



REIMAGINING FINANCIAL INCLUSION



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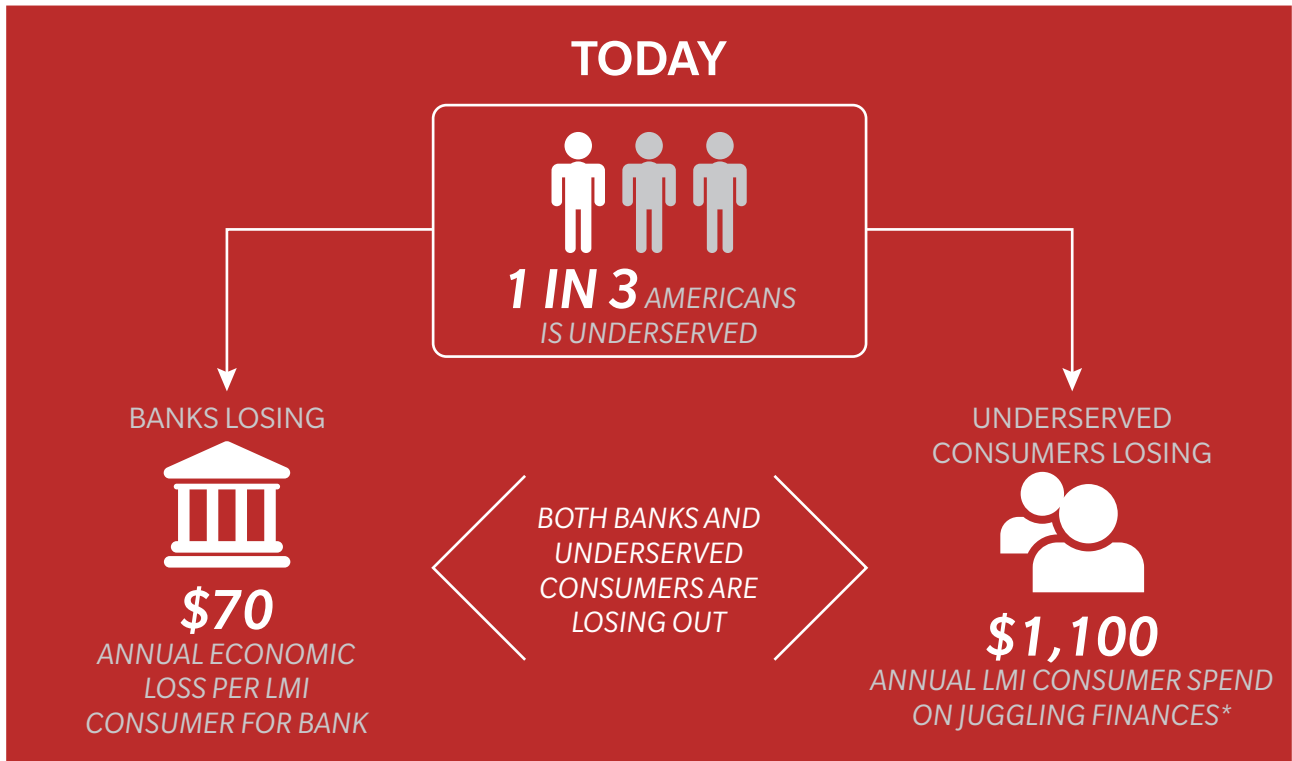
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REIMAGINING FINANCIAL INCLUSION



SOLUTION SET INCREASES BANK PROFITABILITY BY
\$120 PER YEAR
PER LMI CONSUMER



\$1 BN+
PROFIT POTENTIAL FOR A LARGE BANK

CONSUMERS SAVE AN AVERAGE OF
\$500 PER YEAR
ON FINANCIAL SERVICES



\$15 BN+
POTENTIAL SAVINGS FOR UNDERSERVED CONSUMERS

* Includes fees and interest related to products across a range of providers including payday lenders, check cashing companies, prepaid card providers, banks, etc.

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EXECUTIVE SUMMARY

Nearly one in three Americans is “unbanked” or “underbanked” and – despite significant efforts by regulators, consumer advocates, and leading financial institutions – this figure has remained largely unchanged since 2009. So what needs to change to crack the code on financial inclusion? Instead of trying to make lower income consumers fit existing financial products, we propose a new solution set that builds on insights from behavioral science and a deep understanding of financial product economics. This solution, we believe, can help its users improve their financial health and deliver a fair return on capital to regulated financial institutions who offer it.

Advocacy organizations, think tanks, and foundations have been working for years to bring low- and moderate-income (LMI) consumers into the financial mainstream so that they lose less of their scarce income to various types of fees related to managing their finances. Nearly a third of all Americans are considered “unbanked” or “underbanked”.¹ We estimate that a typical unbanked household could spend as much as \$1,100 juggling finances each year.² In total, underserved households spend a staggering \$103 BN on fees and interest for alternative and mainstream financial services each year.³

Financial inclusion has become a business problem in addition to a social problem, as regulators and consumer advocates increase pressure on financial institutions to change the way they serve lower income consumers. A few large mainstream financial institutions have begun offering innovative products for the LMI community, such as American Express’ prepaid card (Serve⁴), J.P. Morgan Chase’s prepaid card (Liquid⁵), and Regions Bank’s deposit advance product (Ready Advance⁶).

Nevertheless, use of these products is far from widespread, and progress on improving LMI consumer financial health has been truly disappointing.

Rates of unbanked and underbanked consumers in the U.S. remained largely the same between 2011 and 2013, decreasing by just 0.5 and 0.1 percentage points, respectively.

In fact, the small 0.5 percentage point decrease that did occur among the unbanked can be explained by differences in economic conditions and demographic composition of households – indicating that these efforts have had limited impact to date.⁷

THE DILEMMA

Why hasn't there been more progress? Financial institutions find it challenging to serve LMI consumers profitably because of low and volatile deposit balances, high risk, and heavy branch usage, among other factors, and have historically charged high fees to cover their costs. In response, advocates have sought extremely low-priced products and services to protect the interests of LMI consumers. But here we reach an impasse: because of the fundamental economics underlying banking products, financial institutions simply can't afford to offer existing products on the terms that advocates desire.

Ironically, the focus on price has distracted the field from the deeper challenge of designing products appropriately for LMI consumers in the first place.

Further, the latest research suggests that many widespread views about LMI consumers are false:

- *Myth: LMI consumers don't want to save.* ideas42's work and external research⁸ indicate that LMI consumers often want to save, even when their budgets show little free cash flow.
- *Myth: LMI consumers are bad at managing their finances.* Recent research shows that LMI consumers are much more aware of their finances and less susceptible to certain behavioral biases than higher-income individuals.⁹
- *Myth: LMI consumers don't have any money to pay for financial services.* LMI consumers pay hundreds of dollars in penalty fees and interest every year, a portion of it going to non-financial firms as late fees. In effect, they pay much more for financial services than the average consumer.

The real challenge facing LMI consumers is clear: they operate in a context of volatility, where cash inflows and outflows are often unpredictable and misaligned, and where small missteps can have serious consequences. This level of complexity would be difficult for anyone to navigate, but the psychological effects of financial scarcity make it especially difficult for LMI consumers to plan for the future – they are often too busy putting out fires in the present.

LMI consumers need a product that can help them manage their cash flow volatility and the behavioral issues this volatility drives.

However, the need to manage volatility doesn't fit neatly into the usual product silos of transactions, credit, deposits, and protection. Traditional banking products designed for middle- and upper-income consumers complicate, rather than simplify, LMI consumers' financial lives. Providing such products to LMI consumers exacerbates the very behaviors (low balances, heavy branch usage) that make these products financially unsustainable for providers and keeps the field from developing better solutions.

BEHAVIORAL SOLUTIONS

Instead of trying to make lower income consumers fit existing financial products, we propose a new type of product that meets the needs of consumers and financial institutions by integrating deposit and credit accounts.

LMI consumers living paycheck-to-paycheck need better tools for managing income and expense volatility. Because this volatility includes both spikes and dips, financial stability requires intervening in good times as well as in bad. In cash-scarce moments, it means providing a way to meet obligations when cash flows are misaligned (credit); in cash-rich moments, it means creating a mechanism for setting aside excess funds between expenses (deposits). When these functions are separate, overdraft fees and interest charges drain value from the consumer. Integrating deposits and credit via a "financial stabilizer" product will encourage beneficial, mutually reinforcing financial behaviors that in turn promote stability for the consumer. Incorporating behavioral design elements such as reminders, spending tools, and automation will further reinforce these positive behaviors.

We understand that the concept described above is complex to design and deliver; however, we believe the potential value justifies the effort.

When consumers have an effective way to manage volatility, many of the problems mainstream financial institutions associate with the LMI population (low and volatile account balances, credit risk) fade.

Seeing more of a consumer's financial life and related behaviors could help institutions screen for credit risk, while automated mechanisms for accumulating savings and replenishing an affordable credit source could directly lower credit risk and expected losses. In addition, offering credit to a consumer appears to drive loyalty and willingness to pay for other services. Finally, an integrated design would reduce much of the "leakage" of funds to product fees, late charges, and overdraft/non-sufficient funds (NSF) fees, as well as capture a larger share of wallet for financial institutions.

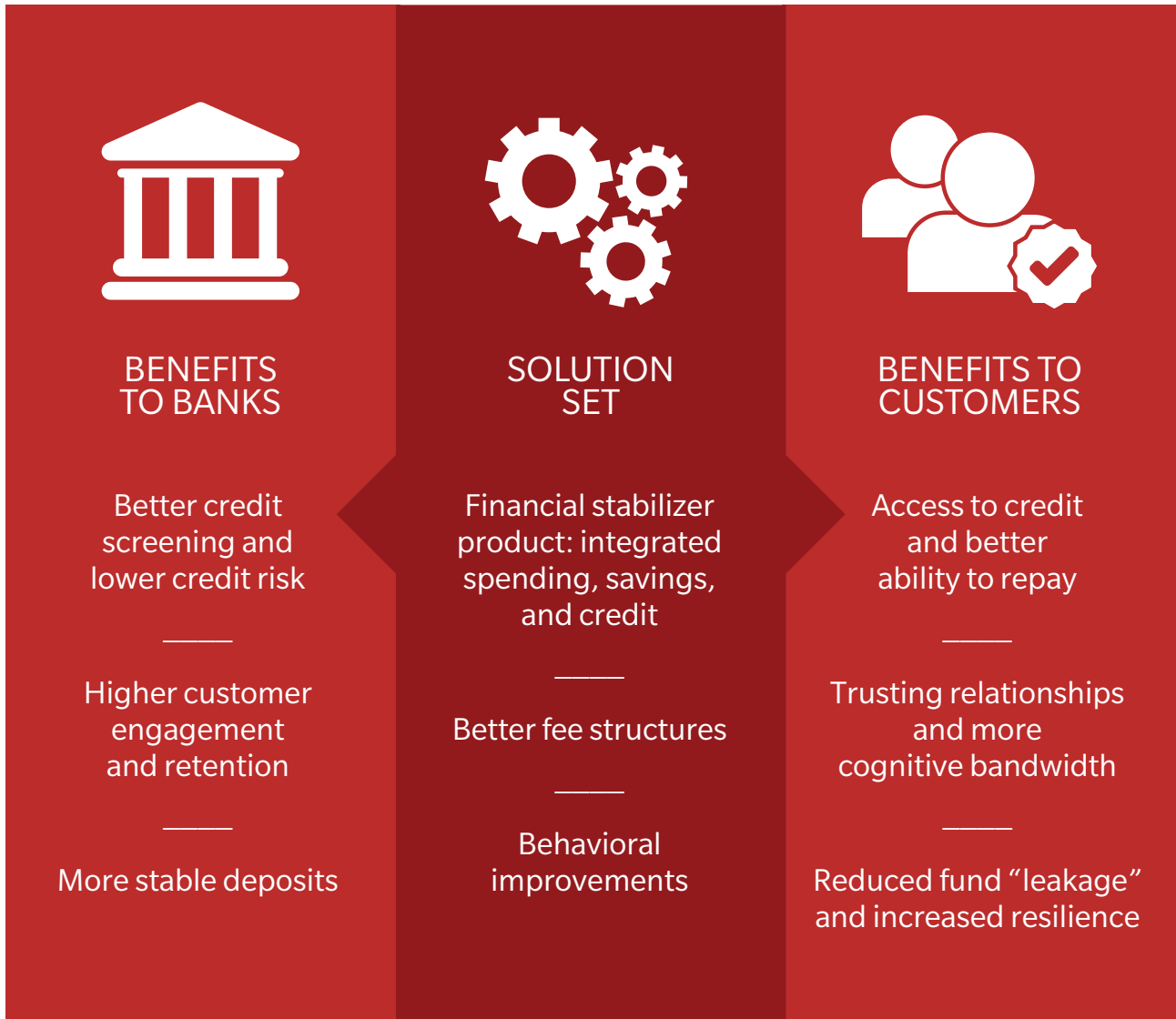
With these behavioral innovations, lower income consumers will look a lot more like middle-income consumers, representing a large, relatively untapped segment that can return above-hurdle-rate profits.

A CALL TO ACTION

Behavioral strategies can significantly improve both the product economics and LMI consumers' financial health, but there is a lot of work to be done. Focused testing of novel designs will be necessary to figure out what works. Making sure that these efforts benefit consumers will require coordination among financial institutions, researchers, advocates, regulators, and funders. Challenges to overcome along the way will include organizational obstacles at financial institutions, regulatory concerns, and some stakeholders' insistence that LMI financial products be totally free. If the collective parties do not come together and the economics do not work out, the financial inclusion field could resort to less financially viable approaches such as subsidizing products. This seems unsustainable for the long run and politically unlikely.

