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Todd H. Baker¹ & Snigdha Kumar²

Introduction & Summary

America has a problem. More than 50 million Americans in low-income working families are financially stressed. Study after study has demonstrated that low-wage working people are struggling to manage their personal finances as incomes and household wealth have stagnated at the bottom of the economic ladder and both income and expense volatility have increased. The most pressing everyday issue for these Americans is managing cash flow—they usually have the resources to pay their regular monthly bills but can't handle small financial shocks or timing mismatches because they lack the savings buffer the more affluent take for granted. Many low-wage workers also can't access reasonably priced and structured small loans to stretch out larger, non-discretionary outflows—like medical, home & auto expenses--over time. The result is a damaging cycle of repeated reliance on payday loans, auto title loans, bank overdrafts and other costly financial products for liquidity and credit support. These products may fill today's urgent financial need, but only at the cost of making tomorrow's financial gap much bigger.³

Although there is wide agreement that financial stress is a big problem for much of the U.S. working population, there's no consensus on what to do about it. Because the issue implicates the questions of personal responsibility, income distribution and fairness that are the most politically divisive, the policy discussion has become polarized. Consumer advocates insist that lenders could make reasonably-priced loans to the broad spectrum of consumers with mixed or poor credit histories if they worked harder to help their customers succeed. Lenders counter that the only way they can broaden the spectrum of borrowers and make a decent capital return is to charge very high prices, even if those high prices cause more defaults.⁴ So far neither approach has delivered much help for working people.

This paper focuses on one new and different approach to managing financial stress among low-income working Americans: employer-sponsored FinTech benefits. Our research shows that employer-sponsored "Fintech"-based benefits that take advantage of the powerful "salary link"—automatic repayment through salary deduction-- can provide more efficient, less costly and more inclusive liquidity and credit solutions for working American families. These FinTech products also show tantalizing potential for significantly reducing employee turnover and savings millions of expense dollars annually at large employers. Importantly, deployment of employer-sponsored FinTech benefits does not require changes in law or government intervention to be successful.

Employer-sponsored FinTech financial health benefits are financial services-- things like short-term loans and advances, emergency savings accounts and online and mobile financial management apps-- designed to help employees address the day-to-day needs and challenges

of employees, particularly low wage employees. These benefits are distinct from the 401(k) plans and other benefits focused on long-term retirement goals and investments. The goal of these benefits is to help employees reduce financial stress by creating sources of resilience to manage financial shocks. The specific financial benefits are chosen and offered to employees by the employer, often with some form of subsidy attached, as part of its overall employee benefits package.

Proponents of employer-based FinTech benefits claim that they can improve the situation of both low-wage employees by:

- providing solutions for the pressing day-to-day crises typically faced of employees.⁶
- providing lower-cost products to employees than market alternatives, due to the
 potential for employer subsidization of benefits and the FinTech partner's lower cost
 base and access to the employer's payroll system for income data and repayment.
- providing some credit-damaged or credit-invisible employees with access to traditional financial products, thus increasing "financial inclusion" and reducing or eliminating reliance on high-cost short-term solutions like payday loans, bank overdrafts and other "alternative" financial products.

They argue that <u>employers</u> would benefit because reduced employee financial stress leads to bottom-line cost reductions for employers, based on previous research asserting that financial stress adversely affects job performance and adds costs, as distracted and anxious employees generally perform worse on the job, and stressed employees show higher absenteeism, turnover, pilferage and healthcare costs.⁷

This paper assesses the impacts of employer-sponsored financial health benefits for employees and employers by looking at two real-world examples of employer-sponsored FinTech liquidity and credit products-- a short-term installment loan provided by SalaryFinance and a payroll advance product provided by PayActiv--to evaluate whether they provide evidence to support or contradict the promise of an efficient "win-win" outcome for both employees and employers.

Based upon our research, we conclude that both employer-sponsored financial products we studied are more efficient than market alternatives and provide clear and compelling benefits to employees:

- <u>Cost</u>. The FinTech products provided under the plans were <u>much</u> less expensive than the alternatives available for most low-income employees in the market.
- <u>Inclusivity</u>. The FinTech products could be used by a much wider range of employees—many of whom are credit-damaged or credit-invisible—who could not access traditional financial products in the market.

The principal reason we found to explain both the lower cost and the greater inclusiveness of these products is the power of the so-called "salary link"—the ability of the FinTech provider to access an employee's salary directly to ensure repayment of advances or loans. The factors associated with the salary link lead to markedly superior loan/advance performance (with

defaults currently at <20% of the rate predicted by credit scoring) which is passed through in the form of lower costs to a larger portion of the employee population than is possible with market alternatives.

We also concluded, but with less clarity and acknowledging the clear need for further and more rigorous research testing, that active use of the two FinTech financial health benefits we studied is associated with increased employee retention (i.e., reduced turnover) over the period measured as compared to employees who didn't use the products. The impact of this reduced turnover rate can be quantified in "hard dollar" expense savings for employers and is likely to be significant—in the range of tens to hundreds of millions of dollars saved every year—to the overall expense base of employers with large numbers of low-wage employees.

