incenting reduced consumer debt, increased savings, and limited credit card spending, Ascend reduces risk on current loans and rewards the borrower by lowering interest payments.	<ul style="list-style-type: none"> • Ascend Personal Loans • RateReward Program 	https://www.ascendloan.com/
Opportun	Opportun provides unsecured credit to under banked Hispanic families that lack credit history	<ul style="list-style-type: none"> • Personal installment loans 	http://www.opportun.com/
My Fin	App based personal finance management tool allows users to set a monthly savings goal, and keeps them on track to hit it.	<ul style="list-style-type: none"> • Financial management tool- Income/expenditure analytics and saving goals 	https://www.myfin.tech/

Lendingpoint	Provides access to credit to users with low FICO scores and helps build credit history by recording installment payments	<ul style="list-style-type: none"> • Personal loans 	https://www.lendingpoint.com/
Digit	A microwaving tool that automatically saves from consumer's checking account into a separate FDIC insured Digit savings account. This is based on an algorithm that monitors income and spending patterns. Users don't earn interest rate	<ul style="list-style-type: none"> • Short- term savings • Monthly bill payment 	https://digit.co/
DoubleNet Pay	Money management application that tracks upcoming bill dates and amounts due on behalf of the employee and pays those funds directly from the paycheck. The employee enjoys simplified budgeting and reduced NSF and late fee expenses	<ul style="list-style-type: none"> • Short- term savings • Bill payment • Debt repayment 	https://www.doublenetpay.com/

Earn Up	A FinTech platform that automates loan payments and sets few dollars aside for loans when consumers can afford it. They make loan payments for consumers, by allocating funds in the way that gets you out of debt faster	<ul style="list-style-type: none"> • Loan repayment 	http://www.earnup.com/
Earn	Earn designs and launches online savings tools that create financial stability for economically vulnerable populations	<ul style="list-style-type: none"> • Short-term savings 	https://www.earn.org/
Albert	Albert connects to all of consumers accounts, provides real life recommendations—like repaying credit card debt with a low-interest loan, getting renter's insurance, or setting up the right retirement plan.	<ul style="list-style-type: none"> • Finance management tools 	https://meetalbert.com/

FlexWage Solutions	FlexWage offers the industry's only solution that provides employees reasonable access to earned wages in advance of their scheduled payday. Through its products, FlexWage helps improve quality of life for employees, employee productivity and minimizes expense and environmental impact by reducing paper-based payroll delivery.	<ul style="list-style-type: none"> • Payroll cards • Wage Bank 	http://flexwage.com/
Even Responsible Finance	Even is an income-smoothing app that aims to provide a consistent paycheck every week. Even does this by setting aside a little bit of money in good weeks, and by giving interest-free credit in bad weeks. Additionally, if consumers have a big bill like rent but are short on cash, Even lets them advance extra money	<ul style="list-style-type: none"> • Pay protection- Income smoothing product 	https://even.com/

Varo Money	A banking service that aggregates all bank accounts in one place and provides information on how to manage money better based on spending and borrowing patterns	<ul style="list-style-type: none"> • Mobile banking • Finance management tool • Varo debit card 	http://www.varomoney.com/
Revolution credit	Revolution Credit is a unique platform that allows consumers to watch short and entertaining financial literacy videos to demonstrate and improve their financial capabilities like a Traffic School for Credit. It allows financial institutions to identify more creditworthy customers, extending access to a wider range of financial services at better prices	<ul style="list-style-type: none"> • Extra Credit- finance management tool • Back on Track- Loan collection product 	https://www.revolutioncredit.com/
FS card	Mainstream unsecured credit card for small dollar credit	<ul style="list-style-type: none"> • Build card- small dollar credit product 	https://fscardinc.com/
Elevate	Elevate is reinventing the non-prime lending industry by giving consumers access to responsible and transparent credit options. Primarily focused on non-prime middle class population.	<ul style="list-style-type: none"> • Rise- Unsecured personal loans • Elastic- personal line of credit 	https://www.elevate.com/