Luckily, all of the stakeholders mentioned above have good reason to care about overcoming these challenges. Moving an LMI consumer from a context of extreme volatility to a position of relative stability holds huge economic potential for financial institutions and huge social potential for improving LMI consumers' lives.

Exhibit 1: A New Integrated Banking Solution Set That Benefits Both Banks and Low-to-Moderate-Income Consumers





CHAPTER ONE

INTRODUCTION

Historically, the goal of the financial inclusion field has been to bring “unbanked” and “underbanked” consumers¹⁰ into the regulated financial services system to access affordable and safe financial products. Since the 2008 financial crisis, regulators have put considerable pressure on large financial institutions to change the way they serve low- and moderate-income (LMI) consumers, in many cases restricting legacy profit models and common operating practices. These efforts have largely failed, making financial inclusion not just a social sector problem, but also a business problem.

Financial inclusion is a worthwhile goal. Regulated banking provides numerous benefits, including the ability to deposit and build funds securely (with federal backing), use payment instruments to facilitate financial transactions, access affordable credit, and obtain sound financial advice. Alternative financial services can be expensive and often fail to meet consumers’ longer-term financial needs like building a credit history. We estimate that a typical unbanked household earning \$20,000 annually could spend as much as \$1,100 each year juggling finances, representing 5% of annual income – or the equivalent of 8 weeks of groceries for a family of four.¹¹ As a whole, the financially underserved segment spent a staggering \$103 BN on fees and interest alone in 2013.¹²

Generally, the strategy behind financial inclusion efforts has been to get more people to use mainstream financial products (and use fewer alternative financial services) by promoting access and making those products more affordable. For instance, the “Bank On” initiative aims to reduce barriers to banking and increase access to the financial mainstream through public/private partnerships between local governments, financial institutions, and community-based organizations.¹³ The FDIC Model Safe Accounts Pilot offered low-cost electronic checking and savings accounts with low minimum balances and no overdraft or NSF fees at nine partner institutions; in the pilot year, more than 3,500 accounts were opened.¹⁴

#1 CALLOUT HOW TO READ THIS PAPER

ideas42 and Oliver Wyman have partnered to take a closer look at scalable financial access solutions for LMI households. In this paper, we first examine the economic drivers underlying existing financial products and consider the implications for LMI consumers. Next, we pinpoint the ways that these products fail to meet LMI consumer needs. Finally, we present a new design blueprint for a financial stabilizer product and discuss the practicalities of testing and launching such a product.

Readers familiar with banking economics may wish to skip many parts of Chapter 2 and proceed directly to Chapter 3. Readers familiar with the latest research on LMI consumers may skip parts of Chapter 3 and move on to Chapter 4.

The financial model we built to study the costs and profitability of existing and potential banking products is online and open to the public. You can explore the relationship between economic drivers and profitability yourself by visiting our interactive web tool at either oliverwyman.com or ideas42.org.

#2 CALLOUT THE FDIC SAFE ACCOUNTS PILOT

In January 2011, the FDIC launched the one-year Model Safe Accounts Pilot with nine financial institutions. Safe Accounts are checkless, card-based electronic accounts that permit withdrawals only through ATMs, point-of-sale terminals, automated clearinghouse pre-authorizations, and other automated means.

During the pilot, more than 3,500 Safe Accounts (662 transaction accounts and 2,883 savings accounts) were opened. Account retention rates reportedly exceeded pilot institutions' expectations, with more than 80% of transaction accounts and 95% of savings accounts still open at the end of the pilot. Because the pilot accounts did not offer paper checks, participating institutions reported that the cost of offering Safe Accounts was roughly the same, if not lower, than the cost of offering other accounts. However, calculating the profitability of Safe Accounts was reportedly challenging due to differences in accounting methodologies, varied business operations, and technology infrastructure limitations among participating institutions.

Source: "FDIC Model Safe Accounts Pilot: Final Report." *Federal Deposit Insurance Corporation*. 2012. Web. www.fdic.gov/consumers/template.

Other efforts have focused on limiting alternative financial services through regulation. As of April 2014, fifteen U.S. states had prohibited payday lending or interest rates higher than 36%.¹⁵ The Talent Amendment to the 2007 defense authorization bill enacted a 36% interest rate limit on payday loans for military service members and their immediate relatives.¹⁶ Yet many of these regulatory actions were born of the need to protect consumers from predatory practices rather than the enactment of a larger financial inclusion strategy.

On the industry side, several financial institutions have tried offering products that resemble alternative financial services but with better prices for consumers. Prepaid card services include the Green Dot card¹⁷, American Express' "Serve" card¹⁸, and J.P. Morgan Chase's "Liquid" card¹⁹, among others. Regions Bank offers a deposit advance product ("Ready Advance") to qualifying customers who have had a checking account open at least six months and use direct deposit (among other criteria), as well as ATM check-cashing services.²⁰ A twist on a traditional checking account, Bank of America's "Safe Balance" account eliminates overdraft fees and paper checks, charging a \$4.95 monthly maintenance fee.²¹

Despite these varied efforts, affordable financial services for LMI consumers are not yet offered at scale, nor has there been

improvement in the financial health of LMI consumers. Rates of unbanked and underbanked consumers in the U.S. have remained largely the same, decreasing by just 0.5 and 0.1 percentage points, respectively, between 2011 and 2013. In fact, the FDIC attributes the 0.5 percentage point decrease in the unbanked rate to differences in economic conditions and the demographic composition of U.S. households – indicating that there has been very little real change.²²

The underserved financial services market, on the other hand, grew from \$82 BN to \$89 BN from 2011 to 2012²³, and rose to a dramatic \$103 BN in 2013.²⁴ Approximately 46% of currently unbanked households have previously been banked.²⁵ Far from helping LMI consumers enter the financial mainstream, such figures suggest we are having trouble keeping current LMI customers in the banking system.

Instead of trying to make LMI consumers fit the products financial institutions already offer, we need to ask how new products could fit the needs of LMI consumers while also being profitable enough for financial institutions to offer broadly. Drawing on the wealth of research on the financial lives of LMI consumers and insights from behavioral science, we have created an innovative product design that holds the promise of financial stability for consumers and significant profitability for institutions.



CHAPTER TWO

UNDERSTANDING BANKING PRODUCTS

Despite the best efforts of consumer advocates, policy makers, and financial institutions, LMI consumers are poorly served by today's mainstream financial markets, and most regulated institutions struggle to generate a fair return on LMI consumer relationships. This is largely the outcome of an unfortunate mismatch between the underlying economic drivers of traditional financial products and several unique features of LMI consumers' financial lives. This mismatch has resulted in low profitability for regulated financial institutions primarily driven by unstable and low deposit balances, higher levels of branch usage, and elevated credit costs due to small loan sizes and high default risk.

In this chapter, we take a closer look at these economic drivers and connect them to LMI consumer characteristics. We have modeled the profitability of typical banking products using public data, industry benchmarks, and other assumptions that we then tested with select banking clients to ensure validity. This model helped us connect and quantify the relationship between consumer behaviors (like closing accounts quickly) and economic drivers of profitability (like account duration). While we can fine-tune variables and assumptions ad infinitum, our findings serve as a starting point for a quantitative analysis that deepens our understanding of the sustainability and value of these products.

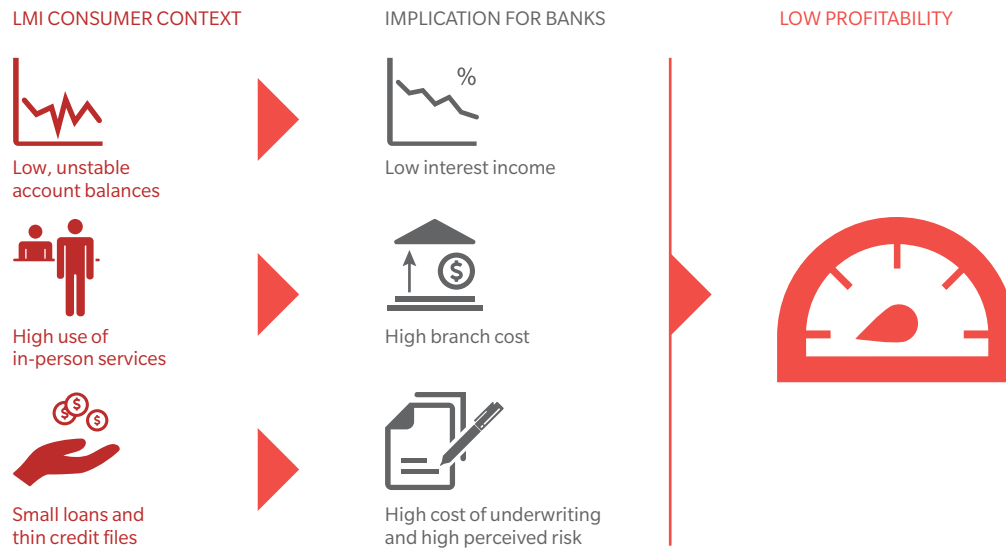
2.1. ECONOMIC DRIVERS

While inputs vary by product and by institution, product profitability boils down to a few key components of revenues and costs for a financial institution.

Revenues include:

- The net interest margin, or the “spread” between the interest income generated by the product and the interest paid out. This applies to checking accounts, savings vehicles, payment cards, and loan products.

Exhibit 2: Key Drivers of Low Profitability for Banks



- Fees, such as monthly or annual maintenance fees, overdraft fees, NSF fees, late charges, merchant interchange fees²⁶, over-the-limit fees, origination fees, and others. The majority of these fees are borne by the consumer.

Typical costs include:

- Branch, service, and other operating costs.
- Capital costs (the pre-tax cost of holding economic capital that is allocated to the product).
- For loan products and payment cards, expected losses due to defaults and charge-offs.

Because of certain characteristics of LMI consumers' financial lives, offering traditional products to LMI consumers is quite costly for financial institutions. There are three primary issues: unstable and low balances limit revenue from deposits; higher branch usage is costly; and small loan sizes and high default risk erode profitability for credit. The result is overall low profitability. We explore each of these challenges in turn in the following sections.

2.2. UNSTABLE AND LOW BALANCES

The relationship between the size of deposit balances and the spread on checking and savings accounts is uncontested. Because financial institutions lend out their deposits, higher balances translate into higher earnings on those deposits.²⁷ But the duration of the account matters, too – sometimes even more than balance size, particularly in low interest rate environments. An estimate of how long a consumer is likely to continue holding funds in an account determines the “time to maturity” for those funds and affects the yield an institution expects when lending out those funds. From a bank's perspective, the key role of deposits is to provide a source of funding and liquidity. Retail deposits²⁸, in particular, are a valuable source of stable long-term deposits. High volatility of retail deposits reduces spread income and increases capital costs.

Low and inconsistent account balances are an unfortunate norm among consumers with limited income, especially those living paycheck-to-paycheck and struggling to

accumulate savings (see “3.1. The Context of Volatility and Implications” on page 24). LMI consumers also tend to have shorter account durations, whether due to extreme volatility within the account balance (dropping near zero on a regular basis), income shocks, job loss, or account closure due to negative experiences with financial institutions. More than one quarter (28%) of overdrafters surveyed in 2013 said that they closed a checking account in the past because of overdrafts³⁰, and 41% of prepaid card users reported that they had closed or lost a checking account because of overdraft or bounced check fees.³¹

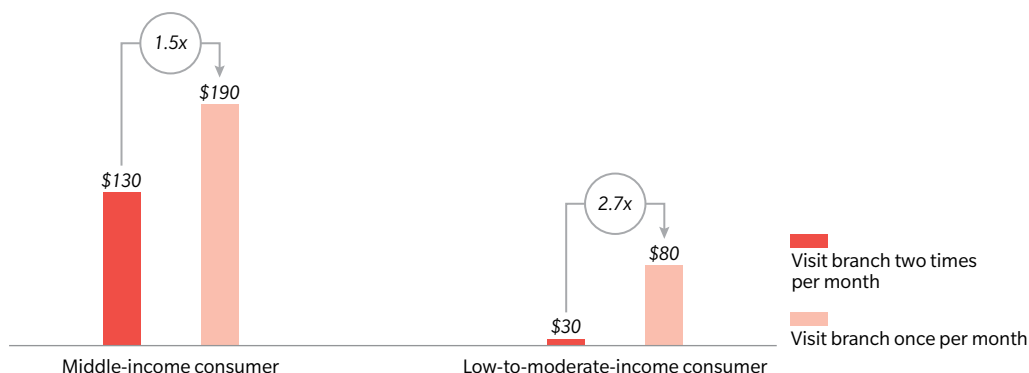
Fluctuations in both account duration and account balance can limit the profits financial institutions derive from lending out deposits, but duration has a surprisingly large impact relative to balance. For instance, consider a LMI consumer holding both checking and savings accounts.³² Halving the average savings balance may cause a corresponding decrease in annual profit of around 5%, but halving the expected account duration is worse for the bottom line – effectively halving annualized profits.