While we urge deeper investigation of the impact of these products, we believe that there is enough evidence to support rapid implementation of employer-sponsored FinTech benefits across corporate America. At the very least, employees would benefit from lower-cost, better quality financial services, implementing companies would likely become employers-of-choice and the inchoate harms caused by financial stress on employees would be reduced. In the best case, employers would reap large financial rewards from reduced turnover and other positive effects on employee morale and performance.

FinTech Providers Studied

We studied two companies that provide employer-sponsored, FinTech benefits focused on low-wage employees: employee loan provider SalaryFinance and earned income advance provider PayActiv.

SalaryFinance—Employee Loan Provider

SalaryFinance was co-founded in 2015 in the U.K. by Dan Cobley, the former Head of Google UK & Ireland, Asesh Sarkar, a former banking consultant and Daniel Shakhani, a social impact entrepreneur. It has raised \$59 million in funding from investors. SalaryFinance partners with employers in the U.K. to offer employees a range of benefits designed to improve their financial well-being, save money, and borrow sensibly. The company describes itself as "bringing together expertise in financial technology with a desire to do good."

While to date primarily a U.K. company, SalaryFinance is preparing to launch its business in the U.S. in mid-2018. It is partnering with a U.S. bank to be able to lend in all 50 states and is marketing SalaryFinance products in conjunction with the United Way, the U.S.'s largest non-profit, which will be introducing SalaryFinance to its network of 100,000+ employers as a preferred solution for the network.

SalaryFinance currently offers three products to the employees of the companies which have added SalaryFinance to their benefits package:

• A low-cost installment loan product with loan payments deducted from salary

- An automatic savings product allowing employees to move money directly from their paycheck into a third-party savings account
- A financial coaching product

The installment loan product, which was the focus of our research, is offered to all employees of a partner employer who have been employed for at least 6 months, are at least 18 years old, have an annual salary of over £6000 (approximately \$8,500 at the time of this writing) and have over 3 years of UK address history. The primary purpose for the loans, as reported by customers, is to pay off existing higher-cost debt. To assess the credit worthiness of its employee customers, SalaryFinance's underwriting model focuses on (i) an employee's ability to afford the loan, and (ii) his/her history of repaying previous debts. The affordability calculation is based upon a borrower's cash flow. Income is verified with the employer. Debt payment information is estimated based on credit data (SalaryFinance loan plus other forms of credit repayments including mortgage) which SalaryFinance sources from a credit bureau. Self-declared information such as rent, and estimated data such as monthly living expenses for the applicant and dependents are also considered while estimating the credit worthiness of the borrower.

In analyzing debt repayment probability, SalaryFinance uses 28 variables which are predictive of repayment probability and focused more on recent than historical repayment history. SalaryFinance reports loan payments by borrowers to credit bureaus and the payment history on the loan becomes part of the borrower's credit score profile in the future. This can help the borrower build positive loan performance data at the bureau which can help improve their future credit rating.

Loan terms range from 6 to 36 months. Rates offered to the employees range from 3.9%-19.9% APR on loans amounts between £500 to £25,000 (approximately \$700 to \$35,000). There are no additional fees charged to customers. Loan payments are directly deducted from the employees' salary so long as the employee remains with the company. The rate on the loan does not change if the employee leaves the company voluntarily or is terminated. If an employee is undergoing financial distress, SalaryFinance offers flexible payment options and payment holidays and may reduce the repayment amount¹¹.

The salary link is critical to making the lending product and SalaryFinance's business model work. Because of the link, SalaryFinance has an information advantage versus a market lender, as direct observation of employment and stability is superior to reliance on indirect credit bureau data for credit analysis. SalaryFinance's credit and collections costs are greatly reduced by having "first call" on the employee's salary before the issuance of a payroll check or automated payroll deposit into the employee's bank account. This is essentially a form of collateralization---SalaryFinance is virtually assured of repayment from the salary "collateral" as long as the employee remains employed. The salary deduction approach effectively eliminates the employee's ability to prioritize payments to SalaryFinance against his or her other obligations. The company also believes that by lending through the employer channel it eliminates a major source of consumer loan defaults: what is sometimes called "soft fraud,"

where individuals take out a loan with no intention of paying it back. SalaryFinance believes the employer model substantially avoids soft fraud behavior because it is not economically rational to leave a job that pays on average around 8-9x the value of the loan to avoid repaying the loan. The combination of these factors associated with the salary link leads to much better loan performance, and hence much lower interest rates, than would otherwise be predicted by credit scoring models.¹⁴

Since January 2018, SalaryFinance has also begun to offer a savings product in partnership with Yorkshire Building Society, a UK financial institution. This product is available for all the employees at a partner employer and can also be customized to fit the employees' need. Like the loan product the employees give permission to deduct a predetermined amount directly from their salaries. The employees earn a small interest rate on the amounts they deposit however, the aim of the product is to build regular saving behavior rather than to provide high returns.

The salary link is also important to the savings product, as the company believes that automatic deduction from an employee's salary leads to greater savings growth.

In addition to the loan and savings products, since 2017¹⁵SalaryFinance also provides a free financial coaching product to all the employees through digital tools. The aim of the product is to build financial confidence by providing financial education.

Employees appear to value the SalaryFinance products highly, based on testimonials contained on the company's website.

