SCBF 2017-04 **Date 1 June 2018**

Solar Lending in Kenya
by Venture South Kenya

1. DEVELOPMENT RELEVANCE

Table 1[i]: Population and economic indicators	
Population in million (*2016*))	*48,461,567*
GDP growth (*2016*)	**5.849%**
Inflation (2016*)*	**8.026%**
Trade balance (% of GDP) (2016)	**-8.79%**
Foreign direct investment (net) (% of GDP) (*2016*)	**0.558%**
Net ODA received (% of GNI) (2016)	**13.184%**
Remittances received (% of GDP) (2016)	**2.474%**
Economic Freedom Index[ii] (Rank among 186 countries) *(2018)*	**54.7**
Poverty indicators	
GDP per capita (USD) (*2016*)	**$1,455.36**
Gini Index (0= equality 100= inequality) (*2005*)	**48.5**
International poverty rate (*2005;* at 1.90 USD/day)	**42.8%**
National poverty rate (2015)	**36.1%**
National rural poverty headcount rate (*year*)	**49.1%**

Country Context

Kenya's population of over 48 million people is young with over 70% younger than 30 years of age. The country has high levels of poverty, though with improving trend lines. The rural urban split is also beginning to show differences in wealth with much higher levels of middle and upper classes in urban areas. "Kenya has a Human Development Index (HDI) of 0.555 (medium), ranked 145 out of 186 in the world. The important agricultural sector is one of the least developed and largely inefficient, employing 75% of the workforce. Kenya is usually classified as a frontier market or occasionally an emerging market, but it is not one of the least developed countries"[1]. The economy has consistently grown at 5.4% or better since 2013. "Economic growth is expected to accelerate this year thanks to easing monetary conditions, higher investment and a continued rise in agricultural output. Completion of phase one of the standard gauge railway between Mombasa and Nairobi should help curb import demand and narrow Kenya's current account deficit.[2]"

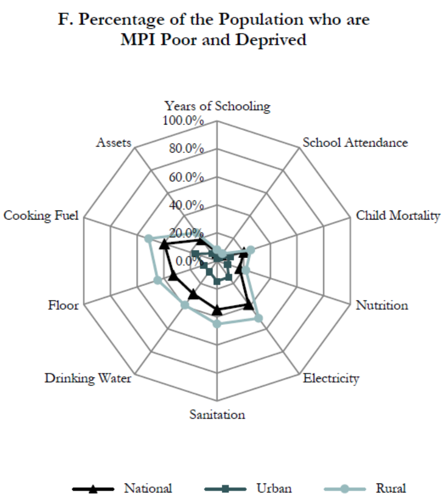


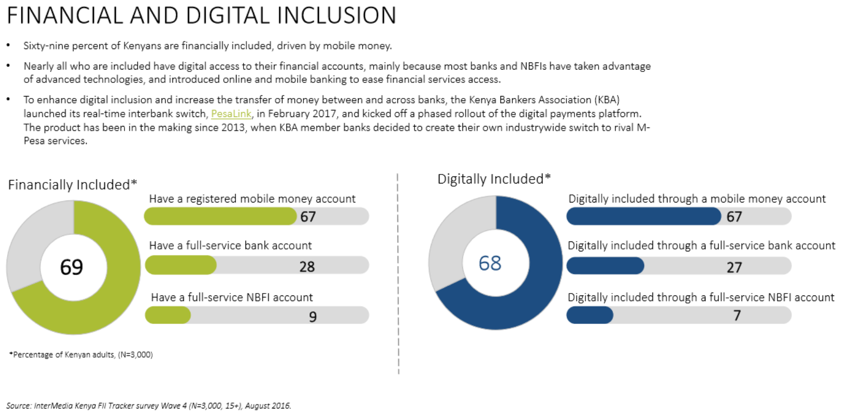
Figure 1 Multidimensional poverty index chart, (Kenya, 2017)

Financial sector context

The Microfinance Act of 2006 has provided the framework for the government's vision for microfinance in the financial sector since it was implemented in 2008. This act pushed many MFIs to convert into banks. The financial sector was then deeply affected with the introduction of M-Pesa in 2007, arguably the most successful mobile money platform in the world. M-Pesa has driven the financial inclusion numbers to 69%, relatively high, when compared to other countries. Bank accounts just with banks has grown to only 31%, according to Financial Inclusion Insights. A third major affect on the financial sector was a 2016 law which put a cap on interest rates. It is not clear the law has had a beneficial affect however as "recent reports from the CBK show there has been a contraction in the number of loans.[3]" The government is reviewing the law and it may be revised. The country has active credit bureaus and finance associations.

