



## Big Questions in Savings

It would appear self-evident that poor families are unable to save. If these households are barely making ends meet, they must be so preoccupied with covering immediate needs that thinking about the future is a luxury. However, this proves not to be the case. Most poor households, even those earning less than \$2 a day per person, have disposable income (Banerjee and Duflo, 2007).<sup>1</sup> And yet, demand for and use of formal and informal savings products falls far below what theory would predict.

In this briefing note, we explore the benefits and risks for saving, the issue of profitability for making savings products available to the poor, how people are saving, and new innovations that can facilitate great access to savings tools.

### Why save?

On a theoretical basis, the costs, benefits and risks of savings are fairly straightforward. The cost of savings is foregone present consumption plus any transaction or service costs related to a savings account. The benefits of accumulating assets are equally clear in theory. For the world's poor, who experience frequent economic shocks like health crises, natural disasters and loss of wage income, the value of savings as a form of insurance can be particularly high. Having assets to fall back on in case of an emergency can prevent a bout of illness or a flood from turning from a hardship into a disaster with lasting repercussions. And yet, we do not see the poor accumulating assets by saving in large quantities.

The strong demand for microcredit adds to this puzzle. The standard explanation of the high demand for credit, even at relatively high interest rates, is that borrowers experience even higher returns to capital, thus making the loans profitable for borrowers. But if there are such high returns to capital, we should see an even stronger demand for savings. That would allow borrowers to self-fund their capital needs and generate a much greater surplus —or to become lenders themselves, either directly or through an intermediary.

So how can we make sense of the strong demand for expensive microcredit but the relatively low level of savings amongst the poor? Ultimately, we cannot without first understanding more about the costs and benefits of savings for the poor.

Research is illuminating several areas of this question and allowing us to move closer to an answer.

Behavioral economics provides a growing understanding of how people calculate costs and benefits and make economic decisions based on psychological and contextual issues. Behavioral economics encompasses theories such as hyperbolic discounting, which suggests that people tend to value

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<sup>1</sup>Banerjee, A. and E. Duflo (2007), "[The Economic Lives of the Poor](#)." *Journal of Economic Perspectives*, 21(1): 141-168.

immediate gains more than future gains (Laibson, 1997),<sup>2</sup> and loss aversion, the principle that people prefer avoiding losses to acquiring gains (Bauer, Chytlová and Morduch, 2011).<sup>3</sup> It also includes theories about mental accounting which suggest that individuals mentally allocate funds into different accounts and behave as if money were not fungible (Thaler, 1990).<sup>4</sup> Also included in this field are theories about cognitive load, attention depletion and decision fatigue – all of which refer to the ways in which human information processing can lead people to make decisions that are not economically optimal, but are rational for the constraints and contexts in which they operate (Dewitte et al., 2005;<sup>5</sup> Bertrand, Mullainathan and Shafir, 2006).<sup>6</sup>

But behavioral barriers to saving are not insurmountable challenges. Relatively small changes in contract terms for savings accounts – like pre-specifying savings goals or receiving reminders to save – can have a large impact on savings. For example, through a field experiment conducted in Bolivia, Peru and the Philippines, Karlan et al. (2010)<sup>7</sup> found that reminders to save increased the likelihood that an account holder would reach a savings goal by 3% and increased the total amount participants saved in the bank by 6%.

We have plenty to learn about creating contexts that influence perceptions of the costs and benefits of savings. One area of special interest that is currently the subject of several trials is the impact of hard and soft commitments to save. Dupas and Robinson (2012)<sup>8</sup> have explored this idea through a field experiment in rural Kenya in which they randomized access to four innovative savings products with different levels of commitment. The products ranged from a simple lockbox to a “Health Savings Account” which incorporated a social commitment to save as well as the opportunity to receive credit. Other researchers have looked at how both formal and informal commitments to save, such as at a financial institution or through a Rotating Savings and Credit Association (ROSCA), can dramatically increase savings rates (Ashraf et al., 2006;<sup>9</sup> Shlomo and Thaler, 2004;<sup>10</sup> Ashe, 2002;<sup>11</sup> Gugerty, 2005).<sup>12</sup>

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<sup>2</sup>Laibson, D. (1997), [“Golden Eggs and Hyperbolic Discounting.”](#) *The Quarterly Journal of Economics* 112(2): 443-477.

