Savings as Forward Payments: Innovations on Mobile Money Platforms

Ignacio Mas and Colin Mayer[1]

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Abstract

This paper presents a new framework which allows people to manage their diverse payment, cashflow management and commitment savings needs simply and intuitively, from a single account. It builds on the logic of mobile money platforms, which provide customers with the ability to initiate real-time electronic payments from their mobile phone and to keep funds in a store-of-value account. By introducing the notion of forward (or deferred) payments, it is possible to create a much richer set of uses for the basic transactional account which cater to people's need for commitments and ear-marking of funds for specific goals. It is functionally equivalent to a system where the customer can create multiple sub-accounts, but it is much easier to conceive and manage by the customer since it does not entail multiple account opening or multiple account numbers.

Help me save!

We talk about finance as a set of tools that can help poor people manage their livelihood better. In financial terms, there are at least three things every household needs to manage: budgeting, saving and payments.

These are highly related concepts. Budgeting is about defining a basic daily expenditure level that is consistent with its income flows, and setting goals for specific larger investments. Saving is the set of periodic sacrifices people make to set money aside and the restraint they exercise daily in keeping the money there. And payments are about the application of saved funds for specific purposes, as well as broadening the set of players they can turn to for help to meet their budgetary objectives and complement their own savings behavior (including friends and family and informal or formal lenders).

These three elements together create savings behavior. By doing these three things, households seek to stabilize their daily circumstances, develop opportunities to improve their condition in the future, and mitigate shocks that can set their families back.[2]

[1] At the time of writing of this paper, Ignacio was Senior Advisor at the Financial Services for the Poor team at the Bill & Melinda Gates Foundation. He is now an independent consultant. Colin Mayer is the Peter Moores Professor of Management Studies at the Saïd Business School, University of Oxford. The authors would like to thank the following for very helpful comments on an earlier draft from several people, though space constraints impeded us from incorporating many of their suggestions: Beatriz Armendáriz, Nick Sullivan, David Wolman, Kim Wilson and Graham Wright.

Yet most savings services available to the poor do not link these three needs. The basic accounts of many banks and financial coops often stand in isolation, offering few if any payment benefits. The innovation of mobile money (epitomized by the successful M-PESA service offered by mobile operator Safaricom in Kenya) has been precisely to put payments as the first rung in the ladder of financial inclusion, but now we are observing that the step from sending and receiving money in real time to storing value over time looms large for most users. Meanwhile, helping people with budgeting is often treated as a stand-alone activity we call financial education, and which many banks expect to be done for their prospective customers by a kind of advanced force of NGOs, the State and other empathetic folk.

If we are going to shift informal savings into formal financial savings, we need to come up with savings vehicles which allow people to set a pattern of regular savings in amounts and in a frequency they can afford, maintain a clear linkage between their multiple goals and their saved balances, and exercise restraint from liquidating these. In fact, formal financial services need to be handled in a way that is much more akin to what poor families do today with the informal options that are available to them.

Protect me from myself: The need for restraining liquidity on savings

For poor people everywhere, saving entails making daily sacrifices, often even cutting into basic needs. By saving, they seek to develop opportunities to improve their circumstances in the future and mitigate risks that can set their families back.

People generally seek mechanisms that help them make regular savings in amounts and in a frequency they can afford.[3] To do that, they turn to outsiders: they'll engage deposit collectors who show up at their doorstep daily, they'll join informal savings clubs that require a fixed savings amount at each weekly meeting, or they'll take a loan from a moneylender or microfinance institution which forces them to set aside some income weekly or monthly.

Having made those sacrifices, they'll do their utmost to protect whatever savings come out of them. They will prefer *safe* savings vehicle with low risk of loss of value or theft. They will also want to put some restraints on their own ability to liquidate their savings.[4] But they will want to do so in a way that does not restrict access to their savings in case of emergencies – that was one of the core purposes of saving, after all.