"I took the SalaryFinance loan, it comes straight out of my wages, there is no way I can mess up. Taking this loan has helped me pay bills. No more sleepless nights and my wife doesn't have to worry"

- SalaryFinance Customer, Gary Cummings

"For me bank loans were out of the question. I called up SalaryFinance asked a few questions, they were very flexible with payment options. SalaryFinance makes me appreciate ... my employers more"

-SalaryFinance Customer, Laura Wheatley

PayActiv—Earned Income Advances

The second company studied was PayActiv, one of several U.S. venture capital-backed companies that are marketing "earned income advance" products to employers in the US. These products leverage the typical two-week payroll latency period during which employees are accruing wages which they cannot access until the next payroll date. PayActiv was started in 2013 by Safwan Shah (CEO), Ijaz Anwar (COO) and Sohail Aslam (CTO) and since then it has

raised a Seed and Series A financing round of \$17.2 million, led by the founders and SoftBank Capital.¹⁷ PayActiv aims to solve employees' small-dollar, between-paychecks need for emergencies and cash droughts by providing access to already earned but still unpaid wages. The goal of PayActiv is to help employees avoid late payments, bank overdraft fees or the need to use high-cost payday-type lenders in times of financial emergency.¹⁸

Through its contract with an employer, PayActiv gains access to employees' time and attendance data and applies various algorithms to adjust for schedules, partial hours, part-time and full-time hours, exempt or salaried status, tips, overtime, etc. All employees are eligible for the benefit. On the PayActiv mobile application, an employee who has signed up for PayActiv can see the exact "safe to access" amount and a nearly exact estimate of their hours worked and accrued earnings. This information is designed to help an employee make a thoughtful decision on funds accessed in advance of the date the actual payroll would be processed. In the US, the typical pay cycle is biweekly/bimonthly or weekly, with up to a week of lag. If an employee chooses to access his or her earned funds through the PayActiv app, PayActiv is reimbursed by the employer by deduction from the employee's next paycheck.

In practice, funds advanced to an employee through PayActiv can move from PayActiv to the employee's bank account, payroll card, biller, a Visa prepaid card issued by PayActiv and if selected, an automated savings account. PayActiv charges a membership fee of \$5 for each pay period in which the service is used. PayActiv believes that the membership model approach is unique and helps eliminate clickbait situations, where the employee is drawn into multiple costly transactions. The membership also includes free access to several non-financial services like pharmacy discounts, financial counselling, education on budgeting, etc. The membership fee is fixed at \$5 and the employee can access the app multiple times in any pay period up to an aggregate of \$500. There is no additional fee or upsell to access the funds as cash or to pay a bill or get an immediate bank transfer or to load a general-purpose card. According to the company, in over 50% of the cases the membership fee is borne or subsidized by the employers so that the customers pay a smaller fee or no fee at all.¹⁹

In addition to the core product, PayActiv platform also provides an automatic savings product where an employee can allocate units of time towards savings. The company believes that the focus on calculating savings deductions based on time, rather than dollars, leads to increased savings. The allocated units are then translated into dollars and deducted from the funds accessible through the app between paychecks.

Both employers and employees appear to see the benefit of the financial wellness services that PayActiv provides, according to information posted on the company's website.

"To help ensure patient well-being, hospital staffers must be mentally alert at all times. That's hard to do when you're worried about money. By empowering our employees to improve their financial wellness, the PayActiv service helps us optimize productivity and provide excellent care to our patients."

- CFO, Baton Rouge General Medical Center, Kendall Johnson

"PayActiv is the most influential benefit that I've ever offered in my career. The impact has been tremendous for us."

- Jennifer Smith, HR Director of Nazareth Home

"For us PayActiv is about stability in the workplace and higher retention rates."

- Mike Fox, CEO Goodwill of Silicon Valley

"You feel ashamed when you can't provide basic things for your family. PayActiv for me has been a Godsend. Not having to worry about basic needs has given me more room in my brains to think about bigger things like going back to college, getting things for my children. I got room for dreams now."

-PayActiv Customer, Michelle Deen

"It felt great to start paying off payday loans, now at this point I'm out of them. PayActiv really, really helped."

-PayActiv Customer, Felipe Palacios

Evidence of Benefit to Employees

Our first goal was to determine whether these two FinTech providers can justify their claims that the products they provide are significantly less expensive for users than equivalent products available in the market without an employer sponsorship. We sought to answer this question by comparing the cost of accessing the products provided by SalaryFinance and PayActiv with the cost of using market equivalents.

SalaryFinance. SalaryFinance has made the claim in its marketing materials that it provides installment loans at approximately 1/3 of the cost of competing products. When asked to justify this number, the company advised us that it had analyzed a large sample of unsecured U.K. consumer loans covering consumers with characteristics generally similar to those that SalaryFinance would lend to. SalaryFinance's review showed that the weighted average interest rate for loans in the sample was 31%. SalaryFinance's weighted average annual percentage rate (APR) on its loans as of March 2018 was 11.8%. From this sample, the company concluded that employees using SalaryFinance loan products saved close to 2/3 in interest on the loans.

Because the market data was collected by SalaryFinance under a confidential contract with a data services provider, we could not verify this claim. We therefore tried two methods to attempt to assess the relative cost of SalaryFinance loans. The first method compared

SalaryFinance's weighted average APR with the current rates offered by a variety of U.K. personal loan lenders.