Banking has several large well known players as well as 13 MFIs which have a banking license. The financial sector is quite competitive and the advent of solar is potentially a disrupting force. SHS provide families a fixed asset which can be leveraged against to borrow. Several of the large solar companies are seizing on this to expand their financing and some of the large ones may be required to seek a banking license. "Overall,

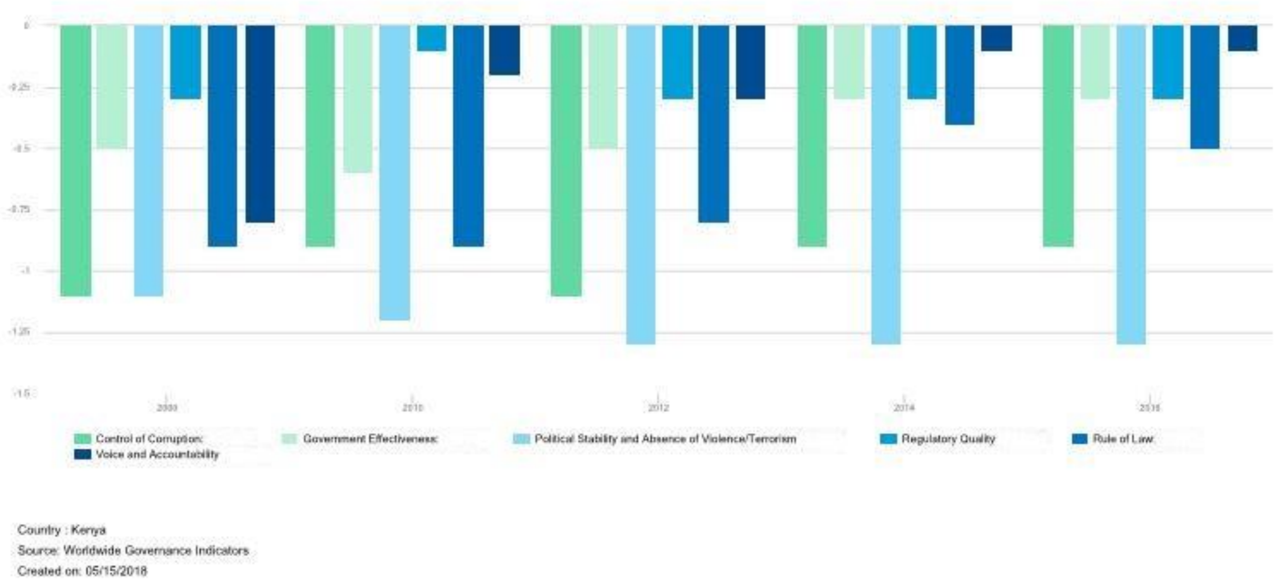
[1] https://en.wikipedia.org/wiki/Kenya#Economy
[2] https://www.focus-economics.com/countries/kenya
[3] http://finclusion.org/uploads/file/reports/Kenya%20Wave%204%20Report_24-May-2017.pdf



58% of Kenyans still do not use advanced mobile money services actively, however, mobile money still presents the best opportunity for Kenyans to engage in active and advanced use of financial services."[4]

27% of Kenyans have insurance. This number "is driven by compulsory employee deductions by the National Hospital Insurance Fund and the National Social Security Fund. With over 60% gainfully employed, the number of insured should be close to 60 percent, given these statutory deductions. However, since most are employed in the informal sector, the statutory deductions are not enforced."[5]

Governance indicators chart[i]