The desire to build self-disciplining mechanisms into your savings choices is often confusingly referred to as an *illiquidity preference*.[5] The term speaks more to the intrinsic features of the asset (how easily it can be unwound) rather than to the attitude that the saver has towards it (it's out of reach physically, mentally or otherwise). People do not want to preclude the *option* of converting their savings back into

[2] See Kendall (2010) for a succinct survey of the impact literature relating to savings by the poor.
[3] For a review of commitment savings devices, see Ashraf et al (2003).
[4] For field experiments in the Philippines that confirm this hypothesis, see Ashraf, Karlan and Yin (2006a, 2006b).
[5] See for instance Shipton (1990) and Collins *et al* (2009).

hard cash –the very definition of liquidity—if circumstances warrant. They just don't want it to be very straight-forward to break into their own savings in normal circumstances.

People build liquidity restraints into their savings in a number of ways:

- *Irreversibility*: Investing in assets that are not easily marketable, which have a long lock-up or pre-announcement (cooling off) period, or which incur hefty early liquidation penalties. Making more or less binding decisions in time is the most common method used by formal financial institutions as a commitment device (time deposits and pension plans). Long-dated investments which cannot be easily sold like real estate also frame time-bound decisions. A similar effect can be sought by entwining savings decisions with productive investments (the cow which is a store of value but also a farming asset) and status signals (gold).

- *Indivisibility*: Investing in larger/indivisible assets, raising the stakes if you do decide to break your savings. That's why people prefer to save in larger-denomination bills rather than smaller bills, cows rather than goats, gold jewelry rather than gold chips – even though all of those things are right there within easy reach for you to dispose of, butcher and sell as you see fit.

- *Earmarking*: Segregating savings into separate assets rather than saving in a common savings pool, making the savings purpose more salient. Having a mental accounting model that assigns a purpose to each savings vehicle helps you exercise budgetary discipline: the cash is for daily expenditures, the chicken are for school fees, and the gold is for medical emergencies. When I run out of one, I don't want to be raiding the other – except under fairly extreme circumstances.

- *Social constraints*: Investments that symbolize family values (heirlooms, medical emergency fund) or that entail social behaviors (savings groups), which are hard to break. This tends to dilute individual decision-making power by enmeshing individual decisions on family and social considerations.

People use these devices to either remind themselves of or actually raise the consequences of dis-saving, when earlier budget calculations are forgotten in a hasty moment. Thus, the perceived liquidity characteristics of savings vehicles may depend on the time frame, size, number, physical expression and social characteristics of investments. All these offer opportunities for restraining one's ability to raid one's own savings.[6]

If we are going to shift informal savings into formal financial savings, we need to come up with appropriate liquidity restraint options for savers. Just freezing the funds and denying access for a period of time may be too limiting. They need savings options that maintain a clear linkage between their goals and their saved balances.

[6] The other motivation people might have in choosing among various savings alternatives is to be able to accumulate without appearing selfish to neighbors and kin. Parker (1990) emphasizes how social pressures against hoarding in times of scarcity can disincentivize savings activity.

Making savings salient: Goal setting and mental accounting

Imagine I came across a little bounty –say $20— and wanted to use it wisely. This is what I'd like to do with it. I'll budget half of it –$10—for daily living expenditures. Since I have the money now, I'll set aside $3 to pay the school fees which are due at the end of the month, and I'll use $4 to send to my parents in the village to cover their rent and utility bills which are due every third Monday. I'll save $2 for a rainy day (I would like to build up a cushion of $100 for emergencies), and I'll apply the remaining $1 to build up the family's medical emergency fund.

For a poor family, allocating and protecting this small bounty is pretty important. More likely than not, you are snatching this small bounty out of a meager pay, making daily sacrifices, even cutting into basic needs.

This example shows three things every household needs to do: budgets, savings and payments. These are three things financial services ought to be designed to help them with. In practice, there are two ways in which one might use banking services in this situation.

One approach would be for me to throw the $20 into my current account, and make each payment out of this account when it's due. I'll withdraw some daily amount for the daily expenditures, I'll send money to my parents and to the school at the appropriate times, and the rainy-day and medical emergency money will stay in the account for much longer.

The other approach would be to use a separate financial instrument for each. The $10 living expenditure amount goes into a checking account, which I can easily access with my ATM card. I'll deposit the school fees and my parents' money too, but I'll write out checks –which I'll hold for as long as I can—so that I can be sure not to spend the money for other things. I'll put the rainy-day money in a separate savings account, and I will buy longer-dated time deposit for the medical emergency funds since the family is still young.