2.3. HIGH BRANCH USAGE

Building and operating brick-and-mortar branches involves considerable fixed

costs, and LMI consumers use in-person services more frequently than higher-income segments. Consumers with incomes less than \$30,000 are more than twice as likely as those with incomes greater than \$75,000 to use a bank teller as their primary banking method.³³ This high use of in-person services could be driven by many different factors, including the need for instant access to funds (see “The Resulting Liquidity Problem” on page 29), relationships with branch employees (see “Behavioral Improvement #3: Focus on Credit and Building Relationships” on page 45), or other preferences such as comfort with in-person services. Providing in-person services is expensive – in fact, some estimates put the cost of the average branch transaction at \$4.25, compared to about \$0.10 for a mobile transaction.³⁴ Both the labor costs of bankers and tellers and the operating costs of running a branch (e.g., real estate) add to the high cost of branch usage. Fixed costs can account for up to 60% of annual branch costs.³⁵ Reducing use of in-person services could reduce the cost to serve LMI consumers: decreasing the frequency of in-person branch visits for a LMI consumer³⁶ from two times per month to once per month can increase per-consumer annual profits by over 2 times (see Exhibit 3 below).³⁷

Exhibit 3: Effect of Decreasing Branch Visits on Annual Accounting Profits (by Consumer Type)²⁹



#3

CALLOUT METHODOLOGY AND ASSUMPTIONS

In our analysis, we modeled the profitability of typical banking products using industry data. We built three consumer profiles – “upper-middle-income”, “middle-income”, and “low-to-moderate-income” – based on income brackets and typical product holdings. Using these consumer profiles, we analyzed accounting profits (AP) and economic profits (EP) at the product level and the average customer level across the portfolio of products held. We define EP as AP minus economic capital costs. Profits were evaluated both on an annualized and a customer “lifetime” basis (including accounting for tax implications where appropriate). More details on these profiles can be found in Appendix B: Consumer Profile and Profitability Assumptions.

Our sources include the 2013 U.S. Survey of Consumer Finances from the Federal Reserve, *No Slack* by Michael Barr, original data from the Detroit Area Household Financial Services Study (2005–2006), Occupational Employment Statistics from the Bureau of Labor Statistics, and prevailing interest rates in the market today.

Note: The analysis presented in this paper relies on our best estimates based on available information. Our analysis does not reflect or apply to individual firms and should be interpreted as reflecting an average taken across the industry. The analysis uses simplifying assumptions and further refinements could be considered in future iterations.

#4

CALLOUT RISK, RETURN, AND HURDLE RATES

The business model of financial institutions depends on taking financial risk and being compensated for that risk through financial return. The higher the risk, the higher the expected return. However, deciding whether an investment is worthwhile is not a matter of simply calculating whether an investment’s return is positive. Financial institutions have a variety of opportunities to consider, and expected return must exceed the “hurdle rate”: the minimum rate considered an acceptable investment. Even after meeting that baseline requirement, a project or investment opportunity must still be weighed against other available options, including a careful assessment of external factors like public perception and regulatory risk. The question, then, is not merely whether a prospective investment is profitable – but whether it is profitable enough to justify the financial, regulatory, and reputational risks associated with that opportunity.

2.4. SMALL LOAN SIZES AND HIGH DEFAULT RISK

On the credit side, the profitability of lending to LMI consumers depends on both the size of the loan and the risk of default. The fixed costs of underwriting and originating loans are substantial and rising in the wake of new regulatory requirements such as Regulation Z TILA (Truth in Lending) and the Consumer Financial Protection Bureau's qualified mortgage rules. Building new features into credit screening systems to comply with changing regulations on small-dollar credit products can be prohibitively costly. Additional regulatory expenses have impeded the development of many small-dollar credit products at banks.

Because revenue is driven by loan size, small-dollar lending becomes a continual struggle to recoup the costs of origination. Lending such small amounts only makes economic sense if the origination costs are kept to a minimum (making intensive credit screening impractical) or if the borrowers are very likely to repay. The shorter the term of the loan, the higher the interest rate must be to cover origination costs.

Because LMI consumers generally have less financial slack and more volatile cash flows (see "3.1. The Context of Volatility and Implications" on page 24), they are, on average, riskier consumers to serve with a credit product. Their financial stability is more sensitive to economic downturns, such that a portfolio with a large portion of LMI consumers requires additional costly risk capital to compensate.

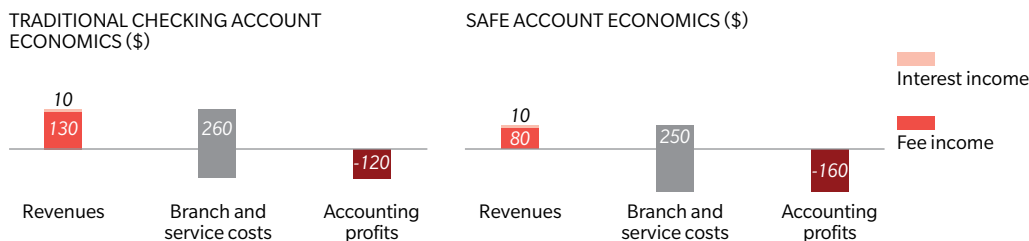
While not all LMI consumers have identical risk profiles, it is difficult to determine whether a given consumer is more or less likely to repay. LMI customers tend to be "thin file" – with little or no credit history – because they previously left the regulated banking sector or never entered it in the first place. Consumers without a strong credit history are likely to be ignored or charged a higher rate to compensate for the additional risk. This leads to higher credit costs for the customer, which in turn increases the likelihood of default, creating a vicious cycle that forces consumers further out of the regulated system.

Collateralized loans (mortgages, auto loans) and other more mature loan products operate under the same economic principles but typically come into play later in the underserved consumer's financial journey. Building credit through a small-dollar loan product can be a critical bridge to mature loan products – if the consumer can access and successfully repay the "gateway" loans.

2.5. LOW PROFITABILITY

Because of LMI consumers' low spread, fees (overdraft, maintenance, interchange) make up the bulk of the revenue generated from their deposit accounts. But because high costs (branch, capital) make deposit accounts so expensive to provide for LMI consumers, profitability remains relatively low despite this fee revenue.

Exhibit 4: Revenues, Costs, and Profits for Traditional vs. Safe Account for a Low-Income Consumer⁴⁰



Consider typical checking and savings accounts held by an upper-middle-income consumer and a LMI consumer. Fees represent an increasing share of checking and savings revenue with decreasing balances – accounting for one-half to two-thirds of total transaction account revenues for the middle-income consumer (depending on the interest rate environment) but up to 90% for LMI consumers (see Appendix B).

While fees are nominally high for the LMI population, a portion of overdraft fees are never collected because consumers may abruptly close or abandon an account after overdrafting. In fact, financial institutions have reported to the Consumer Financial Protection Bureau that charged-off account balances are the single largest cost associated with overdraft programs. These charged-off principal balances (which are primarily due to overdraft programs) represented approximately 14% of net overdraft fees charged at banks in 2011.³⁸ Nevertheless, overdraft fees remain a significant driver of revenue from LMI consumers relative to interest income.

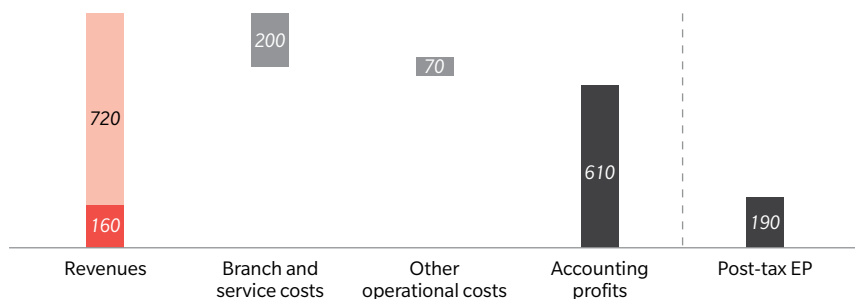
Increasing fees to compensate for high costs is not a sustainable approach for financial institutions. Consumers are likely to

leave in search of cheaper banking options (see Callout 7: “It’s All Relative: Reference Points Shape Our Notions of Fairness” on page 28), and the risk of added scrutiny from regulators and advocates is high. We return to the impasse between financial institutions and advocates: even as providers face only marginally profitable accounts, consumer advocates demand still lower fees. Could these accounts be at least somewhat profitable with lower fees?

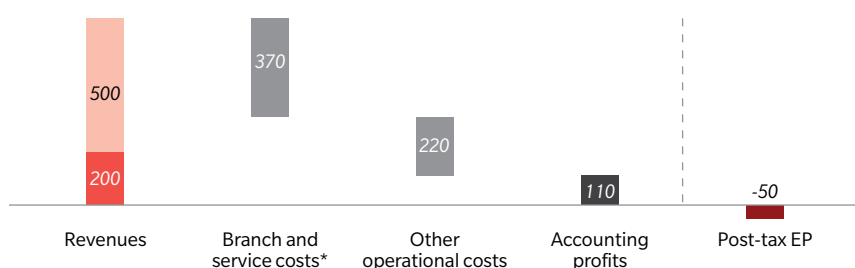
To answer this question, consider the FDIC Model Safe Account (see Callout 2: “The FDIC Safe Accounts Pilot” on page 12). Unlike a traditional checking account, the Model Safe Account is fully electronic, does not offer paper checks, and has no overdraft or NSF fees.³⁹ The lack of fee revenues can reduce transaction account profits by a third relative to a traditional account (see Exhibit 4 above). In theory, the electronic nature of the account could potentially compensate by reducing branch costs in the long term. But in practice, the impact on profits is uncertain. While offering a cost-neutral product may be feasible for some financial providers, for many the potential returns would not justify developing such a product (see Callout 4: “Risk, Return, and Hurdle Rates” on page 18).

Exhibit 5: Profitability for Banks (by Consumer Typer)⁴¹

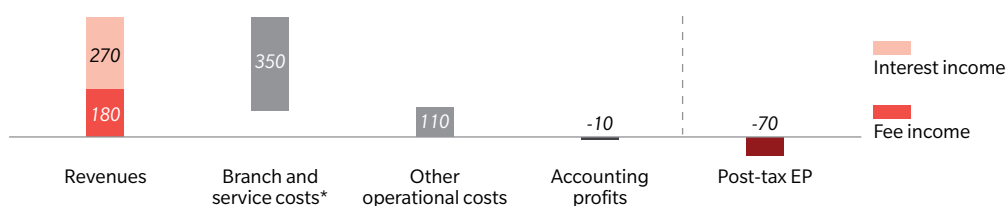
UPPER-MIDDLE-INCOME (\$)



MIDDLE-INCOME (\$)



LOW-TO-MODERATE-INCOME (\$)



* Approximately 30–50% of branch and service costs are fixed

Bringing all these factors together, what we see is that overall profitability rapidly decreases with income level (see Exhibit 5 above). Middle-income customers are marginally profitable from an accounting profit perspective but produce a net loss from an economic profit perspective; LMI consumers are unprofitable from both an accounting profit and economic profit perspective. Apart from the low deposit profitability described above, the high branch costs, low credit penetration, and

higher credit costs depress overall profits. Although financial institutions can try to manage margins by compensating with fee revenue and higher rates (on credit), it is insufficient to make these segments profitable under current product constructs, cost structures, and regulatory environment. Additionally, corporate overhead (which can easily run at 10–15% of revenues) can further depress profitability. This analysis paints a grim economic picture for financial institutions and for LMI consumers.



CHAPTER THREE

UNDERSTANDING CONSUMER NEEDS

Recent research has exposed startling insights into the extreme cash flow volatility facing LMI consumers. These households operate in a unique financial context where cash inflows and outflows are often unpredictable and misaligned, and where small missteps can have serious consequences. As a result of this context, consumers naturally struggle to accumulate savings (often despite intentions to save), have difficulty planning for the long-term, and end up needing immediate access to their funds. Traditional banking products not only fail to solve these problems, but often make them worse. Providing such products to LMI consumers exacerbates the very characteristics (low balances, heavy branch usage) that make these products financially unsustainable for providers and keeps the field from developing better solutions.

Given the economic drivers and consumer characteristics outlined in Chapter 2, offering traditional banking products to LMI consumers is barely financially viable for profit-driven financial institutions. To make matters worse, these products don't appear to meet LMI consumer needs. In fact, 61% of consumers using two or more types of alternative financial services also have a checking account, suggesting that a large number of consumers turn to alternative services for specific needs unmet by traditional accounts.⁴²

While designers tend to focus on product categories, consumers typically focus on their specific financial needs. To meet these needs, they use products without regard for categories (checking, savings, cards, etc.) and labels (regulated, unregulated). Consumers who need quick access to liquid savings, for instance, often use a checking account or prepaid card rather than a savings account to store funds. When cash flows are unpredictable, some LMI consumers prepay bills to manage risk.

Many borrowing and saving practices are variations on the same income-smoothing technique, with different timing.⁴³ Consumers

even find creative solutions to combat their own behavioral limitations, whether by freezing a credit card inside a glass of water to fight self-control problems or using physical envelopes as a concrete budgeting device.

In this chapter, we explore how cash flow volatility and the lack of a financial cushion shape LMI consumers' financial behaviors. Next, we consider the psychological costs of unexpected fees, and finish with a discussion of the limitations of product-driven financial inclusion efforts for different consumer types.

Key sources for our review of the existing literature on consumer needs include the research of Professors Michael Barr, Sendhil Mullainathan, Antoinette Schoar and Eldar Shafir, the U.S. Financial Diaries project, the Center for Financial Services Innovation (CFSI), the Pew Charitable Trusts, and the FDIC.


We have supplemented our analysis with interviews at several of the country's largest financial institutions, advocacy organizations, credit unions, and financial technology start-ups to understand both economic and practical constraints.

