

The Challenge of Combining Credit and Savings

Innovations Case Discussion:
Jipange KuSave

Every once in a while, an initiative comes along that manages to elegantly combine the essence of existing programs with something new whose utility is more than the sum of its parts. Jipange KuSave (JKS) seems to be such an initiative. JKS offers:

- Both a credit and a savings product under the same rubric
- Immediate connectivity to the M-PESA system
- Significant flexibility in catering to the idiosyncratic needs of its clients

JKS “lends to save.” To appreciate this seemingly contradictory notion, we must first appreciate the quite different but complementary properties of credit and savings. As Collins et al. have amply illustrated, the poor often have to make do with an income that is small, irregular, and uncertain.¹ This makes saving up hard to do.² The poor can and do save regularly, but this activity tends to be focused on meeting regular expenses that do not coincide with cash inflow, rather than on building savings for the long term or for emergencies. Moreover, even if building long-term savings is the intention, the overwhelming urgency of immediate needs often disrupts the discipline needed to accumulate a significant sum.

Credit addresses that problem by providing funds up front and when needed, and imposing a greater degree of the discipline required to pay small amounts frequently over a set period of time. In a way, the client is “saving down,” repaying a loan that is essentially an advance against future savings.³ However, there is an underlying concern that credit often traps the poor into a repayment cycle in which they are constantly repaying loans taken to deal with unforeseen expenses, and never really saving in the true sense of the word.

How is it possible to combine the features of the two? At its core, JKS emulates Rutherford’s pioneering work with SafeSave’s P9 program in Bangladesh. JKS holds in escrow a significant portion of the loan that is taken out, often between a third and half of the notional amount, and earmarks that as “savings” for the client. The client then first pays up the loan amount that was actually disbursed, and then pays up to replace the amount held in escrow with actual savings. In doing so, JKS, like P9, transfers the loan repayment to build up the client’s savings.

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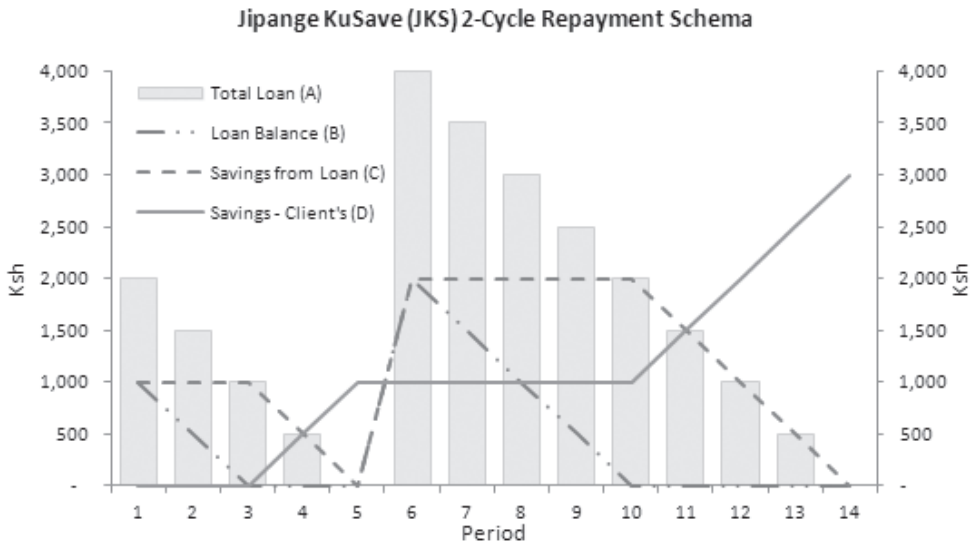


Figure 1. The Interplay of Credit and Savings Facilitated by Jipange KuSave

By starting with a small amount and “bootstrapping” up, the client can eventually build a sizeable savings (see Figure 1).

Figure 1 allows us to appreciate the fungible nature of the cash flows that result in accumulated savings. Assuming that a client takes out a Ksh 2,000 loan (A) and “saves” 50 percent of it in period 1, he has a savings in escrow amount (C) of Ksh 1,000, but the amount he has actually saved through his own cash flow (D) is 0. If he pays Ksh 500 in both period 2 and period 3 toward the outstanding loan balance (B), by period 4 he’s substituting the amount “saved” from the loan (C) with his own savings (D). By period 5, he will have savings of Ksh 1,000.

The cycle repeats itself from period 6 if the client borrows another Ksh 4,000, of which 2,000 is “saved” (C). C starts being replaced with actual savings, D, in period 11, once outstanding balance (B) is zero again, and climbs to Ksh 3,000 by period 14. Note that this is the combination of the Ksh 1,000 from the first cycle, together with the Ksh 2,000 from the second cycle that was initially held in escrow as savings.

By the final cycle, the client has had access to Ksh 3,000 of readily available funds and accumulated savings of Ksh 3,000.