The information on that comparison can be found in APR with the current rates offered by several randomly-chosen U.K. personal loan lenders for similar term and loan value. The table below shows the current rates offered by a variety of U.K. personal loan lenders for an approximately similar term (24 months) and loan amount (approximately £2,440) as the SalaryFinance average.

Selected Personal Loan Rates in U.K. 20

Provider name	Salary Finance	Lloyds Bank	HSBC Bank	118 118 Money*	Likely Loans*
Average	11.8%	26.7%	21.9%	71%	60%
APR					

^{* 118 118} Money and Likely Loans are finance companies

While this data appears to show that SalaryFinance loans are significantly less expensive than many comparable U.K. market loans (comparable loans are 2-6 times more expensive), the data is not sorted to reflect relative credit quality, loan term and other factors that affect pricing. Some of the lenders in the table are "High Street" U.K. banks with, presumably, tighter credit standards, and others are independent finance companies which cater to damaged credit borrowers. Therefore, we attempted a second method of comparison that also attempted to translate SalaryFinance's rates into a U.S. context.

In our second method, we:

- Received from SalaryFinance its estimate of the weighted average probability of default ("PD") for SalaryFinance's total loan portfolio as of March 2018. The number we were provided was a PD of 27.7%.
- Confirmed the company's PD estimate by comparing it to the estimated weighted average PD of the SalaryFinance portfolio derived by application of a standard commercially-available credit scoring algorithm used in the same market.²¹
- Translated the approximately 28% PD predicted into an estimated Fair Isaac ("FICO") credit score with the same 28% PD using publicly available material.²² The 28% PD translates roughly into a 480-500 FICO score.²³ This type of FICO score is considered deep subprime and traditional types of credit such as installment loans and credit cards are not available to customers with this profile.²⁴ In most cases, an individual with a 500 FICO score would need to rely on extremely expensive payday or auto title loans (which generally do not require a FICO score,) or rely on bank overdrafts, for short-term credit.
- Not surprisingly, when we conducted an unscientific survey of available rates for unsecured consumer installment loans in the 480-500 FICO-score range in the U.S. it

appeared highly unlikely that a traditional installment loan would be available today for a 500 FICO consumer. For context, the likely APR range available to a more creditworthy but still subprime 550-score FICO consumer would be at least 59% and as high as 199%.²⁵ These rates are 5 to 17 times the 11.8% SalaryFinance weighted average APR as of March 2018.

The combination of these two comparison methods convinced us that SalaryFinance loans were, on average, significantly less expensive than market alternatives, and that the claim that these loans were 1/3 of the cost of competing products appears reasonable. It is worth noting again that, as described above, SalaryFinance attributes its ability to lend at reasonable rates to credit-impaired borrowers to better data access, the collateralization impact of the salary link and the elimination of "soft fraud" in the lending process, all consequences of the salary link and employer sponsorship. According to the company, default rates on the cohort of SalaryFinance loans made between December 2016 and March 2018 are running at approximately 5% (annualized 2.5%) which is <20% of the 28% PD predicted by credit scoring.²⁶

One final data point can be found by comparing SalaryFinance's 11.8% APR for loan to a 500 FICO borrower to loan pricing from a prime FinTech installment lender like Lending Club: Lending Club's typical loan to a 700 FICO-score borrower bears an APR of around 14% today and it generally won't lend to anyone with a credit score below 660.²⁷

Our second goal was to determine if use of the SalaryFinance product would improve "financial inclusion" by providing some credit-damaged or credit-invisible employees with access to traditional financial services products for the first time and /or reduce or eliminate reliance on high-cost short-term solutions like payday loans, bank overdrafts and other "alternative" financial products. Here the results were particularly striking. We concluded that SalaryFinance's demonstrated willingness to lend on reasonable terms to employees with 500-level and below FICO scores significantly increases financial system access for many employees who would be forced to rely on payday loans, bank overdrafts and other very high cost and unattractive alternatives. SalaryFinance is providing credit at reasonable rates and reasonable terms—and reporting payment history to credit bureaus—for borrowers who are otherwise unable to access the traditional lending system due to low credit scores. By providing the SalaryFinance product, employers can help some of their most vulnerable employees deal with existing high-cost debt and reenter the mainstream financial world. This is a highly salutary result of employer financial health benefits of this type.²⁸

PayActiv. For PayActiv, we compared the \$5 membership fee to a typical payday loan and to a typical bank overdraft fee---because payday loans and overdrafts are the closest analogues and serve the same consumer need as a PayActiv advance.

Using a \$200 assumed PayActiv salary advance and the same payday loan amount, we concluded that the cost of a PayActiv was only 16.7% of the cost a payday loan, for which lenders typically charge \$15 per \$100 borrowed or \$30 total for a two-week, \$200 loan.²⁹

Using the same \$200 amount for a <u>single</u> bank overdraft, we concluded that the \$5 cost of PayActiv was only 14.3% or one-seventh of the typical \$35 per overdraft fee charged by banks.³⁰ This analysis almost certainly understates the cost of the overdraft alternative, as typically bank customers incur several \$35 overdraft charges when overdrawn due to the difficulty in managing timing of check clearances and bank practices which often seek to maximize the number of checks for which a checking account will have insufficient funds.³¹ It also may overstate the cost of PayActiv relative to a bank overdraft in that a PayActiv customer can access his or her available funds more than once during a pay period for the same \$5 fee, while each overdraft requires a separate \$35 fee.