3.1. THE CONTEXT OF VOLATILITY AND IMPLICATIONS

When we think about the financial context of LMI consumers, limited income is typically the first feature that comes to mind. From a behavioral perspective, however, it is the volatility rather than the absolute amount of income and expenses that matters most. Recent research exposes startling fluctuations on both sides of the balance sheet. One study found that nearly half of American households experience an income gain or drop of more than 25% in a given two-year period.⁴⁴ Households living below the supplemental poverty threshold⁴⁵ experience even more volatility: an average of two income and spending spikes per year, with only 40% of spending spikes occurring in the same month as income spikes. Over 40% of these households reported that it was difficult to predict both monthly income and expenses.⁴⁶

LACK OF A FINANCIAL CUSHION

Volatile cash flow swings can be tough to manage: 92% of American consumers report that they would prefer financial stability to moving up the income ladder.⁴⁷ Many LMI consumers do not have a sufficiently large cushion of funds on hand to weather these swings. In the U.S., 44% of households are considered "liquid asset poor", lacking savings to cover basic expenses for three months.⁴⁸ Other researchers found that almost half of respondents in a U.S. survey




Myth: LMI consumers don't want to save. ideas42's work and external research have shown that LMI consumers want to save, even when their budgets show little free cash flow.

were “certainly unable” or “probably unable” to come up with \$2,000 within 30 days.⁴⁹

A common misconception is that LMI consumers do not want to save. ideas42’s work and external research⁵⁰ have shown that LMI consumers actually do want to save, even when their budgets show little free cash flow. 83% of Americans worry about their lack of savings.⁵¹ And simply having low levels of income should not be seen as an absolute barrier to saving or overall financial health. A recent survey found that healthy savings habits correlate with financial health: consumers who save for large irregular expenses are ten times as likely to be financially healthy as those who do not, holding income and demographic variables constant.⁵²

Without a financial cushion, many LMI consumers turn to credit to cover cash shortfalls. LMI consumers cite a range of credit sources: borrowing from friends and family, using a credit card, or even overdrawing a checking account.⁵³ Some consumers may even think of paying a bill late as borrowing for the cost of the late fee. Unfortunately, such credit sources rarely help a consumer achieve a position of financial stability because they don’t enable households to manage volatility in good times and in bad. More often, payday products with short terms and high fees propel borrowers into a cycle of debt. Consumers using payday loans marketed as two-week products end up in debt for an average of five months, and 41% of these consumers need a cash infusion – such as a loan from a family member or a tax refund – to fully pay off the loan.⁵⁴

Volatility works in both directions, with spikes as well as dips: in order to achieve a position of financial stability, a consumer must be able to both weather shocks in bad



Myth: LMI consumers are bad at managing their finances.
Research shows that the poor are more aware of their finances and less susceptible to certain behavioral biases than higher-income individuals.

times and set aside excess funds during good times. Though LMI consumers want to save, various behavioral factors can make it difficult to do so (see “The Psychological Impact of Scarcity” and Callout 8: “Moving Beyond Information and Incentives to Change Behavior” on page 38). Even if a consumer can access a credit source to cover obligations during bad times, successfully repaying that debt requires systematically saving when there is surplus income. The real need is for a cash management solution that covers immediate obligations and automatically builds up a buffer over time to protect against fluctuations in cash flows.

THE PSYCHOLOGICAL IMPACT OF SCARCITY

Within this context of financial volatility, certain psychological effects can exacerbate counterproductive financial behaviors. As discussed in ideas42’s recent working paper⁵⁵, individuals with severely limited resources tend to automatically (and often without realizing it) “tunnel” or focus intensely on

#5

CALLOUT

THE NITTY-GRITTY OF FUNDS AVAILABILITY

Federal law establishes general boundaries around funds availability, including the maximum length of time a financial institution can make customers wait for their funds. Nevertheless, funds availability rules are complex, and practices may differ from institution to institution. For checks larger than \$200, \$200 of the total amount must be made available the next business day. But since the “end of the business day” can be as early as 2 pm, the “next business day” can be 2-4 days later. Different regulations may apply if an account is new or has been overdrawn, if the deposit is larger than \$5,000, or if the deposit is made through any channel other than a teller at the bank.¹

When it comes to depositing paper checks, consumers as well as institutions bear risk. If the writer of a check is also living on the margin, consumers run the risk of bouncing a check if they wait too long to cash it. This means that immediate access to deposits is important for LMI consumers not just to meet their own obligations, but also to counter the risk of being on the wrong side of a bounced check.²

1. Source: <http://www.consumerfinance.gov/askcfpb/1023/how-quickly-can-i-get-money-after-i-deposit-check.html>.

2. Source: Interviews with senior bank executives from multiple institutions. November – December 2014.

#6

CALLOUT

NO SUCH THING AS A FREE LUNCH

Many basic banking products that feel “free” to middle- and upper-income consumers are actually not free. Checking accounts often charge fees that are waived based on certain criteria. Among the most common checking accounts, approximately 40% waive monthly fees with direct deposit and 86% waive monthly fees with a minimum monthly combined balance of \$2,500. A median checking account charges a monthly fee of \$8.95 and requires a minimum opening deposit of \$100.¹ Framing also matters: interest charged on outstanding credit card balances doesn’t necessarily feel like a “fee” from a consumer perspective.

A more subtle point is that minimum balances and deposit thresholds represent a significant opportunity cost for the consumer. These policies compel consumers to hold funds within a financial institution when they arguably could be investing those funds elsewhere and getting a higher return. While these costs are invisible to the consumer, they likely represent a significant dollar amount.

1. Source: “Hidden Risks: The case for safe checking accounts.” The Pew Charitable Trusts. 2011. Web., <http://www.pewtrusts.org/en/research-and-analysis/reports/2011/04/27/hidden-risks>.

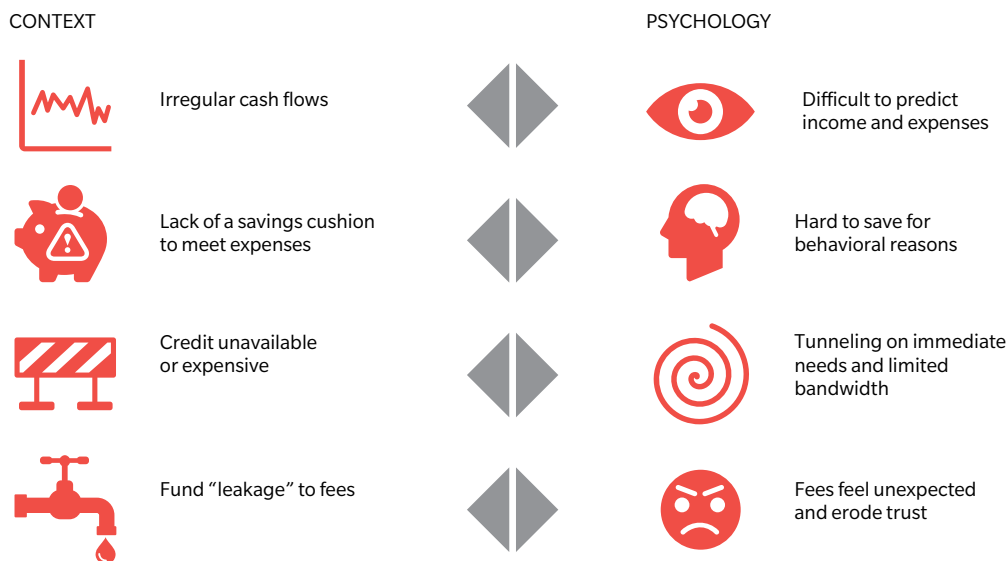
a pressing problem while neglecting other demands. Maintaining this focus can be beneficial in the short term but detrimental over time, as tasks that are important but do not feel urgent – planning for the future, investing in key relationships – are crowded out of the “tunnel”. The cumulative impact of tunneling and other shifts in cognitive functioning created by scarcity can temporarily lower an individual’s IQ by approximately thirteen points.⁵⁶ This so-called “bandwidth tax” not only imposes a financial cost, but also has far-reaching consequences across a consumer’s life by pulling attention away from longer-term goals.

Consumers taking out short-term loans appear particularly vulnerable to tunneling effects. Focus groups confirm that borrowers considering shorter-term loans – even those with a monthly payment structure – focus on required monthly payments and ignore other substantial costs, like maintenance, origination, and interest fees.⁵⁷ Demand for payday loans among LMI consumers is fairly insensitive to price, as reflected by the fact that payday lenders tend to cluster around the

maximum price allowed and compete instead on customer service and location.⁵⁸

Even worse, tunneling and scarcity tend to amplify behavioral issues with which everyone struggles. As human beings, we have limited attention for monitoring our accounts and transactions. We underestimate surprise expenses, fail to set aside enough funds for emergencies, and procrastinate saving for retirement because other tasks feel more urgent. Consumers at all income levels grapple with these behavioral problems, but they can become worse when we intensely tunnel on today’s needs and lack the bandwidth to plan and adapt for the long term. Highlighting these behavioral “quirks” should not be taken to mean that LMI consumers are bad at managing their finances. Recent research shows that the poor are much more aware of their finances and less susceptible to certain behavioral biases: consumers living within a context of scarcity were better at weighing trade-offs and valuing goods consistently than higher-income consumers.⁵⁹ Nevertheless, tunneling on immediate needs inevitably derails longer-term planning, and managing scarcity occupies valuable mental bandwidth.

Exhibit 6: Volatility and the Psychological Effects on Low-to-Moderate-Income Consumers



#7

CALLOUT

IT'S ALL RELATIVE: REFERENCE POINTS SHAPE OUR NOTIONS OF FAIRNESS

Human beings have strong notions of fairness and are willing to pay to punish firms that violate these notions. Often fairness is judged against some reference transaction, such as an existing price or wage. A firm's action is more likely to be judged unfair if it causes a loss to the transactor (relative to the reference transaction) than if it cancels or reduces a possible gain.¹

This has important implications for firms that attempt to raise prices. In the 1990s, Washington Mutual introduced checking accounts with no monthly fee and no monthly minimum balance.² "Free checking" set a new reference point for consumers, and subsequent attempts to increase fees over the past decade have raised consumer ire. In 2011, Bank of America abandoned a \$5/month debit card usage fee following a fierce consumer outcry.³ While upfront fees have slowly crept back into transaction accounts, consumer notions of fairness continue to shape public reactions to pricing decisions for financial institutions.

1. Source: Kahneman, D., Knetsch, J., & Thaler, (1986). Fairness as a Constraint on Profit Seeking: Entitlements in the market. *The American Economic Review*, Vol. 76(4).

2. Source: <http://consumerist.com/2010/12/06/chase-cuts-off-free-checking-for-life-for-former-wamu-customers/>.

3. Source: http://www.nytimes.com/2011/11/14/business/banks-quietly-ramp-up-consumer-fees.html?pagewanted=all&_r=0.

Understanding scarcity's effects has important implications for how we design products and services. Factors that may seem small or insignificant, such as the distance to the bank branch or delay in accessing funds, have a disproportionate influence on actions taken. Effective products and services must be informed by an understanding of human behavior that represents people as they actually are ("homo sapiens") rather than as perfectly calculating actors ("homo economicus"⁶⁰), and must address a range of behavioral challenges from limited attention to self-control to tunneling.

THE RESULTING LIQUIDITY PROBLEM

Many LMI consumers who lack a cushion or credit source to cover obligations amid volatile cash flows end up needing immediate access to their funds on payday. Unfortunately, few traditional banking products offer instant liquidity. For reasons ranging from fraud protection to systemic delays, most consumers cannot immediately access 100% of funds deposited via paper check in a traditional checking account. Rules surrounding check deposit availability are both complex and vague, leaving consumers unsure when they will be able to access their money (see Callout 5: "The Nitty-Gritty of Funds Availability" on page 26).

Liquidity is rarely an issue for middle- and upper-income consumers because most have a cushion of funds in their accounts to cover immediate obligations. But for consumers living paycheck-to-paycheck, waiting even one day may not be a viable option. For those without access to credit, no cash means no food and no gas. Should a bill come due in this interim period, it can mean no heat, no cell phone, and possibly late fees or reconnection fees later on. These

risks become even more serious if they threaten someone's ability to get to work and generate income.

In fact, speed is the second most common reason that underserved households give for using non-bank check-cashing services (after convenience).⁶¹ When given the choice, 90% of consumers on a banking and payments technology platform chose instant deposit with a fee over free deposit in seven business days.⁶² Some mobile instant check-cashing services exist⁶³, but this feature is far from widely available. A recent study of mobile Remote Deposit Capture (mRDC) found that most prepaid card providers disclosed funds-availability policies and gave choices for availability, including an immediate option for a fee. In contrast, almost half of the banks examined did not disclose these terms, and of those that did, most made funds available between one and two days after posting the deposit.⁶⁴

Having fewer ATMs and branches located in lower income areas makes it even harder for LMI consumers to access cash quickly and easily at the moment it is needed. Over 90% of branch closings since 2008 have been in postal codes where the household income is below the national median⁶⁵, and around 70 MM Americans live in a community with only one bank or none at all.⁶⁶ Busy work schedules are often hard to coordinate with branches that are only open during standard business hours: half of check cashing via kiosks and mRDC happens outside of standard 9am-to-5pm business hours.⁶⁷

Restrictions and delays in transferring between accounts exacerbate the liquidity problem, especially when it comes to saving. Transferring from a savings account into a checking account may represent a significant hassle for someone who needs to access a fairly liquid pool of savings regularly.

Regulatory restrictions on savings accounts that limit withdrawals and transfers to six per month⁶⁸ further erode the usefulness of traditional savings accounts for LMI consumers.

Again, if a consumer has a cushion of funds or credit to cover obligations while a transaction clears, liquidity is no longer a problem. But few mainstream financial institutions seem to be offering services with instant liquidity in today's market, even for a fee.

3.2. THE PSYCHOLOGICAL COST OF UNEXPECTED FEES

Another consequence of volatility is that LMI consumers end up paying a lot in fees to both mainstream and alternative financial services providers. LMI consumers pay hundreds of dollars in penalty fees and interest every year, some of it going to non-financial firms as late fees. In effect, they pay much more for financial services than the average consumer.⁶⁹

Myth: "LMI consumers don't have any money to pay for financial services."