JKS adds two delectable features to this. The first is the automatic access to the M-PESA platform and all its benefits, from intermediating existing bank balances to paying bills to transferring funds to others. Even for an industry that has been innovative in solving the “last-mile” problem around the world, inclusion in an electronic ecosystem that functions in near real time is groundbreaking. This commitment to remaining at the forefront of innovation is also reflected in JKS’s real-time CRM system, which allows staff to monitor the program’s performance met-

rics on a day-by-day basis—something very valuable for a program that by design embraces significant volatility.

The second key feature of JKS is its flexibility. Both draw-down and repayment options are dictated by the loan recipient. Clients can take out a lump sum only when they need it and repay it at their convenience. JKS has automated the process, so once a loan is repaid, a new loan can be issued within an hour, pending confirmation. Clients do not even have to show up at meetings or stand in lines, as all the advantages offered by JKS are accessible via the humble cell phone.

The savings side of the program is less flexible. While JKS is not a compulsory savings product, withdrawing before the savings goal is reached incurs a penalty. Clients seem to respond positively to this incentive because it helps them build up significant savings. Incidentally, clients note that JKS is but one of the savings instruments they use, some of the others being Equity Bank accounts and M-PESA itself. This reiterates JKS's positioning as a niche product that clients use to access short-term credit and invest in long-term savings.

JKS seems to be a mobile-based program that provides a huge amount of flexibility on variable loan amounts that are available on very short notice, while simultaneously enabling clients to build up significant savings in a relatively short period of time. Is there anything that should give us pause?

Well, for one, the pricing of the product from the client's point of view calls for some reflection. The program is zero interest for the client, but it certainly is not zero *cost*—and understandably so. JKS is designed as a fee-based product, where the client is charged upon use, per use. Thus, there is an account activation fee, an origination fee of 2 percent to 5 percent for each cycle, and an early savings withdrawal fee of 5 percent. These charges can be translated into a representative annual percentage rate (APR) or an effective interest rate (EIR), which in turn allows apples-to-apples comparisons between loan products. However, as the case points out, this does not always make sense.

Specifically, this does not make sense if the draw downs are sporadic, because APR/EIR inherently assumes that the loan tranches are rolled over and the effective interest charges occur back to back, which in turn justifies compounding over relevant periods. If a client borrows Ksh 2,000, repays it in two weeks, does not draw down the next Ksh 4,000 within another month but repays again within two weeks, the simple APR/EIR calculations cannot be used and more sophisticated techniques come into play. On the other hand, as the case candidly points out, if the client goes through cycles sequentially, the APR can become staggering, and increasingly so as repayment cycles get shorter. So which is the more appropriate scenario for JKS?

The suggested plans seem to be six months long and involve consecutive draw downs. The smallest plan has a monthly savings goal of Ksh 2,500, which leads to accumulated savings of Ksh 15,000. The largest plan has a goal of Ksh 100,000, with a monthly savings target of Ksh 16,700. From JKS's point of view, the interest rates charged are 74 percent for the Ksh 15,000 plan and 171 percent for the Ksh 100,000 plan, as outlined in Tables 1 and 2.⁴ Note that we use the XIRR function in

Date	Num Days	Notional	Disbursement	Principal	Fees	Cashflow
1/1/2011		2,000	2,000	-	100	(1,900)
2/5/2011	35	-	-	2,000	10	2,010
2/6/2011	1	4,000	4,000	-	200	(3,800)
3/13/2011	35	-	-	4,000	10	4,010
3/14/2011	1	6,000	6,000	-	300	(5,700)
4/18/2011	35	-	-	6,000	10	6,010
4/19/2011	1	8,000	8,000	-	400	(7,600)
5/24/2011	35	-	-	8,000	10	8,010
5/25/2011	1	10,000	10,000	-	500	(9,500)
6/29/2011	35	-	-	10,000	10	10,010
Total	179				XIRR	74%

Table 1. Illustrative Ksh 15,000 Savings Plan

Date	Num Days	Notional	Disbursement	Principal	Fees	Cashflow
1/1/2011		2,000	2,000	-	100	(1,900)
1/20/2011	19	-	-	2,000	10	2,010
1/21/2011	1	4,000	4,000	-	200	(3,800)
2/9/2011	19	-	-	4,000	10	4,010
2/10/2011	1	6,000	6,000	-	300	(5,700)
3/1/2011	19	-	-	6,000	10	6,010
3/2/2011	1	8,000	8,000	-	400	(7,600)
3/21/2011	19	-	-	8,000	10	8,010
3/22/2011	1	10,000	10,000	-	500	(9,500)
4/10/2011	19	-	-	10,000	10	10,010
4/11/2011	1	20,000	20,000	-	1,000	(19,000)
4/30/2011	19	-	-	20,000	10	20,010
5/1/2011	1	30,000	30,000	-	1,500	(28,500)
5/20/2011	19	-	-	30,000	10	30,010
5/21/2011	1	40,000	40,000	-	2,000	(38,000)
6/9/2011	19	-	-	40,000	10	40,010
6/10/2011	1	50,000	50,000	-	2,500	(47,500)
6/29/2011	19	-	-	50,000	10	50,010
	179				XIRR	171%

Table 2. Illustrative Ksh 100,000 Savings Plan

Excel to compute this rate, which allows us to incorporate cash flows made on dates that are not on a regular schedule.