<sup>3</sup>Bauer, M, J. Chytlová & J. Morduch (2011), [“Behavioral Foundations of Microcredit: Experimental and Survey Evidence From Rural India,”](#) IZA Discussion Paper No. 4901.

<sup>4</sup>Thaler, R.H. (1990), [“Anomalies: Saving, Fungibility, and Mental Accounts.”](#) *The Journal of Economic Perspectives*, 4(1): pp. 193-205 .

<sup>5</sup>Dewitte, S., M. Pandelaere, B. Briers, & L. Warlop (2005), [“Cognitive Load has Negative After Effects on Consumer Decision Making,”](#) Katholieke Universiteit Leuven Working Paper.

<sup>6</sup>Bertrand, M., S. Mullainathan, & E. Shafir (2006), [“Behavioral Economics and Marketing in Aid of Decision Making Among the Poor,”](#) *Journal of Public Policy & Marketing* 25(1): 8-23.

<sup>7</sup>Karlan, D., M. McConnell, S. Mullainathan, & J. Zinman (2010), [“Getting to the Top of Mind: How Reminders Increase Saving,”](#) NBER Working Paper No. 16205.

<sup>8</sup>Dupas, P. & J. Robinson (2012), [“Savings Constraints and Microenterprise Development: Evidence from a Field Experiment in Kenya,”](#) NBER Working Paper No. 14693.

<sup>9</sup>Ashraf, N., D. Karlan, & W. Yin (2006), [“Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines,”](#) *Quarterly Journal of Economics*, 121(2): 635-672.

<sup>10</sup>Thaler, R.H. & S. Benartzi (February 2004), [“Save More Tomorrow: Using Behavioral Economics to Increase Employee Savings,”](#) *Journal of Political Economy*, Vol. 112.1, Part 2, pp. S164-S187.

Costs, even small ones, also seem to play a much larger role in determining savings behavior than they should. The theoretical benefits of savings should overwhelm transaction fees and indeed they do: people are often willing to pay to save. When Dupas and Robinson (2011)<sup>13</sup> randomized access to the four non-interest-bearing savings accounts in their experiment in Kenya, uptake was high amongst market vendors despite significant withdrawal fees. In an experiment in the Philippines, Ashraf, Karlan and Lin (2005)<sup>14</sup> explore how microsaving clients are willing to pay for a deposit collector service to help them save.

But sometimes other costs such as inconvenience or social discomfort loom even larger than transaction costs. ROSCAs largely operate on the basis of exploiting individuals' social connectedness (Besley, Coate and Lounsbury, 1993).<sup>15</sup> Which begs the question – what are the true costs of saving, and when do these costs matter most? We do not yet have enough evidence to say.

A culture of savings appears to make a difference in many contexts as well. Culture undoubtedly has an effect on how people perceive the costs and benefits of savings, and governments have sometimes helped to promote norms of frugality and thrift. Garon (2011)<sup>16</sup> explores how East Asian and European governments have fostered enduring cultures of thrift by launching aggressive campaigns designed to encourage citizens to save through special savings institutions and savings campaigns.

But questions remain. What are these mechanisms exactly, and how much do they matter? Can they be easily changed?

### **Can savings be delivered profitably?**

Providing savings, unlike credit, does not have a built-in return to cover the costs of service provision and complying with regulations. When CGAP analyzed the costs of taking small deposits, they found that banks lost money on these deposits (Westley and Palomas, 2010).<sup>17</sup> Another study conducted by the Inter-American Development Bank (IADB) found that for of Latin American MFIs the average operating

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<sup>11</sup> Ashe, J. (2002), "[A Symposium on Savings-Led Microfinance and the Rural Poor.](#)" *Journal of Microfinance*, 4(2): 127-135.

<sup>12</sup> Gugerty, M.K. (2005), "[You Can't Save Alone: Commitment in Rotating Savings and Credit Associations in Kenya.](#)" *Economic Development and Cultural Change*, 55(2): 251-282.

<sup>13</sup> Dupas, P. & J. Robinson (2011), "[Why Don't the Poor Save More? Evidence from Health Savings Experiments.](#)" NBER Working Paper No. 17255.

<sup>14</sup> Ashraf, N., D. Karlan, & W. Yin (2005), "[Deposit Collectors.](#)" Yale University Working Paper No. 930.