As with the SalaryFinance example, the salary link is key to PayActiv's business model, as it takes minimal to no credit risk in making and collecting on its advances. We also conclude that the PayActiv product promotes financial inclusion for those employees who cannot access traditional, moderately-priced lending sources and would otherwise need to rely on very high-cost alternatives. The PayActiv product does not rely on credit scoring to regulate access to the product—any employee is eligible, so a damaged or nonexistent credit score is not an issue. Access to a PayActiv advance should provide "breathing space" for individuals under credit stress, giving them a more solid liquidity base from which to improve their financial standing. By using the employer-sponsored PayActiv advance in lieu of incurring multiple overdraft fees or unsustainable payday debt, damaged-credit or credit-invisible employees of large companies should also be able take steps over time to improve their credit profile and rejoin the traditional financial system.

Evidence of Benefit for Employers

In conducting our research on this topic, we focused on the question of whether, and to what extent, employers who provided FinTech-based employee financial health benefits would see changes in employee retention rates associated with the use of those benefits. We chose this indicator—as opposed to other indicators like eNPS (employee net promoter score),³² absenteeism or self-reported financial stress--as a proxy for whether the employer was advantaged because of the relatively good existing data on turnover rates by industry and the costs associated with employee turnover.

Costs of Turnover to Employers

High turnover is a problem for the type of large, consumer-facing companies that tend to employ low-wage workers. The annual turnover numbers in these occupations can be staggering:

- 30% among bank tellers³³
- 30-45% among call center employees³⁴
- 100% in fast food/QSR outlets35
- 60-300% in hotels³⁶

- 100% in supermarkets³⁷
- 59% in retail generally³⁸

High turnover rates impose significant financial costs on employers. Each time an employee leaves the workplace, a company loses the investment it has made in that employee and must incur the costs of recruiting and training a replacement employee. Most of the components of turnover cost are easy to imagine, although sometimes challenging to measure. In a recent article on employee retention, Deloitte Consulting LLP outlined some of the factors that go into calculating the "real" cost of losing an employee. ³⁹The factors cited by Deloitte include:

- The cost of hiring a new employee including the advertising, interviewing, screening, and hiring.
- The cost of onboarding a new person, including training and management time.
- Lost productivity—it may take a new employee one to two year to reach the productivity of an existing person.
- Lost engagement—other employees who see high turnover tend to disengage and lose productivity.
- Reduced customer service levels and increased errors—new employees take longer and are often less adept at solving problems.
- Training cost—for example, over two to three years, a business likely invests 10 to 20 percent of an employee's salary or more in training
- Cultural impact—whenever someone leaves, others take time to ask why.

What does all this mean in dollar terms? Research-based estimates of hard costs of employee turnover vary based on the type of business, level of employee etc., but there are some metastudies that can be used to anchor analysis. For example, Heather Boushay and Sarah Jane Glyn of The Center for American Progress⁴⁰, looked at 30 cases from 11 separate studies to estimate turnover costs for different employee cohorts. Their study calculated turnover costs for lower income employees as a percentage of annual salary, and concluded that turnover costs equaled:

- 16 percent of annual salary for high-turnover, low-paying jobs (earning under \$30,000 a year). For example, the cost to replace a \$10/hour retail employee (a typical wage at Target or Walmart at the time of the study) would be \$3,328.
- 20 percent of annual salary for midrange positions (earning \$30,000 to \$50,000 a year). For example, the cost to replace a \$40k retail manager would be \$8,000.

If we apply these numbers in a simplified fashion to a well-known U.S. "big box" retailer like Target Corporation, we can make a rough estimate of the cost of turnover. Based on a conservative estimate of a 50% annual employee turnover rate⁴¹ and a "low-end" \$3,328 per employee turnover cost, Target's annual cost of turnover appears to be at least \$567 million, or about 4% of Target's 2017 selling, general and administrative expenses⁴². Similarly, large relative cost numbers would also apply to most retailers, hospitals, hotels and other employers.

Annual Estimated Target Turnover Cost	
Cost/Employee of Turnover (\$10/hr. workers)	\$3,328
Avg. Annual Turnover Rate (Large Retailer)	50%
Total Target Employees (2016)	341,000
Total Annual Turnover	170,500
Total Cost of Turnover	\$567,424,000

Salary Finance and Benefit to Employers

In its marketing materials, SalaryFinance argues that its products, and its installment loan product, provide tangible benefits to employers.

We sought to test the company's assertions about the value of the SalaryFinance installment loan product for employers by conducting a limited analysis of de-identified SalaryFinance customer data to determine whether use of the product appeared to have any impact on employee turnover rate. We were provided data for 4839 individuals working for 24 SalaryFinance customers⁴³. We removed 3132 individual data points from 8 employers because SalaryFinance was available through those employers for less than 9 months. We thus conducted our analysis on 1707 individual data points from 16 employers, all of whom had made SalaryFinance loans available to employees for at least 9 months.