This is not the end of the story of equivalent interest rates, however, because the payment plan looks significantly different from the client's point of view. The client only receives half the loan that is earmarked, and receives the other half as a cumulative lump sum at the end of the savings period. In other words, we cannot treat the balance held in escrow the same way we treat the credit balance. This "savings" amount is not only *not* being put to productive use by the client, it also is not earning interest, as most savings accounts do. Furthermore, banks in Kenya generally offer savings accounts that cost nothing to maintain (though there sometimes are withdrawal fees), so one could even argue that the entire 5 percent cost of the notional amount should be borne by the amount that is actually drawn down and not be spread over both the drawn-down and saved portions.

Accommodating each of these notions potentially engorges the equivalent-interest-rate figure spectacularly and is a good candidate for detailed study. However, we should keep in mind that not all clients will engage in scheduled rollovers as envisioned by the savings plans. For example, using the numbers from the Stage I pilot, we see that the 10 percent of borrowers who repaid their loan within three weeks and moved on to subsequent cycles were exposed to significant levels of APR-equivalent costs. On the other hand, only 25 percent had paid a third of their outstanding loan after two months, so three-quarters of its clients were stretching out payments significantly, thus reducing the effective interest rate they were exposed to. Those who diligently paid up early essentially subsidized the laggards and delinquents.

The million dollar question (literally) is whether JKS will grow into a mature financial services product that satisfies a niche demand that other products do not, or remain a showcase of technological innovation that never made it past the pilot phase.

The challenges for JKS are not trivial by any measure. Acquiring or otherwise securing access to the appropriate licenses and satisfying regulatory requirements will be crucial to JKS continuing operations. The regional offering to 10,000 potential clients will also demonstrate whether large-scale demand for the product exists, and whether 300,000 clients is a realistic target. Banks can be expected to be wary of the underlying risk because of the open-ended nature of the loans, and thus to apply different treatment to the savings and credit components. Note that the credit component is similar to a line of credit, but without the heavy due diligence or underlying collateral that usually accompanies such arrangements. JKS's chances of finding a suitor will increase significantly if it can establish the feasibility of the product over a period of time, based on analyses of how a critical mass of clients performs after the regional rollout. Until then, banks may prefer to act as a conduit, rather than carrying the accounts on their books.

The M-PESA charge associated with making each payment, around Ksh 10, does make the cost of making frequent repayments in small amounts somewhat expensive, which could act as an impediment to more widespread adoption of the

product. For example, a client will conceivably prefer to save up to Ksh 1,000 over the course of ten days, instead of sending over about Ksh 100 every day or as it becomes available. Negotiating reduced rates for making a certain number of payments per month would certainly make it easier for clients to save, and thus increase clients' propensity to pay down outstanding balances.

But perhaps the biggest challenge is to make sure that JKS is offering a product that is financially sustainable. There is no doubt that there is an incipient demand for the underlying product, even if the exact scale of the demand is still unclear. The product is simple, flexible, and accessible. Figure 3 of the case suggests a fairly low overhead structure, which implies that if JKS can retain clients, its life-time economic value will be quite attractive. Given the iterative nature of product development, the product itself can be expected to be client relevant, which would contribute to client retention.⁵

The most significant determinant of financial sustainability will probably be how JKS handles delinquencies. For a product that encourages clients to repay when they can and does not impose penalties for not repaying a loan, it is conceivable that repayments will slip more than a standard credit product, even with incentives such as access to a larger sum at the next cycle and accrued savings. Figure 3 in the case suggests a recognized loan loss level of about 10 percent. Three things must be kept in mind when evaluating this figure:

- Given the generous terms of the product, loan losses may not be recognized for a while.
- Clients do not default immediately. Many repay the first couple of tranches and then default.
- As JKS goes from 1,000 clients to 10,000 and more, its books will grow exponentially within a short period of time. This new funding will dilute underlying defaults from older vintages.

The net effect of this will be that JKS will not be exposed to the full delinquency level at a steady rate for years. But, when it does catch up, it has the potential to severely disrupt the liquidity position of the financial company housing the product. The good news is that JKS seems to have the monitoring and surveillance tools in place that can track the performance of vintages on a regular basis, and has already shown the organizational acumen to adapt deftly to changing portfolio characteristics.

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1. Daryl Collins et al., *Portfolios of the Poor: How the World's Poor Live on \$2 a Day* (Princeton, NJ: Princeton University Press, 2009).
 2. Stuart Rutherford, "Saving Up Is Hard to Do," CGAP, microfinance blog. Available at <http://microfinance.cgap.org/2011/05/16/saving-up-is-hard-to-do/>.
 3. Collins et al., *Portfolios of the Poor*.
 4. Assumptions: each cycle is of equal length, client rolls over to subsequent cycles the day after repayment, there is a 5 percent origination charge, and a Ksh 10 M-PESA fee per repayment. Account activation fee is ignored.
 5. As opposed to the "build it and they will come" approach for a product perceived to be superior, or the reliance on superior marketing to promote an otherwise unremarkable product.