<sup>15</sup> Besley, T., S. Coate, & G. Lounsbury (1993), "[The Economics of Rotating Savings and Credit Associations.](#)" *The American Economic Review*, 83(4): 792-810.

<sup>16</sup> Garon, S. (2011), [Beyond Our Means: Why America Spends While the World Saves.](#) Princeton University Press.

<sup>17</sup> Westley, G.D., & X.M. Palomas (2010), "[Is There a Business Case for Small Savers?.](#)" CGAP, Occasional Paper 18.

cost of microsavings accounts (accounts with less than \$100 average balance) was in the range of 250-300% of the account value (Portocarrero, Tarazona and Westley, 2006).<sup>18</sup>

Profitability must therefore come from elsewhere – either from service fees or from investing the accumulated assets. [Portfolios of the Poor](#) and other studies have demonstrated that poor savers are willing to pay for savings services through transaction fees or negative interest (Collins et al., 2010).<sup>19</sup> Delivering useful savings products is difficult in any environment (witness the long history of savings bank failures) but it is even more so when serving the poor. Poorer customers want low-cost accounts designed for small transactions which provide high returns.

Recent innovations in [technologies](#) and [business models](#) are starting to provide hope that offering savings to the poor can become sustainable. The growth and seemingly enduring allure of microcredit suggests that more MFIs could take deposits to fund lending. The CGAP study mentioned previously found that, even though microsavings accounts themselves might not be profitable, microsavings clients can be profitable because of the transactions fees associated with their account and the loans they receive (Westley and Palomas, 2010).<sup>20</sup>

Mobile banking and other technological advances like [M-Pesa](#)—the largest and most rapidly growing mobile money platform in the developing world—hold the promise of dramatically lowering per-transaction costs. With the distribution structure already in place, mobile money platforms offer an efficient and cost-effective way to deliver savings and other financial services. The launch of [M-Kesho](#) (Kenya), [easypaisa](#) (Pakistan), [GLOBE](#) (Philippines) and similar efforts in Mexico, Brazil and several other countries, provide blueprints for connecting low-cost transactions with formal bank accounts. Not only does mobile banking offer the promise of convenience and cheaper costs, the technology makes it easier to spread banking in remote regions and providing busy customers with more options. While some early attempts at mobile savings have suffered from low take-up rates and struggled with regulatory barriers, the promise of mobile platforms is clear.

Innovations that can potentially improve the sustainability of savings offerings are not just limited to technology. New products and business models are also playing a role. Products are finding success by creating structures that help people pay attention, maintain discipline, and create more order in their financial lives. The ideas, like commitment accounts, are simple to implement and so far appear surprisingly effective—and in surprising ways. [Village savings and loans associations](#), [credit unions](#), no-frills accounts, [commitment savings accounts](#) and savings banks all hold promise for changing the cost structure of providing savings.

Still there are no “solutions” yet to the problem of the high cost of delivering savings to poor customers. Barriers remain, including operational concerns (how to manage a network of agents), infrastructure (how to track large numbers of small transactions with 100% reliability) and regulation (Westley and

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<sup>18</sup>Portocarrero, F., A. Tarazona, & G. Westley (2006), [“How Should Microfinance Institutions Best Fund Themselves?”](#) Inter-American Development Bank, Best Practice Series.

<sup>19</sup>Collins, D., J. Morduch, S. Rutherford, & O. Ruthven (2010), [Portfolios of the Poor: How the World's Poor Live on \\$2 a Day](#). Princeton University Press.

<sup>20</sup>Westley, G.D., & X.M. Palomas (2010), [“Is There a Business Case for Small Savers?”](#) CGAP, Occasional Paper 18.

Palomas, 2010).<sup>21</sup> Further investigation is also required to determine which business models actually lower transaction costs for both customers and providers. The question of which business models can profitably deliver savings accounts must also be married to questions of fiduciary duty. While a particular business model may lower costs for delivering accounts it may also raise the likelihood that the institution behaves in an imprudent manner and squanders the savings of its customers.