LMI consumers pay hundreds of dollars in penalty fees and interest every year, a portion of it going to non-financial firms as late fees. In effect, they pay much more for financial services than the average consumer.

While alternative financial services like check cashing typically charge up-front or pay-as-you-go fees, traditional banking products often appear free but have unexpected financial and opportunity costs (see Callout 6: "No Such Thing as a Free Lunch" on page 26). Overdrafting is a particular problem for the LMI population: consumers earning less than \$50,000 represent approximately 63% of overdrafters, and consumers earning less than \$30,000 represent approximately 43% of overdrafters.⁷⁰ This "leakage" of funds further destabilizes LMI consumers financially and can have a negative psychological and emotional impact.

From a behavioral perspective, the psychological pain of incurring a fee can be especially acute if that fee feels unexpected (see Callout 7: "It's All Relative: Reference Points Shape Our Notions of Fairness" on page 28).⁷¹ 31% of unbanked households report high or unpredictable fees as one reason they are unbanked. A large majority (68%) of overdrafters surveyed in 2013 stated their preference that a transaction be declined rather than processed with a fee.⁷² Additionally, the fees feel unreasonably high: the median overdraft fee is about \$35, while the median transaction amount causing the overdraft is also around \$35.⁷³ The negative experience of incurring these fees (or not being able to cover them) can prompt consumers to abruptly close or abandon their accounts, perpetuating a pattern of short account duration.

3.3. LIMITATIONS OF FINANCIAL INCLUSION

While tools for managing volatility will make many LMI consumers better off,

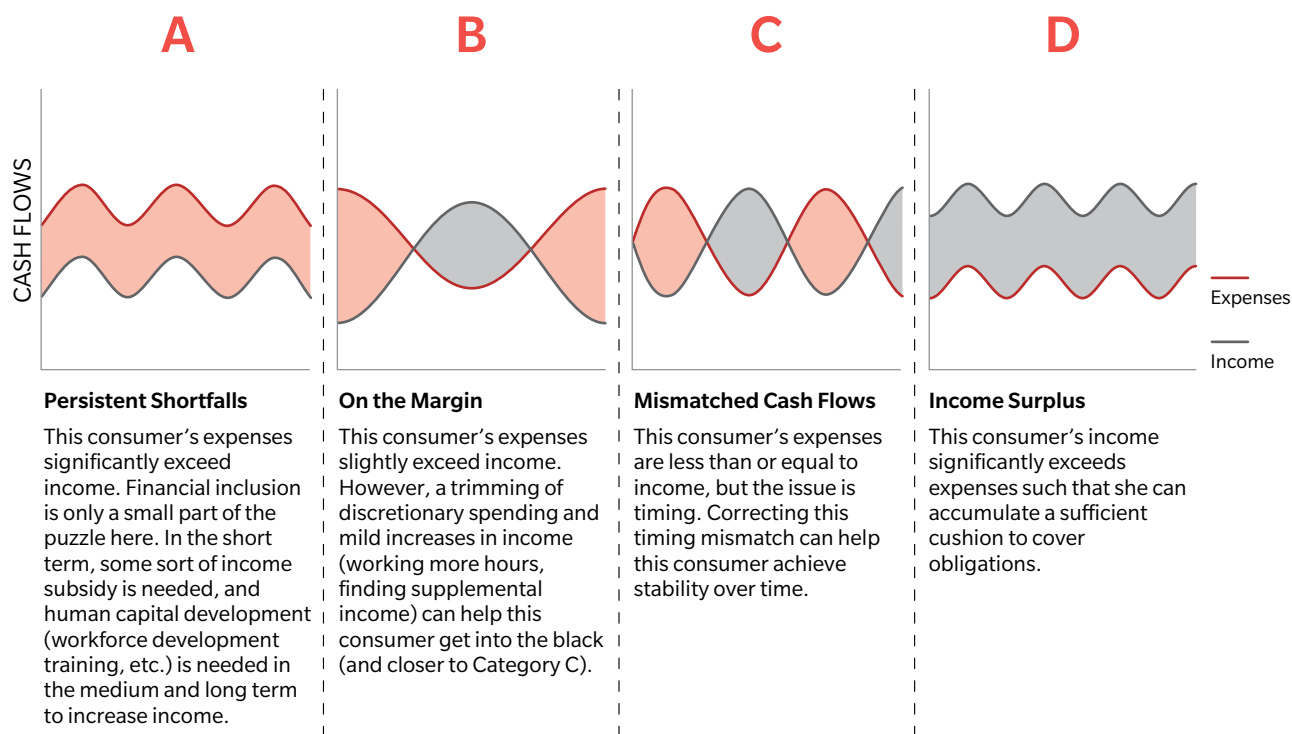
some consumers will not achieve a position of financial stability with even the best-designed financial products. Consumers fall into one of four categories when it comes to income and expenses (see Exhibit 7 below). Better financial products can help many consumers, though they will not necessarily solve deeper problems like persistent and significant income shortfalls (see consumers in category A) – these problems require more substantive interventions from outside the financial services industry, like workforce development support.

In addition, a subset of the population faces more insurmountable barriers to using the mainstream banking system. Some consumers are subject to garnishment, a legal procedure by which a court order gives a creditor or debt collector permission to freeze or take funds from an individual's

bank account for debts owed.⁷⁴ Even the threat of this type of legal action may deter consumers from obtaining a bank account. Other consumers (around 7% in the U.S.) cannot open an account due to identification, credit, or banking history problems.⁷⁵ Some of these consumers may not be able to open an account because of information that appears in ChexSystems⁷⁶ due to past banking behavior, like overdrafting. In these circumstances, there are relatively few products available to meet their financial needs.

Clarifying the purpose – and limitations – of our designs can help financial institutions create products and services that may not help everyone across every context, but that have a better chance of helping large groups of people within common contexts.

Exhibit 7: Low-to-Moderate-Income Consumer Contexts





CHAPTER FOUR

A NEW APPROACH

It does not make sense for financial institutions to offer LMI consumers traditional banking products (as currently structured), nor does it make sense for LMI consumers to use these products. For LMI consumers, volatile cash flows translate into unstable deposit balances that generate little interest income for financial institutions. Many financial institutions address this by focusing on fee revenue, leading to further financial destabilization for consumers. A simple compromise on pricing between advocates and financial institutions will not be enough to bridge this impasse. Instead, we propose a new banking solution set. Our solution comprises a financial stabilizer product that integrates spending, savings, and credit, introduces transparent fee structures, and embeds behavioral design elements. These design elements can help consumers stabilize their financial lives and improve the economics for the bank.

Rather than starting with the assumption that existing products will work, we must begin with consumer needs and work backward to design products that meet those needs. Fixing the financial volatility that LMI consumers experience requires a way to meet obligations when cash flows are misaligned and a mechanism for setting aside excess funds between expenses.

LMI consumers struggle to build up a cushion because saving money can be difficult for many behavioral reasons. With tight cash flows, a small cushion might not even be sufficient to cover a medium-sized expense. Credit, the other solution, can be hard for LMI consumers to access at all. The types of credit they can access are so expensive that it's hard to repay without getting caught up in a cycle of indebtedness. By itself, credit helps a consumer cover obligations in the short run, but it does not help a consumer build financial stability in the long run.

On the flip side, LMI consumers may also have excess funds at times. Where might these "excess funds" come from? For some, "excess funds" will come from seasonal spikes in income or other lump sums (e.g., tax refunds). For many, however, the "excess funds" will come from the money they are currently spending just to manage

their finances. LMI consumers not only pay high fees and interest to mainstream and alternative financial providers, but they also pay late fees to landlords, utility companies, and other billers as a means of accessing short-term credit. These costs can total hundreds of dollars per year. A small fraction will be sufficient to pay for a better financial product, while the rest contributes to a modest cushion of savings.

After smoothing out the volatility and building a small buffer of savings, many of the “problems” with serving LMI consumers disappear. In fact, many features of LMI consumers’ financial lives that are seen as unavoidable realities (such as unstable balances or short account durations) are actually linked to behavior and the context of volatility. When a consumer is living paycheck-to-paycheck, even a predictable expense can feel like a shock, causing her to fall farther and farther behind. Lending to this consumer is risky not because she is insolvent, but because she may not be able to align cash flows in order to repay in a timely manner. But if we offer consumers a way to combat this volatility, and incorporate smart design features that nudge healthy financial behaviors, LMI consumers become less risky, more stable, and more resilient. Improvements could come in the form of more stable deposits, reduced branch usage, better debt repayment, and fewer late and NSF fees.

The next chapter proposes a solution to the volatility problem. Subsequent chapters explore additional behavioral design elements that could further improve outcomes for both consumers and providers and explain the psychology of fee structures. Finally, we acknowledge organizational and regulatory hurdles to creating and scaling

financial products for LMI consumers and suggest how we might move past them.

4.1. AN INTEGRATED SOLUTION SET

Helping LMI consumers cope with financial volatility is essentially a cash management problem. Solving this problem can save consumers hundreds of dollars in fees and high-interest credit that can go towards savings and towards paying for the financial product itself. However, the cash management problem can only be solved if LMI consumers integrate the bulk of their financial management into one product offering – and this will happen only if they are provided with a better alternative to the patchwork of financial services they currently use.

Three key insights drive the design of a cheaper and easier-to-use integrated solution:

1. **Automate budgeting and saving.** It’s not enough to simply offer LMI consumers a savings account. We must help them set aside a buffer against volatility by building automatic savings and spending buckets into the product design. The account must set aside funds for savings and bills, leaving a separate pot for discretionary spending. While the cash separation would be immediately reversible for sudden liquidity needs, behavioral research suggests that even a virtual separation can help consumers stick to their budgets (see “4.3. Other Behavioral Design Elements” on page 39).⁷⁷ To maintain that savings buffer, any withdrawal must be automatically and quickly “repaid” as if it were a payday loan. This feature must be built into the product with reminders so that the consumer doesn’t have to remember to repay savings.

2. **Offer affordable credit.** We will need to provide the consumer with short-term credit while she is building up a savings buffer, but the amount of credit can shrink as savings grow. That credit will be low risk, as it will be quickly and automatically paid back with deposits. It will also be affordable since the consumer will save on late fees and payday loan fees, a portion of which can go towards interest.
3. **Integrate spending, savings, and credit.** Automated savings alone won't last in a context of volatility. Without credit, automatically funneling income towards bill payments is not viable for LMI consumers. By itself, short-term credit eventually devolves into expensive payday lending or is too high-risk to be viable for the provider. An integrated solution needs to link spending, savings, and credit so that spending obligations are automatically covered by the optimal source and those sources are automatically replenished.

Additional behavioral design features like reminders and timely feedback on spending can further encourage the sorts of healthy financial behaviors that promote stability (see “4.3. Other Behavioral Design Elements” on page 39). The result is more financial stability and, ultimately, more mental bandwidth to devote to other important aspects of life.

IMPROVED PRODUCT ECONOMICS

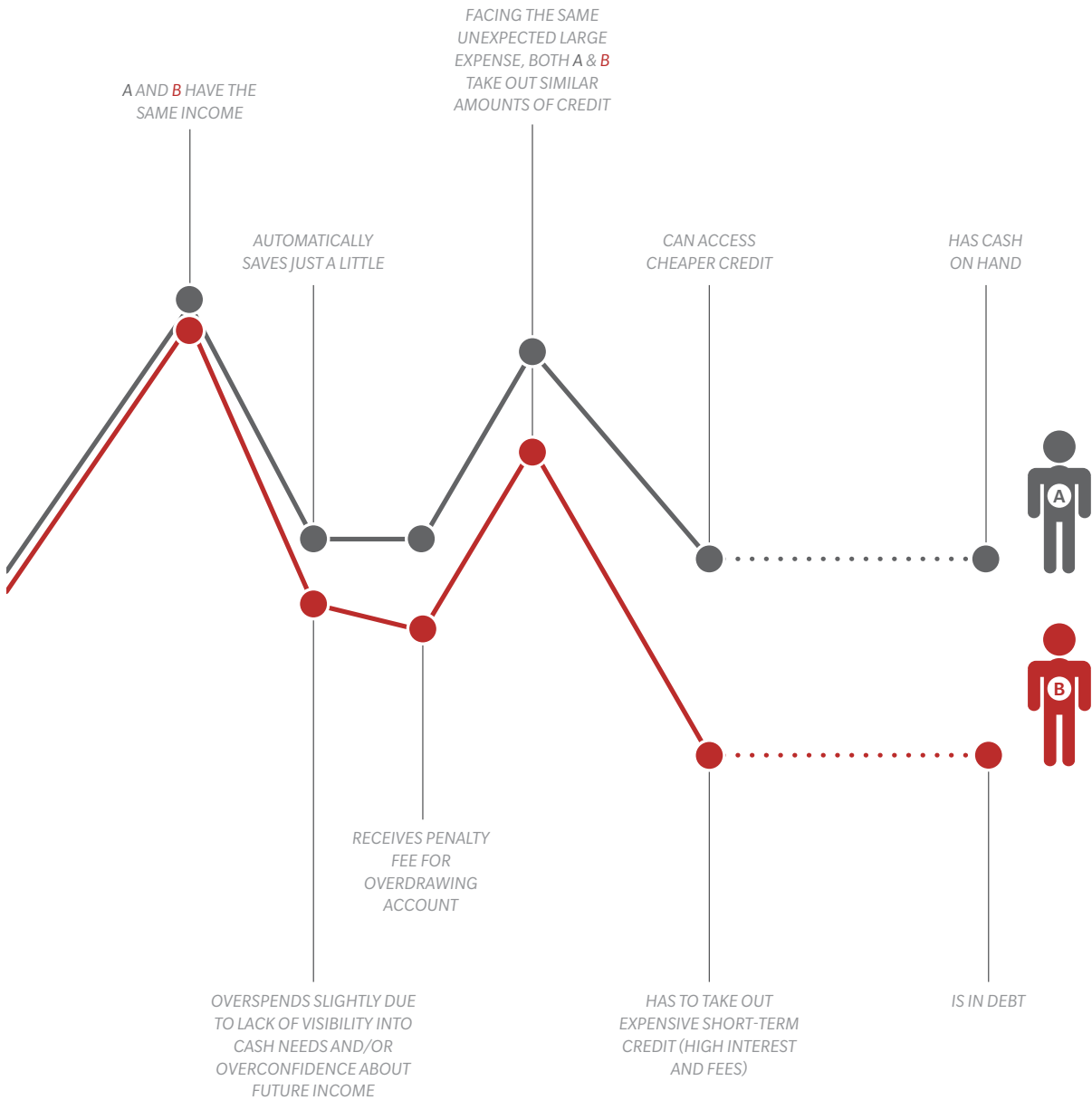
The consumer benefits of this design translate into economic benefits for the financial provider. First, simply seeing more of a consumer's financial life and behavioral “indicators” can help the institution screen for credit risk. A pilot of a combined savings and credit product in Kenya found that loan repayment rates were higher among

clients who demonstrated certain planning behaviors around their savings goals.⁷⁸ Similarly, interviews with bank executives indicated the importance of using direct deposit, account balances, and deposit frequency as proxy indicators for credit risk.⁷⁹ Automated mechanisms for accumulating savings and replenishing an affordable credit source could directly lower credit risk and expected losses. Such mechanisms could also open up the prospect of profitable lending for larger expenses like education, cars, and homes with much lower risk for the institution and lower rates for the consumer.