Float	Float provides users with a personalized line of credit by evaluating borrower's income, spending habits and bank account statements	<ul style="list-style-type: none"> • Personal loans 	https://hellofloat.com/
Payoff	Payoff is a financial wellness company that provides its members with personal loans. It develops products and services to support its members attain their targets by focusing on the connection between financial behavior and personality. The company partners with First Electronic Bank to originate loans for its clients.	<ul style="list-style-type: none"> • Personal loans 	https://www.payoff.com/
Fig Loans	Fig partners with Family Houston to offers consumer a loan that is 80% cheaper than payday alternative and in future build towards credit history.	<ul style="list-style-type: none"> • Personal loans 	https://www.figloans.com/
Ecredible	Provides alternate credit score for thin and no file customers. It has secured a partnership with BBVA Compass bank to allow consumers to use the eCredable score to apply for BBVA credit card	<ul style="list-style-type: none"> • Credit scoring product 	http://www.ecredible.com/

Happy Mango	Happy Mango, an online tool that creates an alternative credit score by analyzing consumer spending and saving habits continuously online. Happy Mango assesses credit risk is based on gaining access to a user's bank accounts – with permission – and mining the accounts for data on income, savings and spending	<ul style="list-style-type: none"> • Finance management tool • Underwriting and credit assessment • Financial advisory services 	https://www.happymangocredit.com/
Wage Goal	WageGoal, a mobile product, is designed to help employers provide employees access to their earned wages on demand, with financial guidance, to help them use the same pay with more power.	<ul style="list-style-type: none"> • Income smoothing product • Finance management product 	https://launch.wagegoal.net/
Simple	Simple is a web and mobile application that unifies various accounts into one accessible bank card.	<ul style="list-style-type: none"> • Online banking product • Safe to spend- Financial management product • Short-term saving product 	http://simple.com
PayActiv	A financial wellness benefit for employees living paycheck to paycheck. PayActiv allows employees of Partner employers' organizations to access unpaid but unearned wages.	<ul style="list-style-type: none"> • Income smoothening product 	https://www.payactiv.com/
Active Hours	Activehours develops a smartphone-based application that enables hourly workers to get paid early when they need it. Activehours helps its users to avoid overdraft fees and high-interest payday loans.	<ul style="list-style-type: none"> • Income smoothing product 	https://www.activehours.com/

Nowsta	Nowsta offers a web-based platform that enables companies to optimize their labor force by leveraging employee skills. The product is an integrated platform for scheduling, tracking and paying employees (sometimes in advance).	<ul style="list-style-type: none"> • Scheduling and employee tracking product • Payroll products 	http://www.nowsta.com/
Long Game	Long Game designs fun and engaging customer experiences on top of savings products to encourage responsible financial planning	<ul style="list-style-type: none"> • Savings product 	https://www.longgame.co/
SelfLender	Our customers get personalized credit score tracking, credit monitoring, access to simple financial tools, and the opportunity to apply for a credit builder account. A credit builder account can help you establish credit history and save money in a safe, responsible way.	<ul style="list-style-type: none"> • Savings product • Credit scoring product 	https://www.selflender.com/
Lenny	Lenny focuses on providing microloans (up to \$500 initially) to college-age students, using their educational background in general and their GPAs in specific, to help establish creditworthiness.	<ul style="list-style-type: none"> • Personal loans • Credit scoring tool 	https://www.lennycrredit.com/
Lendstreet	We negotiate with your creditor to refinance your old debt at a discount. That means a fresh start with a lower amount and a lower interest rate for you. We customize your payments to fit your lifestyle, not the	<ul style="list-style-type: none"> • Debt consolidation product • Personal loans • Finance management 	https://www.lendstreet.com/

	other way around.		
Finova	<p>Welcome to a new era of affordable emergency loans. Finova's C-LOC provides you instantly the emergency cash you need and best of all upon successful repayment history you get access to an ongoing credit line with declining rates.</p> <p>Unlike a Title Loan, Finova's Car Equity Line of Credit (C-LOC) is the best way to get the cash you need. We make it simple and clear what your costs will be upfront for our service and you have online access 24x7 to your personal loan portal to see all loan terms, payment schedule, payments made, and your contract so you can keep track of your progress.</p>	<ul style="list-style-type: none"> • C-LOC- Emergency personal loans 	https://www.finovafinancial.com/
Aspiration	<p>Aspiration was born to be the financial firm for all. Because everyone deserves access to the best banking and investing products. Everyone deserves a financial partner they are confident they can trust. And everyone deserves to put their money in an institution that puts "good" ahead of "greed."</p> <p>Profits are important. But what sets Aspiration apart is the belief that people are</p>	<ul style="list-style-type: none"> • Summit account- High yield checking account • Flagship Fund- Mutual fund • Redwood fund- Sustainable investing 	https://www.aspiration.com/