The second approach is much more akin to what poor families do today – just not with banking services. They will assign a different form of informal saving –cash under the mattress, a loan to a friend, chicken in the back yard, accumulating bricks or gold— to each of the above uses, matching as closely as possible the liquidity of the instrument to the size, immediacy and predictability of the financial need.

The surprising diversity of informal savings instruments poor households typically use is primarily because none is good enough for all circumstances. But it also helps them do mental accounting and hence exercise budgetary discipline: the cash is for daily expenditures, the chicken are for school fees, and the gold is for medical emergencies. When I run out of one, I don't want to be raiding the other – except under fairly extreme circumstances.

So why not do all this with financial instruments? The problem is that the economics of low-balance savings accounts is pretty tough. $20 doesn't produce much margin for the bank. If the bank serves you at all, it is certainly not going to be very keen in you having not one but five accounts because that's how you mentally account for your money. You are not likely to want to be managing five different accounts

anyway, that's too complex. In the best case, if you are determined to be banked, you will incorporate a bank account into your mental accounting plan and assign one savings purpose to the bank –say the rainy-day fund. But now your incremental bank balance is not $20 but $2. The bank will not be too happy, and the rest of us will look at your bank balance and wonder why you are not saving more now that you have a bank account.

The hygiene factors of savings: Enter the mobile phone

It is necessary to figure out how to package and communicate savings services for the poor, but we must not start building the big edifice of financial inclusion by the roof. This kind of product innovation needs to happen on a solid foundation – an appropriate retail banking infrastructure. Underscore the last three words: retail is about location, banking is about trust, and infrastructure is about low unit costs. This gives us the three basic hygiene factors of financial inclusion: proximity, trust, affordability.

Meeting these three hygiene factors requires a combination of scale and density of service. People need to transact as near as possible to their doorstep, in a totally secure way under the full protection of (appropriate) regulation and supervision and backed by a brand that they trust. Providers need to avoid heavy local fixed costs (branches) which represent the main barrier to their territorial expansion.

This is where mobile money –and branchless banking more broadly—comes in. It is about leveraging mobile phones which are increasingly prevalent even among the poor in developing countries as payment devices, and retail stores that exist in every neighborhood and village as cash in/cash out points. In some countries it may also be appropriate to leverage the brand of mobile operators, which are often better known and trusted by the mass of the population and more financially robust than many banks.

It is true that an infrastructure that extends beyond bank branches and leverages mobile phones and retail stores places extra constraints on the product side – as if that wasn't hard enough. People will need to operate their finances from a basic mobile phone or a point-of-sale device with a very small screen and nothing more than a number keypad. Most corner stores are ill-prepared to do anything other than offer cash in/out. We just need to assume that – and find ways around it.

Mobile phones offer a special opportunity for integrating savings, payment and budgeting tools seamlessly for the client. The phone offers a level of immediacy and interactivity that no other kind of banking touch point can deliver. It needs to evolve from being a mere payment instrument (a card and point-of-sale terminal replacement technology) and become a tool that helps people manage their money. The phone can act as a passbook, a calculator, a channel for alerts and reminders .

Mobile money is not just a cost reduction story; it ought to be a service creation and integration story as well. Mobile phones offer the possibility for banks to maintain a constant presence in their customers' lives, helping them budget for today and plan for tomorrow.

The mobile user interface – the set of screens that people use to handle their finances on a mobile phone—will therefore be a key determinant of how successful mobile money turns out to be in facilitating fuller financial inclusion. How will mobile money providers present the range of budgeting

tools, savings options and payment services to their clients? The product challenges in the front end (user interaction on a very limited user interface) will eclipse the traditional challenges in the back end (integration into the core banking system).

At a distribution level, financial service providers will need to develop a parallel marketing and selling channel – whether through a more specialist store channel, partnerships, an outbound sales force, or product fairs on market day. Branchless banking is not about being more removed from customers, it's only about delegating the more mechanical aspects of cash handling to third parties.

Product challenges: managing multiple needs from a single account and a mobile phone

Here we have a problem of product design. I want to keep my money in separate mental categories. I want liquidity in some cases, I have a preference for illiquidity in others. For some uses I have a precise numerical savings target, for others I just want to manage whatever is available as best I can. One account is too few since I have five different uses for it; five accounts is too complicated for me and too costly for the bank.