Offering credit to a consumer also appears to drive loyalty and willingness to pay for other services. At one large financial institution, 90% of customers who used a deposit advance product stated their intention to continue with that institution in the coming year, and 36% of customers said they “probably” or “definitely” would switch banks if the bank stopped offering the product.⁸⁰ LMI consumers pay quite a bit for their financial services, but a significant portion of these funds goes to alternative financial services providers like payday lenders rather than mainstream financial institutions. A Detroit study found that around 53% of a median LMI household's annual spending on financial services (including transactional and credit services) went to alternative financial service providers.⁸¹

Exhibit 8: Net Cash Comparison

TYPICAL UNDERSERVED CONSUMER VS. CONSUMER USING INTEGRATED BANKING SOLUTION SET

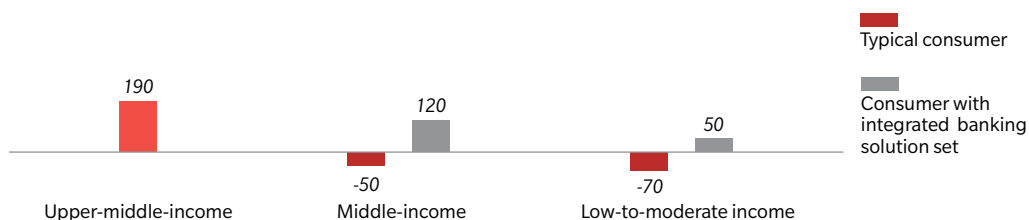


CONSUMER A: USES INTEGRATED BANKING SOLUTION SET

CONSUMER B: TYPICAL UNDERSERVED CONSUMER (USES A BUNDLE OF TRADITIONAL AND ALTERNATIVE PRODUCTS)

Exhibit 9: Lifetime Economic Profit for Banks (by Consumer Type)⁸⁵

POST-TAX ECONOMIC PROFIT (\$)



Credit unions across the country have piloted products that integrate lending and saving with encouraging results. North Carolina State Employees Credit Union (SECU) created a payday loan combined with a savings account that automatically saves 5% of the borrowed amount.⁸² The product had generated net income of around \$1 MM with average monthly volume of \$12 to \$13 MM as of 2005.⁸³ Freedom First Credit Union offers a similar “Borrow and Save” product and reported charge-offs of less than 1% on a portfolio of over 200 loans in 2012 and 2013.⁸⁴

An integrated design would also reduce a lot of the “leakage” of funds that LMI consumers experience, as well as capture a larger share of wallet for financial institutions. Automating bill payment, sending bill payment reminders, or a combination of the two could reduce late fee charges. Providing a source of affordable credit rather than charging costly overdraft fees would free up funds for saving and strengthen the relationship between consumer and financial institution. With a financial cushion and credit to cover obligations, consumers can wait for deposits to clear rather than visit the branch in person or turn to check-cashing services for instant liquidity.

With these small but powerful behavioral interventions, lower income consumers represent a large, relatively untapped segment that could return above-hurdle-rate profits.

For example, assuming that some behavioral interventions were successful in increasing the average savings balance by 80%, improving credit behaviors, increasing account duration by 25%, and reducing branch visit frequency by half, underserved consumers become profitable and can more than double annual and lifetime profits.

As shown in Exhibit 9, these improvements make both LMI and middle-income consumers actually profitable. Because industry consolidation has heightened competition among banks, serving this segment of consumers may become a necessity. Firms who do so in a way that benefits those consumers will not just be doing the right thing, but also expanding their business and easing regulatory concerns in the process.

#8

CALLOUT

MOVING BEYOND INFORMATION AND INCENTIVES TO CHANGE BEHAVIOR

Historically, one major focus of the financial capability field has been providing financial education to improve outcomes. However, research indicates that traditional financial literacy efforts simply don't work. A meta-analysis of over 200 studies found that financial literacy programs can explain only 0.1% of the variance in the financial behaviors studied, and the effects in LMI samples were even weaker.¹ Education is undoubtedly an important first step towards setting financial goals, but it appears that information and awareness alone are not enough to generate real behavioral outcomes.

Other efforts have centered on monetary incentives, such as matching or subsidies. Yet studies show these programs are also largely ineffective at changing behavior – and quite expensive. One group of researchers estimates that matching only increases savings by 1 cent for every \$1 spent by the U.S. government.² While Individual Development Accounts (IDAs) cost an average of \$64 per participant per month in addition to the match costs, the relationship between IDAs and net worth or home ownership has not been significant.³ Incentives may grab someone's attention, but smart behavioral design suggests that there are cheaper (and potentially more effective) levers to pull to change behavior.

1. Source: Fernandes, Lynch, & Netemeyer, 2014.

2. Source: Chetty et al, 2012.

3. Source: Schreiner, Tin Ng, & Sherraden, 2006; Grinstein-Weiss et al, 2011; and Boshara, 2005.

4.2. RESHAPING FEE STRUCTURES

In order to deliver an integrated product solution to LMI consumers, mainstream financial institutions must rethink fee structures. Hidden or unexpected fees (such as overdraft fees) hurt consumer wallets and destroy relationships between consumers and financial institutions. Overdrafts are in essence an expensive form of short-term credit, with high fees often charged in place of interest. Relying on such fees to compensate for low interest income from deposits is an unsustainable approach for financial institutions.

The typical response to this problem has been a push for firms to disclose full product terms and fee structures when consumers take up the product. But full regulatory disclosures are complex, and fees can be hidden in plain sight. In 2011, checking account disclosures from the ten largest banks had, on average, more than 100 pages and approximately 50 types of fees.⁸⁶ In 2013, the majority of overdrafters surveyed (52%) said that they were either unaware that their bank offered overdraft coverage or discovered the cost of a penalty only after they had overdrawn their account.⁸⁷ Pew Charitable Trusts has worked with 10 of the 12 largest banks and the three largest credit unions to redesign their online disclosures to be easier to understand and compare.⁸⁸

However, there is an important distinction between disclosure and transparency. Simply providing a long list of hypothetical fees and asking consumers to agree to those terms up front counts as disclosure, but is not transparent in the sense that it does not help a consumer predict those fees in real

time (especially given the human behavioral tendency towards overconfidence). Unlike traditional account fees, alternative financial services transaction fees are typically disclosed at the moment at which they are incurred. This gives consumers the choice of whether or not to incur the fee in the moment. Consumers need well-designed fee structures that not only disclose the right information, but disclose that information at the right time within the experience of transacting.

Some consumers may prefer a reasonable maintenance fee paid at regular intervals to per-transaction fees, especially because larger lump sum fees may be hard to cover for LMI consumers. Other consumers may object to regular maintenance fees, especially if those fees are introduced on previously “free” accounts (see Callout 7: “It’s All Relative: Reference Points Shape Our Notions of Fairness” on page 28), and prefer a “pay-as-you-go” model with a small fee tied to specific services. If consumers were offered a choice to incur an overdraft fee or cancel a transaction at the point of sale, they would likely regain a sense of control and agency. Regardless of the specific structure, the important takeaway is that fees must be easy to understand at the right time and predictable on a regular basis.

4.3. OTHER BEHAVIORAL DESIGN ELEMENTS

Integrating deposit and credit products is the first step towards solving the volatility problem for LMI consumers. But there are a host of other behavioral design strategies that should also be embedded within a product to help consumers stabilize their financial lives.



SAVINGS STARTER KIT

Sometimes, the hardest part of saving money is getting started. Providing a fun, tangible savings vehicle like a wallet or envelope for accumulating your first deposit, along with easy-to-complete account opening forms, can make that process a little easier. In fact, even after your savings account is open, you could use the savings vehicle to regularly drop in your extra cash until you get a chance to go to the bank and make a deposit.



MENTAL ACCOUNTING BUCKETS

Often what seems like a saving problem is actually a spending problem. Anticipating future expenses and tracking how much we have left is mentally taxing, and making any kind of error can easily eat into our savings. When it comes to money, humans tend to think in terms of the labels we assign to our spending. These “mental accounts” break down a difficult math problem into something more manageable. A visual tool or interface associated with a checking account or prepaid card that allows us to assign money into mental accounts, adjust them as our cash flows change, and track spending accordingly could provide much-needed visibility into how much we have left to spend – allowing for “real-time” budgeting. And limiting spending can help us save.

BEHAVIORAL IMPROVEMENT #1: PROMOTE STABLE DEPOSITS

Financial institutions need larger, more stable balances to make deposit accounts financially sustainable. Many LMI consumers intend to save, but have trouble following through on these intentions, so balances remain low and volatile. Helping the customer to build and maintain balances would benefit both the financial institution (by improving the economics) and the consumer (by increasing financial resilience), but this requires addressing the behavioral factors that contribute to low and unstable account balances.

Managing cash flow volatility requires covering expenses when there is a shortfall and saving extra funds when there is a surplus (no matter how slight the surplus). When juggling difficult-to-predict cash flows, consumers are likely to pay attention to their most urgent, pressing needs rather than longer-term goals like saving (see “The Psychological Impact of Scarcity” on page 25). Even if a consumer does start saving regularly, these efforts can be thwarted if overspending eats away at those savings (see Callout 10: “Self-Control and Commitment Devices” on page 44).

A few behavioral strategies that address these attention and self-control issues have proven effective at increasing account balances and duration. These range from simple product elements like reminders and automation to innovative features like commitment devices and prize-linked savings. Simple reminders were found to increase savings account balances by 6% to 16% in the field and were most effective when combined with a reminder of the consumer’s specific savings goal.⁸⁹ Setting up direct deposit into IDAs helped consumers save more, and these

consumers were 17 percentage points less likely to drop out than their counterparts without direct deposit.⁹⁰ Participants in a financial counseling session that focused on setting up automated savings transfers had 21% higher savings than a control group by the end of the study period.⁹¹

Providing virtual or physical tools for setting savings goals and tracking progress is another promising avenue to focus consumer attention and facilitate taking action (see “Savings Starter Kit” on page 40). Consumers who experienced a series of interventions that included creating a savings plan and tracking progress on a paper calendar had 15% higher initial deposits, a 37% increase in balances, and were 73% more likely to initiate a transaction in a new account at a bank in the Philippines.⁹² Offering the chance to win a prize can also grab attention to help a consumer focus on saving. A pilot of prize-linked-savings accounts, where consumers were offered the chance to win prizes based on their savings behavior, showed average savings of around \$2,700 and average account rollover of approximately 80% year over year⁹³ (see Callout 9: “The Power of Prize-Linked Savings” on page 42).

Saving and spending are closely linked. Often what seems like a saving problem (“I just don’t save money regularly”) is actually a spending problem (“I have a hard time tracking and limiting my spending”). Research suggests that consumers are better able to constrain their spending when resources are partitioned.⁹⁴ Allowing partitioning within accounts (even if it is just conceptual, not a physical separation) could help consumers allocate funds for specific purposes, budget and track spending in real time, and ultimately save more (see Design Idea 2: “Mental Accounting Buckets” on page 40).

Part of designing an appropriate savings product is balancing flexibility and rigidity in the account structure. For consumers who need to access savings quickly, it may be beneficial to store funds in a transaction account or in a specified bucket within that account. However, for consumers with a longer-term saving need, a “commitment savings” structure that locks up funds could help combat self-control issues. In one study, adding a commitment savings feature that restricted access to funds for a designated time period increased average balances by 81 percentage points (over the 12-month period after opening) relative to the balances of consumers who opened traditional accounts⁹⁵ (see Callout 10: “Self-Control and Commitment Devices” on page 44).

These effects could have an impact on the economic feasibility of deposit accounts for financial institutions. The direct increase in balances alone may not positively impact the economics in a substantive way. But the real impact comes from the increase in “stickiness” of the accounts – longer duration increases lifetime value of the consumer. Lengthening the relationship of a LMI consumer by 1 year can increase profits by around 5–10%.