Partner financial institution/s

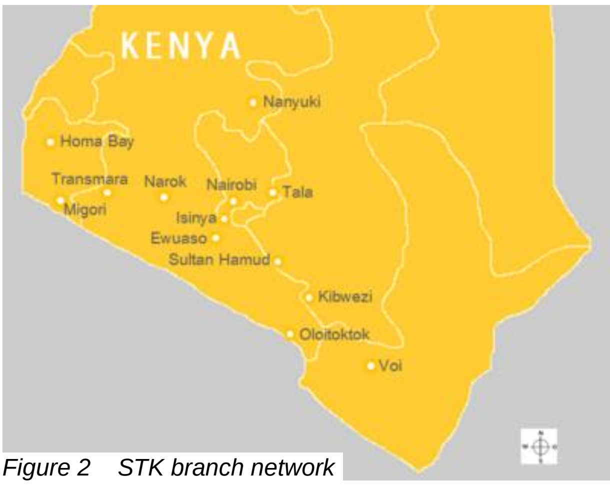


Figure 2 STK branch network

The Kenyan partner for this project is Biashara na Fedha (BnF). BnF is 100% owed Venture South International and was registered as a financing company in 2015. BnF was established specifically to respond to the solar sector because MFIs were not working in this market niche. The company is based in Nairobi and works in close partnership with its solar partners. BnF buys solar receivables from its partners and the solar partners manage the end user client contact, based on established conditions. The area of operation therefore directly overlaps the areas of operation of the solar partners. BnF is the only lending company focused on buying solar receivables. BnF will work with small amounts which contrasts with some lenders who require borrowers to take a US$ 1 or 2 million minimum loan amount.

The other important partner in this project is SunTransfer Kenya (STK). STK is a Kenyan solar company with 17 branches around the country. STK has high quality products with after sales service. STK is strong in SHS and following this intervention, aims to grow loans to SMEs further.

[4] ibid
[5] ibid

Prior to BnF, to the extent buying receivables from solar companies was done, it was done on a large scale with the most established solar companies in the country. BnF is working with 2nd and 3rd tier solar companies. Buying receivables from them provides liquidity to these companies which allows them to buy more product and expand sales. This is beneficial to the market because it provides vital financing to the market which was otherwise being dominated by the largest companies. BnF is now considering using a similar model with clean cookstoves.

INTERVENTION APPROACH

Capacity building needs

Our knowledge of the market peaked our interest in developing products for the SME space. There have been various demands for solar SME products, but no standardized loan products. It was important that the institutional needs of the solar company and the financing company were compatible, so both could dedicate their efforts to this goal. Using consultants facilitated this because it took pressure off daily operations and allowed the partners to benefit from the consultants expertise.

Main activity areas (goals, targets, resources & time frame) and outputs

The projects main goals were to a) perfect the lender / solar company partnership model b) develop loan products for the MSME sector c) expand lending into N. Kenya d) explore partnerships with other solar co.s e) develop data to attract investors into this space. We were able to develop outputs for each of our goals:

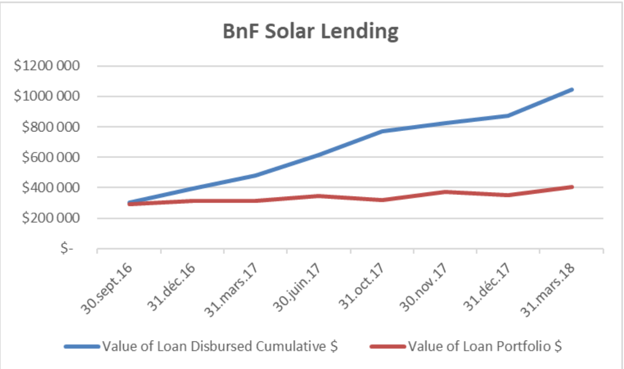
- The partnership model developed with STK was improved upon and then used to develop agreements with new companies. The model is in advanced negotiations with two companies and serves as the basis for two more companies.
- We were able to develop loan products for the SME sector. Each product is slightly different and thus requires tweaking.
- Training: a) ExCom - the top management = 5, b) Credit Customer support = 3 c) SC Managers = 13 for a total of 21
- The project did a market study for SMEs in Northern Kenya. The report is attached.
- The solar partner expanded to N. Kenya, but then had to retreat. As the new offices were losing money, the solar company had to retreat and close their expansion
- BnF developed relationships with several companies. The demand for buying receivables is clearly manifested by the number of companies who wish to work with BnF. In Kenya alone, more than five companies wished to work with BnF. Companies from Uganda and Tanzania also reached out to BnF with requests for the company to buy receivables
- BnF was able to further prove the market and show the growth of the institution
- Additional funders did not contribute to the intervention. However, the project has prepared the institution for additional funding and several different funding opportunities are waiting approval and this project helped create these opportunities

Market study results show that groceries, phone accessories (M-Pesa, airtime, and phones) and the phone charging services were the most common business activities and services offered by the SMEs in the northern region.