In our analysis, we compared the historical data for each employer's overall annual turnover rate with the actual annualized turnover rate for those employees who used the SalaryFinance loan product since the launch of the SalaryFinance program at the employer. Program launch dates differed for employers. The maximum number of months for which SalaryFinance was "live" at an employer was 24 months, the median was 14 months and the minimum was 9 months.

SalaryFinance shared both expected attrition rate based on the historical data⁴⁴ and the actual number of "leavers" at the employers with us. We then calculated the percentage difference between the number of employees who left the employers versus the number of employees that were expected to leave based on historical experience. The final step of our analysis involved taking the weighted average of the percentage difference in the actual versus expected attrition rate for SalaryFinance product users by applying the weight of total number of active SalaryFinance loans at each employer.

Our calculations showed that weighted average annualized employee attrition was 28% lower than expected at all the employers included in the analysis.

Salary Finance Turnover Data

Sector	Months in Operation	# of Active SF loans	# of SF Borrower Leavers	Historical Turnover Rate	Expected # of SF Borrowers Leaving Based On Historical Turnover	Difference in Actual vs. Expected # of Turnovers
Data Included In The Study						
Utility	9	483	22	15%	39.1	-44%
Retail repairs	11	252	7	7%	9.8	-29%
Payments	13	133	10	15%	15.3	-35%
Telecoms	10	102	3	14%	8.0	-62%
Local government	15	100	5	6%	4.5	11%
Insurance	18	99	10	18%	9.5	5%
Financial services and holidays	22	84	6	20%	9.6	-37%
Leisure	12	81	6	22%	11.7	-49%
Bank	11	78	6	13%	6.2	-4%
Retail	24	66	8	20%	8.3	-4%
Care homes	16	49	4	20%	3.5	15%
Recruitment	21	45	7	20%	5.7	22%
Food1	15	38	6	20%	7.0	-14%
Charity2	14	36	6	15%	4.5	33%
Food	9	31	-	17%	1.8	-100%
Recruitment	12	30	1	29%	4.5	-78%
Data Excluded From The Study						
Grocery retail	3	1460		25%	35.9	-100%
Outsourcing	4	1216	21	20%	47.8	-56%
Insurance	5	170	1	13%	4.0	75%
NHS	5	63		8%	1.3	-100%
Retail	3	62		25%	1.5	-100%
Retail	5	60	3	34%	4.5	-33%
NHS	5	51		10%	0.9	-100%
Local government	5	50	-	8%	0.9	-100%

While this analysis is compelling, some caveats are in order due to the limitations of the data and the lack of a controlled project design. The analysis we undertook shows what should be characterized as a strong association effect rather than clear evidence of causation. Although, we had access to all the user data from the employers who had greater than 30 SalaryFinance users and had offered the installment loan product for at least 9 months, it is possible that other factors contributed (to a lesser or greater extent) to the apparent change in employee turnover behavior recorded in our data. For example, it is possible that employee turnover at employers has cyclical or seasonal features which were not captured in the data. Similarly, it is possible that employers provided other benefits in addition to the SalaryFinance product during the same time and those could have affected the results. Additionally, while we know that individuals who took out SalaryFinance installment loans had a lower turnover rate than employees of the relevant company experienced historically, because of the lack of a control group we don't know whether the attrition rate of similar employees would have been without a SalaryFinance loan. Despite these caveats, we take comfort in the observation that even if those employees who took out a SalaryFinance loan would have had somewhat lower turnover rates than the employee base as a whole even without the loan, it is still of considerable value to an employer to be able to provide useful benefits to the lowest turnover (and thus most valuable) employees in the company.

Despite these caveats, it appears that the use of an employer-sponsored financial health benefit like SalaryFinance installment loans is associated with material reductions in annual employee turnover rates. This evidence of impact has great importance for employers seeking to control turnover costs. If, for example, we were to apply the SalaryFinance 28% lower attrition rate to a large retail company like Target (using the simplified Target model we set out earlier in the paper), we would expect cost savings at Target of up to ~\$159 million in a year.

Annual Estimated Target Turnover	
Savings from SalaryFinance	
Cost/Employee of Turnover (\$10/hr.	\$3,328
workers)	
Avg. Annual Turnover Rate (Large	50%
Retailer)	
Total Target Employees (2016)	341,000
Total Annual Turnover	170,500
Reduction in Turnover from SalaryFinance	28%
Total Annual Turnover Post-SalaryFinance	122,760
Reduction in Employee Turnover Post	47,740
SalaryFinance	
Total Annual Turnover Cost Reduction	\$158,878,720

Even a reduction of 10% in expected attrition rates, or roughly one-third of the level reflected in the SalaryFinance data, would be worth \$56 million annually to a company like Target

PayActiv and Benefit to Employers

As in the case of SalaryFinance, we asked for de-identified data from PayActiv to assess the impact of use of PayActiv products on employee turnover rates. PayActiv initially provided us with data for 14170⁴⁵ individuals from 9 employers. We removed the data from three employers where PayActiv was available to employees for less than 9 months. We thus conducted our analysis on approximately 6700 individual data points from 6 employers, all of whom had included the PayActiv product for at least 9 months.

We compared user attrition data for two types of PayActiv users, "Enrolled" users and "Active" users. Enrolled users are those who have been registered with PayActiv but have used the product less than twice (0-1 times). For purposes of the analysis they are not considered active users of the product. Active users are those who have accessed the PayActiv product two or more times. Due to limitations on PayActiv's data sources, we did not have data on employees who did not register at all with PayActiv and were therefore neither Enrolled nor Active users.