BEHAVIORAL IMPROVEMENT #2: ASK THE RIGHT QUESTIONS ABOUT ALTERNATIVE CHANNELS

Serving consumers through in-person transactions at the branch can be prohibitively costly for financial institutions. Many financial institutions want to nudge consumers to use online and mobile channels, and there is good reason to do so. Banks in the U.S. and many other countries around the world have demonstrated that it is possible to promote online and mobile

#9

CALLOUT

THE POWER OF PRIZE-LINKED SAVINGS

Building on the popularity of lotteries, prize-linked savings (PLS) products use prizes to reward savings behavior. Because humans tend to overweight the likelihood of small probabilities, we overestimate our chances of winning in games like these, making PLS products a powerful behavioral motivator to save. Applications of PLS have been used internationally and are now being tested in the United States to promote savings.¹

The Save to Win initiative launched in Michigan in 2009 with 8 credit unions. By 2013, it had expanded to 38 credit unions and more than 12,531 account holders holding more than \$33 MM. Nearly two-thirds of surveyed account holders reported one or more indicators of financial vulnerability, with 45% reporting that they had previously not saved. Of those who opened accounts in 2012, 81% rolled over to 2013.²

1. Source: http://www.d2dfund.org/prize_linked_savings.

2. Source: http://www.d2dfund.org/files/publications/d2d.save_to_win_scorecard.report.michiganfinal.4pp%20%282%29%20%281%29.pdf.

banking channels as means of reducing branch visits.⁹⁶

Mobile channels may be especially promising. Anecdotally, LMI consumers represent some of the most active users of mobile services at one major financial institution.⁹⁷ A recent survey on phone use among low-income New Yorkers found high rates of mobile phone use, with 87% of phone owners using a smart phone. Texting was cited as the preferred method of communication. Approximately 48% of smart phone owners had used online banking, either via computer or phone.⁹⁸ In America more broadly, around a quarter of consumers used mobile banking in 2013, and 29% of underbanked consumers used mobile banking (compared to 22% of fully-banked consumers).⁹⁹

There have also been efforts to redesign physical locations to reduce in-person costs. Credit unions are experimenting with a variety of models, including cash-less service centers (ATMs and video tellers only, no live tellers) and kiosks. For consumers who aren't ready to transition immediately to mobile or online, ATMs could play an important role by shifting demand for in-person services from expensive tellers to less expensive machines.

To promote alternative channels in a meaningful way, we must understand why LMI consumers prefer in-person channels in the first place. One issue is the lack of instant funds availability (see "The Resulting Liquidity Problem" on page 29). With a financial stabilizer product that helps consumers manage the temporal mismatch between income and expenses, fewer consumers will be concerned with this issue; still, many will appreciate instant funds. Immediate access to deposited funds for

a small fee via mobile check cashing or mobile remote deposit capture (mRDC) could pave the way for additional mobile use and further reductions in branch costs (see "Instant Check Cashing via mRDC" on page 46). Financial institutions could use third party services similar to Certegy¹⁰⁰ to assess risk when permitting these deposits via the mobile phone and charge a small fee to cover fraud risk costs.

Relationships with branch employees may also play a role (see "Behavioral Improvement #3: Focus on Credit and Building Relationships" on page 45). Introducing video tellers at an ATM site or live chat on a mobile device might draw in consumers who want a personal interaction while banking. Consumers who develop a strong relationship with a specific employee may even be willing to wait to interact with that employee or use alternative channels to access their trusted employee. Finally, expanding ATM functionality to include features like bill payment and check-cashing could justify a trip to the ATM for a busy LMI consumer.

If successful, strategies for reducing the frequency of branch usage could have a noticeable economic impact for financial institutions. For instance, decreasing the frequency of in-person branch visits for a LMI consumer¹⁰¹ from two times per month to once per month can increase per-consumer annual profits by over 2 times (see Exhibit 3 on page 17). Because lower-income consumers tend to use in-person services at a high rate, a broader business model shift from brick-and-mortar branches to digital requires careful consideration of LMI consumers' needs and preferences.

#10

CALLOUT

SELF-CONTROL AND COMMITMENT DEVICES

As humans, we are often impatient (we have a preference for the present over the future) and we struggle to exert self-control when encountering temptation. Evidence from both developing and developed countries suggests that individuals who are aware of their self-control problems voluntarily take up so-called “commitment devices” to limit their options preemptively, leading to better outcomes.

A field experiment among farmers in Malawi offered both ordinary savings accounts and “commitment” accounts that allowed customers to restrict access to funds until a specified date. The commitment feature had a positive effect not just on savings deposits, but also on agricultural inputs and crop sales. Interestingly, the study produced suggestive evidence that the positive effects were not just derived from combating self-control failures, but also from enabling farmers to keep funds from being shared with one’s social network.

Source: Brune, L., Giné, X., Goldberg, J., & Yang, D. “Commitments to Save: A Field Experiment in Rural Malawi.” The World Bank. 2011. Web. <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-5748>.

BEHAVIORAL IMPROVEMENT #3: FOCUS ON CREDIT AND BUILDING RELATIONSHIPS

Short-term credit can help LMI consumers meet obligations when cash flows are misaligned, but these consumers also need access to longer-term credit for large purchases (car, education, housing). From an institutional perspective, the value of longer-term credit like auto loans and mortgages may be smaller for LMI consumers than for higher-income segments; however, capturing some of these dollars may produce margins that are high enough to meet hurdle rates for financial institutions while still being more affordable for consumers than alternative providers.

Behavioral “nudges” like well-timed reminders can help institutions manage default risk and reduce expected losses associated with these loans. Borrowers at a microlender in Uganda were more likely to pay on time if sent a monthly text message reminder that the payment was due, with an effect equivalent to a 25% interest rate reduction.¹⁰² A microlender in Texas found that a series of email and text reminders and redesigned monthly statements helped microloan borrowers avoid NSF fees.¹⁰³

A consumer’s relationship with her financial institution is also important. 34% of unbanked consumers report dislike of or distrust in banks as a reason for being unbanked.¹⁰⁴ Anecdotal, strong relationships between tellers and customers at a check-cashing facility in New York City were a primary driver of customer loyalty.¹⁰⁵

Relationship-building techniques can reduce losses, and these techniques can be relatively cheap when delivered through phone calls or text messages. A study conducted at a

large commercial bank in India found that borrowers who were regularly called either by a single assigned relationship manager, or by one manager randomly selected from a small team of managers, showed much better repayment behavior and greater satisfaction with bank services than borrowers who received no follow-up or only received follow-up calls when they were delinquent.¹⁰⁶ Personalized text message reminders that included the name of the borrower’s loan officer were more effective than reminders that did not, reducing the probability of a late weekly payment by 20%.¹⁰⁷

Innovative repayment structures are another potential avenue to reduce loan losses, especially for small-dollar credit products. Clearly, rigid payment structures don’t work for many short-term credit borrowers: 40% of payday and pawn borrowers do not pay back their original loan when it first comes due.¹⁰⁸ Consumers who take up five or more loans per year generate approximately 90% of payday lending business, and consumers with 12 or more loans per year generate more than 60% of business in this industry.¹⁰⁹ Reforms in Colorado have changed the terms for payday lending from a single lump-sum payment to a series of installment payments stretched out over six months (and lowered the maximum allowable interest rates). It is unclear whether other states will follow suit. Nevertheless, given the unpredictability of LMI borrowers’ cash flows, even more flexible repayment policies may increase the likelihood of successful repayment.

Another angle for mitigating credit risk is expanding the role of the lender. When financial institutions make a housing or auto loan to a consumer, they are taking on some risk associated with the quality of those assets. A consumer’s ability to repay an auto loan is directly tied to the vehicle’s provision



INSTANT CHECK CASHING VIA MRDC

Mobile remote deposit capture (mRDC) is a huge innovation in check cashing, enabling us to use our mobile phones to electronically deposit checks. However, the delay in funds availability when using this feature through most major banks remains an impediment for consumers living paycheck-to-paycheck. Charging a small fee for instant access to funds, and potentially using a third party to assess risk, could help millions of consumers make deposits quickly and conveniently through their mobile phones.



CONVERT TO INSTALLMENT PLAN

As humans, we are supremely confident – about how correct our answer is, about how long a task will take us, and about our ability to repay a loan in the future. Unfortunately, reality often fails to match our predictions. Many consumers who anticipate being able to pay back a loan quickly in a lump sum are unable to do so, falling into a cycle of debt. Why not create a loan repayment structure that gives us flexibility in our repayments, just in case? A small-dollar credit product that automatically converts from a “bullet” repayment structure to an installment plan could help us when our predictions, predictably, turn out to be wrong.

of reliable transportation to and from work. Financial institutions could reduce the risk associated with such loans by forming partnerships with trustworthy third parties like auto dealers and housing contractors to ensure the quality of the assets (vehicles, etc.). These partnerships could also simplify the consumer’s search for reliable third parties and further strengthen the relationship between the consumer and the institution.

4.4. FROM DESIGN TO REALITY

Even if smart design improves product economics, a firm must overcome many hurdles to develop and bring new products to scale. As detailed in ideas42’s white paper, *Driving Positive Innovations to Scale in the Financial Services Sector*, the scaling process requires making the business case to pilot a product, working with regulators to make sure a product meets regulatory guidelines, and overcoming organizational impediments to scale.¹¹⁰

FINDING THE MARKET OPPORTUNITY

For a firm to devote resources to product development, there must be a solid business case for passing up other promising opportunities (or as one bank executive put it, “the juice had better be worth the squeeze”¹¹¹). Establishing this case involves a product-level calculation as well as an assessment of the overall market opportunity that the potential product represents. Less-certain cash flow projections like cross-selling opportunities are usually heavily discounted in this calculation. The financial services industry, like many other established industries, is often compelled to take a strict and relatively short-term evaluation of profitability based on realistic, tangible

revenue and costs, not on potential and uncertain future revenue streams.¹¹²

Estimates of market opportunity may vary from firm to firm, depending on the organization's relative position in the value chain. Risk assessments also factor heavily into the decision to launch a product. Because LMI consumers are a heavily scrutinized population, reputational risk is especially high from a bank's perspective.¹¹³ Even a seemingly lucrative product could be easily derailed if the firm judges regulatory or reputational risk to be too high.

While the hurdle for a large or medium-sized bank to introduce a new product is high, we believe a product well-tailored to LMI consumers' needs can clear that hurdle.

Based on our estimated lifetime profits for LMI consumers using a financial stabilizer product and other assumptions, we estimate the lifetime profit potential of this opportunity for a large bank to be over \$1 BN.¹¹⁴

Financial institutions face considerable external pressures as consumers at all income levels continue to drift outside the regulated financial sector and take up offerings from technology-based financial providers. The behavioral designs highlighted above should benefit all types of consumers, since higher-income and LMI consumers encounter many of the same problems with traditional banking products (although having a financial "cushion" makes these issues less problematic for wealthier consumers). New designs that benefit LMI consumers could easily be offered to other segments. Similarly, targeting student populations or the "millennial" generation was a commonly mentioned goal among senior bank

executives.¹¹⁵ By capturing up-and-coming consumers as well as existing middle-income customers, a behaviorally-informed banking solution could add tremendous value for a financial institution's core business and justify an upfront investment to test and build such a product. Once built, offering such a solution to LMI consumers should not be expensive.

NAVIGATING THE REGULATORY LANDSCAPE

Regulatory considerations can sometimes derail efforts to innovate for LMI consumers, especially for less traditional products like small-dollar credit. The process of trying to create a small-dollar credit product with regulator input has been called a "death by a thousand paper cuts" with products never making it out of testing.¹¹⁶

According to bank executives, some of the more challenging aspects of current regulations include the inability to mandate autopay for loans under Regulation E¹¹⁷ and disclosure requirements under Regulation Z.¹¹⁸ Regulatory agencies and consumer advocates occasionally have differing opinions on key issues related to the LMI segment – including whether some LMI consumers should be served in the financial mainstream at all due to safety and soundness concerns.¹¹⁹ Conflicting guidance further complicates innovation efforts.