Several internet-based services have emerged in the US to help people manage their savings in the context of specific goals they set for themselves (see for example www.smartypig.com and www.goalmine.com). Like many online payment services such as PayPal or Google Checkout, these services ride on top of existing banking or payment card relationships. They leverage these relationships to identify the customer (under legal Know Your Customer requirements) and to provide means to fund their accounts, thereby avoiding having to deploy their own customer touchpoints beyond the online presence. They also take advantage of a full graphic user interface that comes with the use of computers and the Internet.

But let's assume that, because I am poor and live in a developing country, the bank is nowhere near where I live and I am numerate but not literate. So let's put three conditions on the user experience. I don't want to be having to fill forms every time I think of a new savings objective. I must be able to operate all my finances from a basic mobile phone with a very small screen and nothing more than a number keypad. And I only want to be entering numbers (matching my numeracy skills and the absence of letter keys on my low-end phone.)

Managing a multiple system of accounts and sub-accounts from a mobile phone is too cumbersome. So here's an entirely different way of doing it. You could structure this from a single transactional (or mobile money) account through a system of forward or deferred payments. In a forward payment, the bank ear-marks or *freezes* the appropriate funds from my account to fund the future payment. The money is still mine until the value date of the payment, but I can't access it any more.

In the above example of the $20 bounty, I would deposit the $20 into my account. I would set up forward payments to the school and my parents. (I could pay them immediately, but then I lose the float and in any case I may not want my parents to access the money sooner because then they might apply the funds to purposes other than the one I intended.) The set-asides for the rainy day and the medical emergencies I could set up as forward payments – to myself. That's a payment to my own mobile phone,

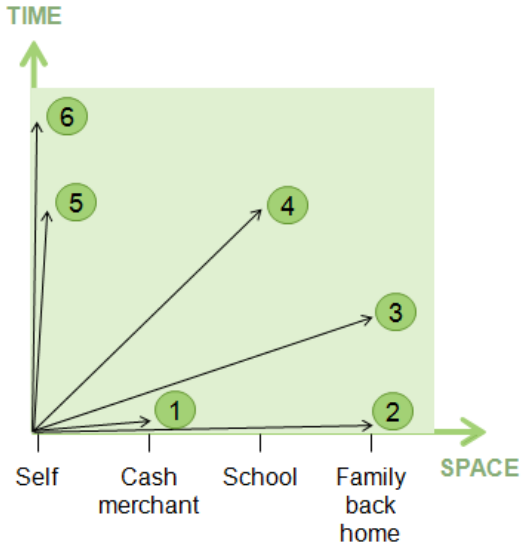
into my own account. In this fashion, the money is frozen in my account immediately, and I can only access it at the future date when the payment goes through and the money *comes back* to me.

Let's say over time I want to save up to buy a bicycle. I would need a way to be able to associate the many bicycle payments I plan to make over a period of time, otherwise I would lose track of how much I've already saved for the bicycle. I would do so by associating a date with the bicycle savings goal – say that's January 1st, 2015. Every savings relating to the bicycle I would do as a forward payment to that date, as an *installment* against the goal.[7] I might come up with a separate goal to pay for an extension for the house, and I would set myself a different target date for that. I would save in installments against the house extension goal by making forward payments against that date.

In other words, I would identify my *de facto* sub-accounts not with account names or numbers but with dates. In this way not only the purpose but also the target date for the saving goal become salient in my mind. If the date passes and I still haven't set enough money aside, I might reset the date for the goal and transfer the accumulated balance forward to the new date.

Figure 1 illustrates the new possibilities that are created with forward transactions. When payments are account-based, they enable transfers of value across space (from me to you) and across time (from today to tomorrow). Payment 1 in the figure is a simple transfer of value to a nearby cash merchant to fund a cash withdrawal to meet daily living expenses. Payment 2 is the classic *send money home* scenario. Payment 3 is the case where the money sent home is deferred, i.e. there is a timing gap between when I send the money (based on when I have liquidity) and when my relatives receive it (based on when I think they need it). Payment 4 is an installment or prepayment on a school fee, paid directly to the school in advance but available only on the due date. Payment 5 is an equivalent transfer, except that I pay to myself for onward payment to the school on the due date of the school fees. Payment 6 may be a pure commitment savings forward payment to myself, for my rainy day fund.