In our analysis, we calculated the difference in attrition rates between Enrolled and Active users of the PayActiv product since the launch of the PayActiv program at the employer (The number of months for which PayActiv was live at an employer varied, with the maximum being 29 months, median being 13.5 months and minimum being 9 months). We then took the weighted average of the percentage difference in attrition rates between Enrolled and Active users of the PayActiv product by weighting for the total number of active PayActiv users at each employer.

We concluded that Active users of PayActiv products had a 19%⁴⁶ lower turnover rate than Enrolled users. While we have no data to substantiate our view on this point, we speculate that this difference in turnover rates would likely be higher if all the employees of each employer, including those who did not register at all with PayActiv, were included in the calculations.

PayActiv Turnover Data

Employer Name	Aggregate Turnover of Enrolled Users	Aggregate Turnover of Active Users	Improvement Percentage	Months in Operation	# of Active Users
Data included in the study					
Baton Rouge Hospital	72%	62%	15%	29	539
CraftWorks	26%	21%	19%	10	318
Goodwill of Silicon Valley	135%	133%	1%	23	343
IBEX Global	163%	129%	21%	12	5073
Lafayette General Hospital	21%	16%	23%	15	423
Prime Communications	21%	5%	78%	12	18
Data Excluded From the study					
Christian Care Communities	42%	40%	6%	7	159
Signature Healthcare	35%	12%	66%	7	1423
TeleTech	23%	15%	35%	3	550

As with the SalaryFinance example, the analysis we undertook is by no means dispositive from a statistical standpoint and should be viewed as evidence of a strong association rather than proof of causation. Although, we received all employee data points from among PayActiv's high volume employers who had offered the product for at least 9 months, it is possible that other factors contributed (to a lesser or greater extent) to the apparent change in employee turnover behavior recorded in our data.

However, our analysis clearly shows that active use of the PayActiv product by an employee is associated with a materially lower turnover rate as compared to those employees who think about using the product but don't use it actively. This effect, especially if it is shown to persist over a longer period, provides evidence useful to corporate decision makers assessing whether FinTech financial health benefits like PayActiv can reduce turnover costs.⁴⁷

Once again, the dollar benefits to employers using this type of FinTech product could be quite large. If we apply the PayActiv reduced turnover rate to our simplified Target attrition model, we would anticipate annual cost savings of ~\$110 million per year.

Annual Estimated Target Turnover	
Savings from PayActiv	
Cost/Employee of Turnover (\$10/hr.	\$3,328
workers)	
Avg. Annual Turnover Rate (Large	50%
Retailer)	
Total Target Employees (2016)	341,000
Total Annual Turnover	170,500
Reduction in Turnover from PayActiv	19%
Total Annual Turnover Post-PayActiv	138,105
Reduction in Employee Turnover Post	32,395
PayActiv	
Total Annual Turnover Cost Reduction	\$107,810,560

Potential Negative Effects of Employer-Sponsored FinTech Benefits

It should be noted that improving access to low-cost consumer credit, particularly for low-income consumers, is not without its risks. While the amounts advanced by PayActiv are relatively small and SalaryFinance's underwriting model take into account ability to repay, there will undoubtedly be situations where some employees unwisely take on additional high-cost debt as a result of the lower cost of the employer-sponsored FinTech products we researched. The authors' view, however, is that this risk is unavoidable in the current U.S. credit system and that the benefits of employee access to the superior SalaryFinance and PayActiv products outweigh these concerns.

Conclusions

The results of our research highlight the enormous potential for FinTech financial solutions delivered through the employee channel to improve financial health and reduce stress among low-income working Americans and significantly reduce the turnover costs of large employers.

- <u>Employees</u> with access to employer-sponsored FinTech products like SalaryFinance and PayActiv would have better solutions for the pressing day to day crises typical of lowwage employees in the current US economy.
 - o The products would be available at much lower-cost than market alternatives.
 - Some credit-damaged or credit-invisible employees would gain access to traditional financial services products for the first time
 - Reliance on high-cost short-term solutions like payday loans, bank overdrafts and other "alternative" financial products would be reduced or eliminated.

• <u>Employers</u> would find that provision of products like SalaryFinance and PayActiv are associated with materially lower employee turnover rates, which could potentially save them tens to hundreds of millions annually.

Our research supports the view that employer-sponsored Fintech-based employee financial health benefits are an efficient "win-win" solution for the problems of both employers and employees. Importantly, deployment of employer-sponsored financial health benefits does not require changes in law or government intervention to be successful.

These results—particularly those relating to the benefit to employers—should be further investigated by undertaking more statistically robust research comparing employees using FinTech product with an appropriate control group. If our preliminary results are confirmed by future research, the potential of the employer channel as a vehicle for improving the lives of employees will be proven. Additional work measuring the impact of employer-sponsored FinTech benefits on health care costs and employee absenteeism, both areas of significant costs for employers, would also advance understanding.