The cost structure and target customers of a savings product are not solely determined by providers. Regulators play a substantial role as well. Savers must be protected—of that there is no question. But there is a substantial question on how to manage the trade-off between saver protection and outreach. Evidence suggests that prudential regulation does have a significant (negative) impact on the range of people who have access to formal financial services (Cull, Demirgüç-Kunt and Morduch, 2009).<sup>22</sup> Regulation, while necessary, adds costs for providers who already face an uphill battle to provide savings for the poor while making a profit. Additionally, regulators have to navigate unknown territory in terms of new forms of financial services providers that range from non-profit organizations to telecom companies (Alexandre, Mas and Radcliffe, 2010).<sup>23</sup>

How are providers limiting the costs of savings accounts? How do various costs—cash and convenience costs—of savings account affect saver behavior? Do new business models offer hope of sustainably offering products that meet the needs of customers? What forms and mechanisms of regulation effectively balance innovation with foresight of future challenges and crises? Answers to these questions will ultimately dictate whether savings can be delivered profitably in a particular context.

### **How do people save?**

Assessing the extent and use of savings among the poor has long been hampered by a limited view of what constitutes savings. “Savings” are often narrowly defined as accumulations in bank accounts with balances that are held for long periods of time.

Recent work has given us a better understanding of the financial lives of the poor – including the use of very short-term savings via a wide variety of mechanisms. The typical participant in [Portfolios of the Poor](#) (Collins et al., 2010)<sup>24</sup> moved much more than their annual income through various financial transactions during the year. Participants were constantly building up and drawing down very short-term savings balances throughout the year. But if you looked at the change in their balances from year to year, there was usually relatively little increase.

Poor households also often seem to put their long-term savings into other forms of capital. One savings mechanism that is not frequently counted is investing in children’s education. In many countries the

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<sup>21</sup>Ibid.

<sup>22</sup>Cull, R., A. Demirgüç-Kunt, & J. Morduch (2009), [“Microfinance Tradeoffs: Regulation, Competition, and Financing.”](#) World Bank Policy Research Working Paper No. 5086.

<sup>23</sup>Alexandre, C., I. Mas, & D. Radcliffe (2010). [“Regulating New Banking Models that can Bring Financial Services to All,”](#) *Challenge Magazine*, 54(3): 116-134.

<sup>24</sup>Collins, D., J. Morduch, S. Rutherford, & O. Ruthven (2010), [Portfolios of the Poor: How the World's Poor Live on \\$2 a Day.](#) Princeton University Press.

returns to education are quite high (Lau, Jamison and Louat, 1990)<sup>25</sup>—and children are expected to use earnings to support extended family. Investing current income to generate future income via education is therefore a form of savings.

Another mechanism for saving is investment in a family-run microenterprise (Robinson and Dupas, 2012).<sup>26</sup> If investments in a microenterprise help secure a steady future income, they can perhaps be considered a form of annuity. Finally, poor households also invest in durable goods, livestock and jewelry. Although these investments are not typically thought of as savings, they are assets that hold value and are often highly liquid (in that they can be exchanged for cash for other valuables) and can be more liquid than a bank account (Collins et al., 2010).<sup>27</sup> While research is broadening our understanding of savings behavior of the poor beyond formal long-term savings, access to more traditional savings products is also expanding rapidly due to technological, business model and regulatory changes. Regulatory approval of savings transactions via mobile banking could suddenly provide access to formal savings accounts for millions of people (Alexandre, Mas and Radcliffe, 2010).<sup>28</sup>

So what is the current state of savings around the world? The best estimates of formal bank and semi-formal bank accounts recently can be found at [The Global Financial Inclusion \(Global Findex\) Database](#). More and better data is constantly emerging to give us a better view of the current state of savings—though new data often leads to more questions and illustrates the limitations of the data we already have.

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<sup>25</sup>Lau, L.J., D.T. Jamison, & F.F. Louat (1991), "[Education and Productivity in Developing Countries; An Aggregate Production Function Approach](#)," World Bank Policy Research Working Paper Series No. 612.

<sup>26</sup>Dupas, P. & J. Robinson (2012), "[Savings Constraints and Microenterprise Development: Evidence from a Field Experiment in Kenya](#)," NBER Working Paper No. 14693.

<sup>27</sup>Collins, D., J. Morduch, S. Rutherford, & O. Ruthven (2010), [Portfolios of the Poor: How the World's Poor Live on \\$2 a Day](#). Princeton University Press.

<sup>28</sup>Alexandre, C., I. Mas, & D. Radcliffe (2010), "[Regulating New Banking Models that can Bring Financial Services to All](#)," *Challenge Magazine*, 54(3): 116-134.