Figure 1: Sample transactions across space and time



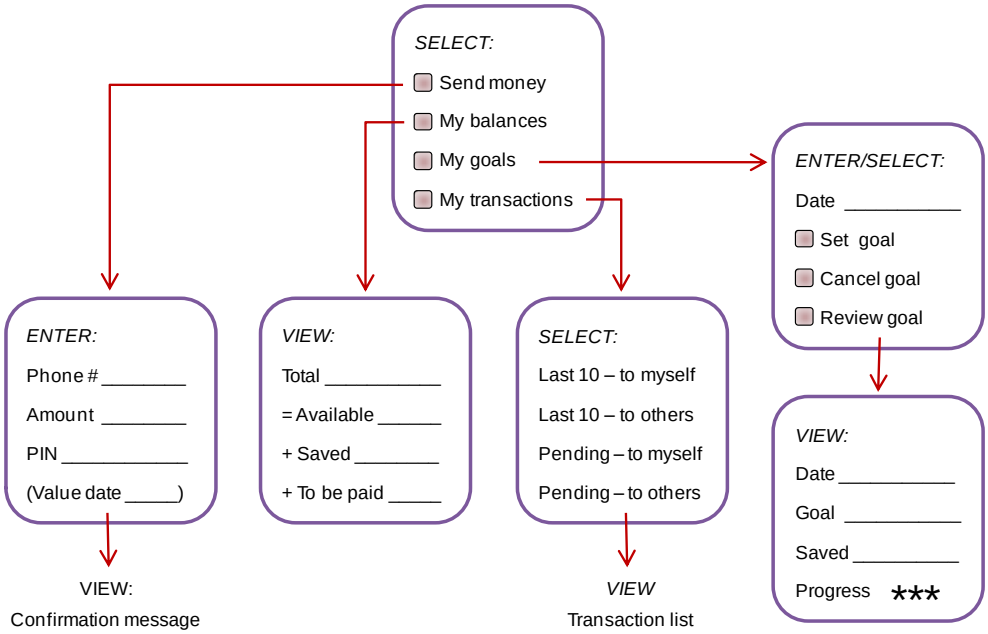
Offering such a system to customers would require three fundamental changes to the current standard mobile money user experience. First, the user interface on the standard person-to-person (P2P) transaction, which typically requires entering three figures (a destination phone number, an amount and

[7] Rutherford (2011) explains how the opportunity to save or repay in frequent bite-sized amounts is the main driver of microfinance's success, and describes experiences in packaging savings services as installment plans in Bangladesh. Collins et al (2009) describe this in the broader context of the financial lives of the poor.

your PIN), would now have a fourth optional field: the value date for the transaction (if this was left blank it would be assumed to be for immediate effect). Second, there would be an option to view all future scheduled payments on your account (in the case of self-payments, aggregated by date). Third, a balance inquiry would result in three numbers being quoted back to the customer: *(i)* the liquid balance on the account, i.e. the funds that are immediately available for withdrawal; *(ii)* the net value of the account, which is the liquid balance plus future payments to yourself (i.e. the liquid balance plus commitment savings balances); and *(iii)* the gross value of the account, which is the liquid balance plus the value of all forward payments.

Figure 2 shows what a mock up of the menu structure might look like, at its most basic. Beyond this basic capability, there are three additional product features that could be introduced.

Figure 2: Illustrative phone menu structure for a savings service based on forward payments



One feature would be the ability to set and review progress against commitment savings goals by date. For instance, I would have an option to specify that I would like to have $150 saved by January 1st, 2015 (for the house extension). Another option would allow me to view the size of the goal and the total value of forward payments due on January 1st, 2015.

A second feature would be to be able to ascribe an explicit purpose to a savings goal, rather than relying on the user to be able to map purposes and dates in their mind. This could be implemented by having another optional field in the payment instruction screen, which allows you select the purpose from a short, and hence fairly generic, predefined list of goals (e.g.: house, school, transport, piggy, etc.)

The third product enhancement would be to allow me to access the motorcycle money or the house extension money prematurely if I had an emergency in my family. In this case the bank could give me a loan for up to the value of saved balances that are frozen because they are backing my forward

payments to myself (not those to others). It's my saved balance, and that can serve as collateral. If I don't repay the loan by the time the forward payment is due, the bank takes the saved balance and cancels the forward payment.