One very encouraging sign is that Walmart itself recently introduced financial health benefits from PayActiv and Even Responsible Finance (another FinTech) to its employee base. Since the quiet introduction of the benefit in December 2017, it has become popular. As of early March 2018, 80,000 employees were participating, and more than \$30 million had been advanced through PayActiv since the offering began. Walmart allows up to 8 PayActiv advances per year at no cost to the employee. Walmart expects the number of participants to grow quickly as employees learn about its benefits.

While we urge large, high-turnover employers such as Walmart and Target to conduct deeper investigations of the impact of these products by running randomized control trials, there appears to be enough evidence to support rapid implementation of FinTech benefits of the types studied across corporate America. At the very least, employees would benefit from lower-cost, better financial services, implementing companies would likely become employers-of-choice and the inchoate harms caused by financial stress on employees would be reduced. In the best case, employers would reap large financial rewards from reduced turnover and other positive effects on employee morale and performance.

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- ¹¹ SalaryFinance website https://www.salaryfinance.com/how-it-works/
- ¹² Note that government liens (e.g., garnishments) and some other legal obligations may have legal preference over the salary link.
- ¹³ This is similar, but more powerful as a credit matter, to a lender's automatic ACH payment arrangements from a customer's bank account.
- ¹⁴ Communication between SalaryFinance and Todd H. Baker April 23, 2018.
- ¹⁵ SalaryFinance press release, October 4, 2017. https://www.finextra.com/pressarticle/70981/salaryfinance-closes-40-million-investment-round.
- ¹⁶ Co-author Snigdha Kumar completed a summer internship with PayActiv in 2017.
- ¹⁷ Cruchbase analysis. https://www.crunchbase.com/organization/payactiv#section-overview
- ¹⁸ PayActiv website. https://www.payactiv.com
- ¹⁹ Interview with Safwan Shah, CEO of PayActiv.
- ²⁰ Rates found on company websites.
- ²¹ The credit scoring algorithm used cannot be disclosed due to contractual restrictions.
- ²² FICO Score 9 based on Equifax Data: Odds Charts. February 2015
- ²³ Consumer Financial Protection Board. "Analysis of Differences between Consumer- and Creditor-Purchased Credit Scores," September 2012, p. 24.

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²⁴ Credit.Org. "What Credit Scores are Good Credit Scores?" November 6, 2014.

https://credit.org/2014/11/06/credit-scores-good-credit-scores/ According to a leading financial advice site, "[a] FICO credit score under 580 is considered to be poor credit. If your score is below that, it will be hard to qualify for a personal loan."

Elyssa Kirkham, "How to Get a Personal Loan with a Credit Score Under 550," January 2018.

https://studentloanhero.com/featured/personal-loan-credit-score-550.

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³ Baker, Todd H., "FinTech Alternatives to Short-Term Small-Dollar Credit: Helping Low-Income Working Families Escape the High-Cost Lending Trap," Mossavar-Rahmani Center for Business & Government, Harvard Kennedy School, Associate Working Papers Series No. 75. May 2017.

⁴ Pew Charitable Trusts Issue Brief, "Standards Needed for Safe Small Installment Loans from Banks, Credit Unions." February 15, 2018. http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2018/02/standards-needed-for-safe-small-installment-loans-from-banks-credit-unions

⁵ Baker.

⁶ Ibid.

⁷ Hannon.

⁸Crunchbase analysis. https://www.crunchbase.com/organization/salaryfinance

⁹ There is not control over the use of proceeds, however.

¹⁰ According to SalaryFinance, verification of salary is either done proactively, i.e., the employer shares an encrypted payroll file which verifies salary information automatically, or reactively, i.e., employee information is manually validated by the employer.

²⁵ Ibid.

²⁶ SalaryFinance data.

²⁷ Robin S. Frankel, "Lending-Club Personal Loans: 2018 Comprehensive Review," March 29, 2018, Bankrate. https://www.bankrate.com/loans/personal-loans/lending-club-personal-loans-comprehensive-review/

²⁸ It is worth noting that the power of the salary link would be diminished, and could even become counterproductive, if over used. If, for example, an employee had both a large SalaryFinance loan payment and a

large PayActiv advance in the same pay period, the deduction from his or her paycheck might be so large as to create its own problems.

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- https://corporate.target.com/_media/TargetCorp/Press/Multimedia/2018/03/Q4%20FY17%20Earnings/TargetReports-Fourth-Quarter-and-Full-Year-2017-Earnings.pdf
- ⁴³ We were provided with data sets that cover all employers at SalaryFinance who had 1) greater than 30 SalaryFinance users 2) shared retention data with SalaryFinance.
- ⁴⁴ SalaryFinance calculated the expected attrition rate internally by using the formula- number of loans taken out so far * (current date launch date) / 365 * (annual historical attrition rate of >=1-year employees) / 2

 ⁴⁵PayActiv shared all employee data from its 9 highest volume employers.
- ⁴⁶ We also ran the analysis on all the individual data provided to us (not controlling for a minimum availability period of 9 months) and found that the turnover rate reduction would have been 28%.
- ⁴⁷ PayActiv also believes that availability of the service positively impacts the employer's employee engagement as measured by the employee Net Promoter Score (eNPS). The eNPS is a measure that seeks to systematically search out those forms of employee engagement that have the biggest potential impact on customer loyalty. See Bain & Company http://www.netpromotersystem.com/about/employee-engagement.aspx
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