Regulators aiming to protect consumers after the financial crisis are cautious about how providers attempt to serve the LMI segment. This skepticism is especially pronounced for products that have historically targeted LMI consumers in a predatory fashion, like small-dollar credit and mortgage lending. The disclosure and underwriting regulations described above are in place today precisely because of practices among financial institutions in the past that were not in



COMBINE SAVINGS + AUTO LOANS

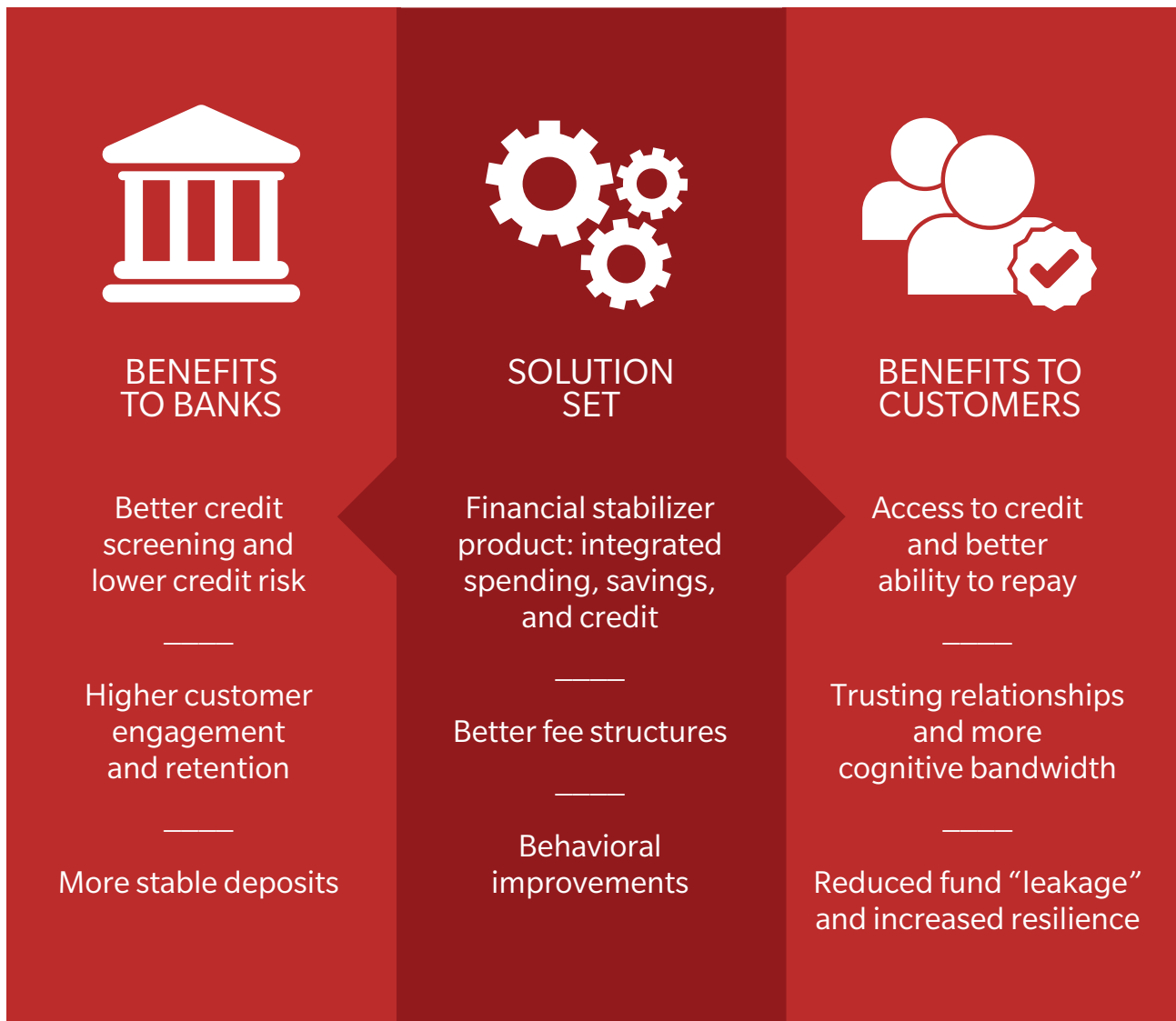
Cars don't last forever. While you're paying down your current auto loan, why not make your next car even more affordable? A portion of your auto loan payments can go into a special savings account for your next down payment. For the financial provider, these funds can be used to mitigate risk related to missed payments.

consumers' best interests. To truly improve the financial health of the underserved, regulators must strike a balance between protecting consumers from predatory practices and enabling innovation.

OVERCOMING ORGANIZATIONAL HURDLES

Even if a product makes it through the pilot stage, a full-scale launch can be easily derailed by organizational challenges. As described at length in ideas42's white paper *Driving Positive Innovations to Scale in the Financial Services Sector*, scaling up a product requires a complex set of organizational activities. Bringing innovation to scale means grappling with the growth of innovations internally. New innovations often need a champion who is willing to fight for and guide them from pilot to roll-out across the institution. Successful implementation of innovative pilots on a wider scale requires the transition of ownership from a subset of the organization to a larger pool of users. Common pitfalls can be avoided if innovators effectively plan for scale by starting with the end in mind and pursuing it with intentionality. An effective scaling plan must anticipate not just the infrastructure and operational needs of a product launch, but also what is needed internally to navigate organizational dynamics.¹²⁰

Exhibit 10: A New Integrated Banking Solution Set That Benefits Both Banks and Low-to-Moderate-Income Consumers





CHAPTER FIVE

A CALL TO ACTION

The integrated banking solution set and related design ideas proposed in this paper present an opportunity for massive social benefit by helping lower income consumers achieve greater financial stability. This design also provides a sizeable market opportunity for mainstream financial institutions by making it financially viable to serve LMI consumers. To realize this social and commercial benefit, regulators and advocates must first acknowledge that a sustainable LMI product can never be totally free. Second, banks, regulators, and advocates must work together to get past the organizational, political, and regulatory hurdles that stand in the way of testing, refining, and launching the new product. The ideas we have put forth in this paper draw on extensive empirical research in behavioral science and considerable financial analysis, but they will need to be refined through testing in the field.

5.1. RETHINK AFFORDABILITY

Our behavioral designs could improve the economic sustainability of financial products for LMI consumers. Even so, there will be some cost associated with providing them. Many of the existing products offered by financial institutions to LMI consumers are not profitable – they are breakeven, at best. Sometimes banks offer products because it’s the right thing to do, not because it offers any significant financial return.¹²¹ Based on economic motivations alone, financial providers are unlikely to offer free or extremely low-cost products widely enough to benefit LMI consumers at scale.

The huge recent growth in the alternative financial services market suggests that LMI consumers are willing to pay for financial services that meet their needs. By insisting that products be free, we are driving consumers out of the regulated market and into alternative financial services. Clearly, the lower we can get the cost of these products, the better off LMI consumers will be. But instead of chasing a mythical zero-cost product (see Callout 6: “No Such Thing as a Free Lunch” on page 26), we can design something that

costs consumers relatively little but is still feasible to provide. One head of product development and innovation at a large bank noted that there is no mission without margin.¹²² It will be critical during the testing phase to take a careful look at the benefits and implementation costs of behavioral strategies like those suggested in chapter 4.

If these efforts are not successful, the financial inclusion field may end up moving towards less financially-sustainable approaches. This could take the form of the government subsidizing basic products or using other levers like the Community Reinvestment Act (CRA).

5.2. GET THE DETAILS RIGHT

Behavioral design has huge potential for enhancing both the financial health of LMI consumers and product economics, though there will be many challenges to overcome along the way. Beyond making

a strong business case and pushing past organizational impediments, firms must be able to prove to regulators that a product meets safety and soundness criteria (an especially challenging task for small-dollar credit products). While these hurdles may seem daunting, the best way to promote this type of innovation is to create avenues for focused prototyping and testing.

Financial providers must build the capacity for innovation. A firm's organizational structure, routines, and culture play an important role in shaping these dynamics. Financial institutions that want to be leaders in this space must be strategic about developing an organizational culture that fosters innovation and experimentation and creates defined pathways to scale for promising products. If large mainstream financial institutions are unable or unwilling to do this, smaller providers (such as financial technology entrepreneurs) may step up to the plate. Reaching scale is somewhat more challenging for smaller players unless larger players ultimately

decide to replicate (or acquire) the innovation to distribute broadly.

Regulators, meanwhile, need to allow and encourage the testing of new ideas by providing a defined testing ground with clear rules to manage regulatory and reputational risk (think of the guidelines set around testing in healthcare by the U.S. Food and Drug Administration). We are starting to see progress on this front. For example, the CFPB's Project Catalyst aims to support innovators in developing consumer-friendly financial products through focused testing and open dialogue with regulatory agencies.¹²³ It is important that regulators focus attention not only on established banks but also ensure adequate supervision of alternative financial services providers, who may derive certain competitive advantages from today's regulatory landscape.

Financial services innovation requires a willingness to take risks. There are a huge number of promising ideas circulating, but very few concrete evaluations of the

likelihood that these ideas will ultimately be effective. Because of the inherent risk involved in these sorts of tests, funders need to help pay for the risk of experiments. Acting as a guarantor or creating a loan loss reserve is one way that funders can support initiatives. For instance, Ford Foundation provided a \$50 MM grant to establish a loan loss reserve fund as part of the Community Advantage Program (CAP), a partnership between Self-Help Credit Union, mortgage lenders, and Fannie Mae to offer a standard prime-priced affordable fixed-rate mortgage alternative.¹²⁴

Pressure on financial institutions to change the way they serve LMI consumers is unlikely to ease up in the near term. Making sure that these efforts benefit consumers requires coordination among financial institutions, researchers, advocates, regulators, and funders. Luckily, all of these stakeholders have good reason to care: we have a promising market opportunity for financial institutions, with the potential for tremendous social benefit if they can better serve the financial needs of LMI consumers.

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APPENDIX B

CONSUMER PROFILE AND PROFITABILITY ASSUMPTIONS

We have developed sample consumer profiles to compare profitability across product combinations: an “upper-middle-income” consumer, a “middle-income” consumer, and a “low-to-moderate-income” consumer. Assuming that each consumer type holds a different set of financial products (based on industry estimates of their likeliness to do so), we have calculated the per-consumer pre-tax accounting profit, the per-consumer post-tax economic profit, and the overall lifetime consumer post-tax economic profit. The source data for the consumer profiles draw primarily from the following:

- 2013 Survey of Consumer Finances by the Federal Reserve
- 2012 Oliver Wyman Survey of Consumer Finances
- Detroit Area Household Financial Services Study (2005-2006)

Wherever available, we use public data. Proprietary data sources are leveraged only where public data unavailable.

Below is a table of the key assumptions for each distinct consumer profile:

| | UPPER-MIDDLE-INCOME | MIDDLE-INCOME | LOW-TO-MODERATE-INCOME | |
|------------------------------|--|----------------------|------------------------|--------|
| CUSTOMER DEMOGRAPHICS | | | | |
| Income bracket | 60th–80th percentile | 40th–60th percentile | 20th–40th percentile | |
| Median income level | \$76,400 | \$46,700 | \$28,400 | |
| Average income level | \$78,500 | \$47,200 | \$28,600 | |
| Credit quality | 680–720 | 620–680 | 620–680 | |
| Estimated score band | C | D | D | |
| PRODUCT HOLDINGS | | | | |
| Transaction accounts | Likelihood of holding a primary checking account | 99% | 97% | 91% |
| | Likelihood of holding a secondary checking account | 0% | 0% | 0% |
| | Primary checking balance (median) | 1,500 | 700 | 500 |
| | Typical frequency of branch usage (visits per year) | 12 | 28 | 33 |
| Savings | Likelihood of holding a primary saving account | 70% | 60% | 45% |
| | Primary savings balance (median) | 7,600 | 3,800 | 2,000 |
| | Likelihood of holding a secondary savings account or CD | 9% | 8% | 7% |
| | Secondary savings / CD balance (median) | 10,000 | 20,000 | 15,000 |

| | UPPER-MIDDLE-INCOME | MIDDLE-INCOME | LOW-TO-MODERATE-INCOME |
|--|---------------------|--------------------------|--------------------------|
| PRODUCT HOLDINGS | | | |
| Credit | | | |
| Likelihood of having a credit card | 94% | 81% | 59% |
| Card type | Prime + points/cash | Subprime (secured cards) | Subprime (secured cards) |
| Credit card spend | 400 | 200 | 150 |
| Credit card revolve (% of outstanding) | 40% | 70% | 80% |
| Credit card outstanding (median) | 3,100 | 2,200 | 1,500 |
| Likelihood of having an auto loan | 43% | 37% | 23% |
| Auto loan balance (median) | 15,000 | 12,200 | 10,100 |
| Likelihood of having a HE/HELOC loan | 12% | 8% | 4% |
| HELOC balance (median) | 95,900 | 78,500 | 82,000 |
| Average lifetime of accounts (in years) | 8 | 6 | 4 |

In our banking cost estimates, we have relied upon the following assumptions, drawing primarily from the following sources:

- May 2013 Occupational Employment Statistics (OES) data from the U.S. Bureau of Labor
- March 2013 FMSI Teller Line Study
- Q4 2014 Experian-Oliver Wyman Market Intelligence Reports (for estimated loss data)

| | BANKING COST ESTIMATES |
|---|--|
| Teller cost (per transaction) | \$1.08 |
| Personal banker costs | <p>Average personal banker salary of \$33,684 – this is the average salary across:</p> <ul style="list-style-type: none"> • Customer Service Representatives (SOC code 43-4051) in the Depository Credit Intermediation industry (NAICS 522100) • New Accounts Clerks (SOC code 43-4051) in the Depository Credit Intermediation industry (NAICS 522100) <p>Annual estimated sales volume of 780 sales per personal banker</p> |
| Number of branches | 88,975 branches based on FDIC data as of June 2014, adjusted for in-store branches |
| Average number of bankers and tellers per branch | 1.92 bankers/branch, 3.23 tellers/branch |

Other key cross-product assumptions:

| | RATES |
|----------------------|---|
| Prime rate | 3.25% (based on the WSJ prime rate) |
| Discount rate | 4.25% (used for lifetime account value) |

SOURCES

- 1 For simplicity, we will refer to these groups jointly as “underserved” in this paper. Burhouse, S., Chu, K., Goodstein, R., Northwood, J., Osaki, Y., & Sharma, D. “2013 National Survey of Unbanked and Underbanked Households.” *Federal Deposit Insurance Corporation*. 2014. Web. www.fdic.gov/householdsurvey/2013report.pdf.
- 2 Includes interest and fees related to check-cashing services, money orders, money transfers, short-term loans, overdraft fees, minimum balance fees, prepaid card loading and usage, and late fees across a range of providers including payday lenders, check cashing companies, prepaid card providers, banks, etc. (sources include USPS, The St. Louis Fed, RiteCheck, MoneyGram, Walmart, JPMorgan Chase, CFPB, FDIC, The Pew Charitable Trusts, USDA, original data from the Detroit Area Household Financial Services Study, and ideas42 and Oliver Wyman analysis).
- 3 The underserved financial services market includes both alternative and mainstream products and services, including auto loans, payday loans, check cashing, and other credit, payment, and deposit products. See Wolkowitz, E. “2013 Financially Underserved Market Size.” Center for Financial Services Innovation. 2014. Web. www.cfsinnovation.com/Document-Library/2013-Financially-Underserved-Market-Size.
- 4 www.serve.com.
- 5 www.chase.com/debit-reloadable-cards/liquid-prepaid-card.
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