Investment choices: Balancing safety and returns

We have seen how mobile money users can be given a fuller set of payment and savings options by creating the possibility of pre-committing to future payments and giving them a greater degree of choice on the duration and liquidity of any balances they leave in their account. This would help people to allocate their current resources between different time periods and activities more flexibly. But the discussion so far has focused exclusively on the nature of the liabilities issued by the mobile money provider. What might be the implications of such a system on the asset side?

At one extreme, mobile money might be conceived as a *narrow bank*, in which all liabilities are backed by safe assets, such as pure custodianship (cash) or liquid government securities. The mobile money provider would essentially run a pure accounting system with no real investment choices. The purpose would be to constitute a *fail proof bank*, offering full protection of depositors' funds and insulating the scheme from contagion in the event of systemic bank failures. Such a system would take savings out of the productive sector as it would prevent channeling of savers' balances to other people who can employ them more productively. This investment inefficiency would tend to reduce the return for savers or the scheme, or both.

Mobile money systems in operation today tend to take a less extreme investment approach. Instead of locking depositors' funds in cash or risk-free securities, they transfer them to the banking system as corporate accounts. Mobile money can be conceived as an individualization of pooled bank accounts. Funds are therefore productively employed but at the cost of making them as risky as regular bank deposits. The scheme can reduce exposure to individual banks by spreading their pooled accounts across multiple banks, but it would still be fully exposed to systemic bank crises.

Today, mobile money schemes' pooled accounts tend to be exclusively sight deposits, reflecting the full liquidity of mobile money accounts. But if forward payments are introduced, it becomes possible in principle for a portion of the scheme's funds to be invested in longer-duration assets. By aligning the liquidity of liabilities and assets, the scheme ought to be able to increase the average return on its assets without taking on any extra risk. The only cost would relate to running a more complex treasury management.

There is therefore a tradeoff between safety and operational simplicity on one hand and productivity and return on the other hand. Furthermore, this choice does not have to made by the mobile money institution on behalf of its customers – individual customers could make the decisions for themselves for each of their allocated mobile accounts. They could choose to put their liquid balances into money market funds instead of keeping them as a current credit on their mobile accounts. They could move their delayed payment accounts into duration matched savings such as fixed term investments. They could put savings held as protection against adverse events such as illness into insurance or health care

plans. They can therefore determine for themselves how they wish to tradeoff risk and return for each of their accounts and transfer monies to and from their mobile accounts into the externally provided savings and insurance vehicles as appropriate, while knowing that there is a perfectly safe zero return alternative mobile banking account available to them as well.

Unbundling the challenge: Of ladders and platforms

The experience with M-PESA in Kenya is revealing a wide gap between the means-of-payment and store-of-value propositions.[8] The payments features of M-PESA (with its simple "send money home" tagline) prompted half the adult population to take up the service within less than three years, and to use it to the point where M-PESA today handles more transactions than Western Union does globally.

Yet indications are that saved balances remain paltry for the majority of M-PESA users. Part of the reason may be that Safaricom is not legally allowed to promote M-PESA as a savings service, even though it is functionally equivalent to and has virtually identical risk exposure as a bank account. The fuller reason is probably because M-PESA accounts have no commitment features and do not easily accommodate people's mental models about their finances.

We tend to think of financial inclusion as a ladder, where customers are taken from basic to increasingly complex financial products. The innovation of mobile money has been to put payments as the first rung. But now we are observing that the step from sending money in real time to storing value over time looms large. Could it be that forward payments provide the *missing link* between real-time payments and savings? Figure 3 depicts this metaphorically within a simple, conceptualized financial inclusion ladder.

[8] For a detailed case study of M-PESA in Kenya, see Mas and Radcliffe (2011) and Jack and Suri (2010).