	<p>too. Our “Pay What Is Fair” fees mean we go to work every day committed to do great for our customers. And as a financial firm with a conscience, we are motivated by the mission to help you make money and make a difference at the same</p>		
Chime Banking	<p>We created Chime for one very powerful reason: to empower people to lead healthier financial lives. At Chime we’re dedicated to building a new kind of bank account that helps members get ahead by making the hard parts of managing money easy.</p> <p>How do we do this? By eliminating unnecessary fees and creating a service that puts members in control, helps them form healthy habits, and empowers their financial well-being.</p>	<ul style="list-style-type: none"> • Spending account • Chime Visa debit card • Savings account 	https://www.chimebank.com/
Clearbanc	<p>Clearbanc is a banking service that’s specifically geared toward helping self-employed Americans get paid faster.</p> <p>Clearbanc wants to appeal to the independent contractors, freelancers, and 1099 workers in the U.S.</p>	<ul style="list-style-type: none"> • General purpose cash advances • Future invoice based cash advances • Business data analytics product 	https://clearbanc.com/
Bee (One Financial)	<p>Bee partners with Community Federal Savings Bank to offer alternatives to checking and savings accounts to its</p>	<ul style="list-style-type: none"> • Checking account • Savings account 	https://www.beeaccount.com/

	customers in New York and California.		
eCreditHero	Fix errors on your credit report and receive helpful guidance. We help you easily find your errors and prepare personalized credit repair letters to help you reach your credit goals.	<ul style="list-style-type: none"> • Finance management tool • Credit score improvement product 	http://www.ecredithero.com/
Ziero Finance	Interest free loans for employees. Help businesses provide safety net to all employees	<ul style="list-style-type: none"> • Xero interest employee loans 	http://www.zierofinance.com/index.html
Acorns	Acorns is a finance company that allows individuals to round up purchases and automatically invest the change	<ul style="list-style-type: none"> • Savings and micro investment product 	https://www.acorns.com/
SmartyPig	SmartyPig is a website helping users save for specific financial goals by making their accounts public for friends and families	<ul style="list-style-type: none"> • Savings product 	https://www.smartypig.com/
Qapital	Qapital allows consumers to organize their finances in a single place by connecting to their online accounts. It gives you an instant overview of your finances and allows consumers to save through 'nudges'	<ul style="list-style-type: none"> • Finance management tool • Savings product 	https://www.qapital.com/
Moven	Moven's app, debit card, and contactless payment sticker provide real time spending insights that motivate customers to make smarter decisions and save more. For smartphone users who struggle to manage their finances, Moven is an alternative to traditional bank	<ul style="list-style-type: none"> • Prepaid app, debit card and contact less payment method • Finance management tool 	https://moven.com/

	deposit and payment products with high fees and little value. Moven recently pivoted to become a B2B software offering to banking sector in the US.		
Mint	We bring together everything from balances and bills to your credit score and more. It's your financial life, in one place that's easy to understand. The more accounts, cards and bills you link, the more we can help you do. See what you have and what you owe. Understand where money goes and where you can cut back. Create budgets, track investments, discover new ways to save and more.	<ul style="list-style-type: none"> • Finance management tool 	https://www.mint.com/
LendUp	Small dollar loans to help build credit for consumers and move up the financial ladder. A direct lender that also provides financial education and gamification for responsible lending behavior	<ul style="list-style-type: none"> • Personal loans 	https://www.lendup.com/

Author's Note:

I would like to thank the following people for their assistance in reviewing drafts of this paper and otherwise providing helpful suggestions and guidance: Howell Jackson, Douglas Simons, William Longbrake, Cantwell F. Muckenfuss, III, Morgan McVicar, Diane Baker, Nick Bourke, Corey Stone, John Haigh, Robert Glauber, JoAnn Barefoot and Richard Zeckhauser.

I want to give particular thanks to Snigdha Kumar, who acted as my primary research assistant and partner in this endeavor, and without whom it would not have been possible. I would also like to thank Raushanah Bowdre, who provided valuable research assistance to the project.

Special Thanks to Scott Leland, Susan Gill and the rest of the very supportive staff at the Mossavar-Rahmani Center for Business & Government at Harvard Kennedy School.

And finally, my sincere thanks to the many FinTech executives who contributed their valuable time and energy to our interview process.