Figure 3: Forward payments adding extra rungs in the ladder of financial inclusion (demand side view)

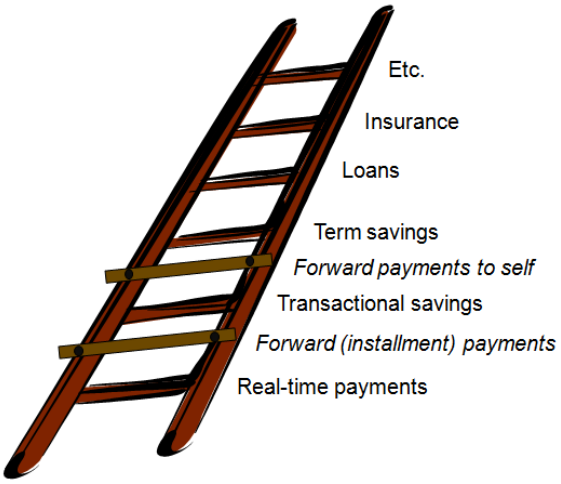
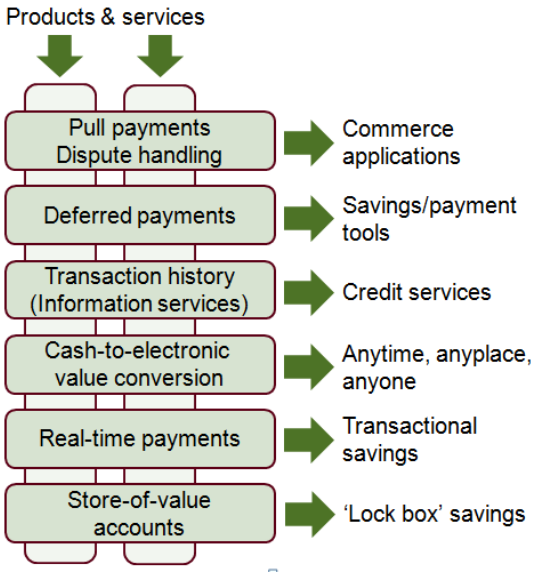


Figure 4: Service creation as a packaging of platform functionalities (supply side view)



When accounts are used primarily as a means of undertaking real-time payments, small saved balances may arise in two ways. The sender may deposit enough money into the account to fund multiple payments that need to be made over several days. And the receiver may take a little time to access received amounts before withdrawing them. The primary driver of savings is therefore transactional convenience.

Once deferred payments are allowed, the sender can de-link the timing of his commitment to send funds from the timing of the actual transfer of the funds. The commitment to pay in the future creates a commitment to save in the interim. By making these deferred payments to yourself, you can think of forward payments as installments on some future goal.

Moving to the supply side, mobile money is potentially transformational because of its platform characteristics. Customers can use the underlying store-of-value and payment features in a remarkably flexible way, for a variety of uses. Platforms become more valuable as higher-level platform layers develop on top of existing platforms, each time adding more flexibility, convenience and simplicity to customers and product developers who use them. The more platform functionalities exist, the easier it will be for providers to create new products which vertically integrate across and build on them.

The core idea expressed in this paper is a case in point: putting a forward-payment platform layer on top of existing mobile money platforms might trigger entirely new ways in which electronic money is used. Figure 4 shows a 'stack' of platform functionalities which, in various combinations, could in principle support a collection of financial services that might help poor people progress up the financial inclusion ladder.

People's savings goals generally relate to future payments they would like to make: for school fees, housing, weddings, working capital for trading activities or health emergencies. By planning payments, households can seek to stabilize their daily circumstances, develop opportunities to improve their condition in the future, and mitigate shocks that can set their families back. Thus, the notions of savings, payments and budgeting are inextricably linked.

Extensions and implications

We conclude with ten implications and extensions suggested by this paper.

First, in this scheme there is no commitment by the saver to a second party. The individual is making his or her own savings decision and savings are pure custodianship. There is no investment and there is no return on the savings. There is therefore no regulatory issue or prudential requirement and there is no restriction to the service being provided within the banking system. The only regulatory requirements that mobile banking raise are in relation to mobile telecom services not banking. The only issue that the savings product raises is the quality of the software so that there is even less supervision required than for mobile payments.

The second point is that the emphasis of savings is on consumption possibilities and goals rather than time periods. Economists think in terms of time periods; people think in terms of products and activities. The deferred payments makes that point and the software could be structured in terms of pictures of the products for which one is saving including piles of cash for rainy days.

Third, the savings obligation could take several forms. I could commit not to reallocate the savings that I have made in the past to different activities. There may therefore be an element of irreversibility of past allocations. I can commit to future allocations in the form for example of an installment payment. Also the commitment in the future could be to particular products rather than income at particular time periods so there could be automatic payment for the product rather than delivery of cash at particular time periods. This commitment may be desirable for certain activities, e.g. for medical insurance or education where savers might otherwise be tempted to reallocate future cash to other products.

Fourth, the program makes clear that savings is about future consumption choices not about expanding the pot. I can decide to spend more on today's consumption or earn less or decide to spend more on a product in the future. But if I do that I have to take resources out of another pot and diminish my consumption of something else in the future. This can be graphically illustrated on the system by for example literally showing the legs being chopped off the cow for which I was saving or the wheels being taken off the bike which I wanted.

Fifth, borrowing and lending in this framework should also be regarded as riskless. My consumption opportunity for one future product can be expanded, but if there is 100% collateral that involves a corresponding reduction in my consumption of another product

Sixth, investment is then distinguished from savings. Investments utilize savings but I do not have to invest if I save. So the savings investment identity can usefully be clarified in so far as savings can be allocated to deferred consumption as well as investment and the returns to investment can be saved as deferred consumption in some period beyond that in which the investment matures. The advantage of drawing this distinction between savings and investment is that it makes the point that savings can be entirely riskless with no requirement for any form of prudential regulation if it is purely custodianship and deferred consumption.

Seventh, correspondingly risky borrowing and lending involve less than 100% collateralization, i.e. less than a full commitment to reduce consumption of another product correspondingly. Savings reduce risk by reducing future resources required for consumption; borrowing increases risk by requiring increased income generation or reduced future consumption to meet debt obligations

Eighth, the provision of education about this savings product is less demanding than for most financial products because of the fact that there is no transfer of resources to others. People can learn how to operate the system safe in the knowledge that they are not losing money to others. The fact that the activity is about savings not risky investment means that it will have appeal to low as well as high income families because of the riskless nature of the activity and the ease with which information about it can be communicated.

Ninth, sharing of information and control of the software is important. To the extent that it is collectively owned by the family unit rather than an individual then it can promote productive family interactions. It can encourage family participation in lifestyle decisions – how to allocate resources and how to plan for the future - and it can empower female as well as male members of the family in making key financial decisions about the household unit.

Tenth, the potential for sharing information and extending the unit beyond the family emerges. To the extent that access to individual family savings programs or parts of them is collectively available to other members of the community then there is the potential for collective mutual insurance and collective savings for public goods that are beyond the reach of any single family unit. So there can be communal goals of achieving particular public services or goods in the future to which all members of the community are expected to contribute. The same social pressure to participate in communal savings can be present as exists in microfinance on the borrowing side. This raises questions about the governance of communal savings, the voting power of different members of the community regarding how savings decisions are made and the way in which implementation of those savings decisions is administered.

References

Ashraf, Nava, Nathalie Gons, Dean Karlan and Wesley Yin (2003). "A Review of Commitment Savings Products in Developing Countries." Mimeo, May.

Ashraf, Nava, Dean Karlan and Wesley Yin (2006a). "Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines." Quarterly Journal of Economics, May, pp. 635-672.

Ashraf, Nava, Dean Karlan and Wesley Yin (2006b). "Deposit Collectors." Advances in Economic Analysis and Policy, Vol. 6, No. 2, Article 5.

Collins, Daryl, Jonathan Morduch, Stuart Rutherford and Orlanda Ruthven (2009). Portfolios of the Poor: How the World's Poor Live on $2/day (Princeton, NJ: Princeton University Press).

Jack, Billy and Tavneet Suri (20010). "The Economics of M-PESA." Unpublished paper.

Kendall, Jake (2010). "A Penny Saved: How Do Savings Accounts Help the Poor?" Financial Access Initiative working paper. Available on http://financialaccess.org/ .

Mas, Ignacio and Daniel Radcliffe (2011). "Mobile Payments Go Viral: The Case of M-PESA." In Yes Africa Can: Success Stories from a Dynamic Continent (Washington, DC: The World Bank).

Rutherford, Stuart (2011). "Boosting the Poor's Capacity to Save: A Note on Instalment Plans and their Variants." In Marc Labie and Beatriz Armendáriz (eds.), Handbook of Microfinance (World Scientific Publishing Company: London, UK).

Shipton, Parker (1990). "How Gambians Save – And what their Strategies Imply for International Aid." World Bank PRE Working Paper Series No. 395, April.