2. RESULTS ACHIEVED AND NOT ACHIEVED

Client level

We are pleased with the results and will break them down one by one. The operating model of the partnership with the solar company is vital to the scaling up of the program. A good operating agreement allows BnF to replicate their model and scale up their activities. The model reviewed each party's responsibilities and the cashflow from BnF to the solar partner to the end and back. Defining each party's responsibilities is very important in such an agreement. It was important not to disrupt the solar company's normal operations while protecting BnF against defaulting loans. Establishing a replicable model makes it easier for BnF to market to other solar companies as they see it has worked with other solar companies and is



advantageous to them. Tax and legal matters are also important. The transfer of title of the receivables obviously affects ownership and also taxes.

Figure 3 This barber was originally a cattle farmer. However, drought has been hard on the herd and saw an opportunity to become a barber because there was only one barber in his town which was often faced with no electricity due to poor grid service. He purchased solar barber business kit which include 2 cutters, 2 bulbs, battery hub and a solar panel of 35 Watts. He now earns an average of Kshs 500 day with more than double that on weekends and market days. He states: "Now am planning to buy more barber kits from Suntransfer, so that I can reach more people wherever they are".

Loan products were developed for the MSME sector. Solar batteries which have enough storage capacity to power a small business (like a Tesla PowerWall) are just being prepared now. To scale a loan product to compete with diesel generators we will need solar products designed specifically for SMEs. Most solar replacements to diesel generators sold now are customized by the solar companies rather than standard products with model A, B or C. Small business products have begun well and contrast with the existing SHS loans which do not generate (for the most part) family or business income.

The project expanded solar loans to Northern Kenya as planned, but then pulled back when sales did not meet expectations. Weak cell phone network coverage, as highlighted in the report, also makes PayGo payments more difficult in the north. The report highlighted this potential problem when it stated "Poor mobile network coverage hindering sell of solar products on credit – this is especially in Gotu, Kachuri in Isiolo County and Lodungokwe in Samburu County." While not ideal, it is normal adaptation to market conditions. A principal reason for withdrawing was that first movers had already expanded to Northern Kenya with Pawame, Azuri and Bboxx already established there before STK opened offices. These solar companies established themselves first in the market and left little room for STK to establish itself in the lower population density region. Solar penetration in the north is about 20%, which is similar to other regions of the country.

The exploration of partnerships was very successful with many companies approaching BnF requesting to partner. Companies from Tanzania and Uganda also approached BnF and finally the company had to tell potential partners to wait because there were too many partners and not enough capital to handle all at the same time. This was solid proof of the demand in the market and BnF could easily grow its portfolio to US$ 3m before year end if it had the funding. BnF has used the partnership model described above as the basis of negotiations with solar companies and now has signed NDAs with several companies and has advanced with full due diligence. Loans with new partners will be done in the following quarters.

As can be seen in the graph showing historical loans above, BnF further expanded its track record and payment history to show potential creditors. The company is purchasing US$ 25,000 of receivables every two weeks and has demand for much more. This totals more than 100 new families each month. BnF was able to use data to pursue several funding opportunities which are in development now. Many creditors are interested in this space and like BnFs model. With each passing month there is a longer credit history and expanded portfolio. BnF is primed to expand its portfolio. The SCBF support allowed BnF to look deeply into the products and partnerships which are so necessary to provide the foundation for scaling up. Training was also provided to STK staff so they can work with SME clients and better understand how to analyze SME risk and respond to their needs. The training was conducted for senior managers, branch managers and customer support.

Partner financial institution/s level

The SCBF intervention contributed to strengthening the partner companies by providing resources it needed to develop essential operating documents to expand its activities. Developing the loan products and partnership agreements is time consuming but absolutely essential to establish a firm legal framework to work from. It is this sort of professional documentation which is costly and time consuming which many smaller institutions do not have the time or resources to develop. These documents will serve the partners for years to come. The legal documents were reviewed numerous times with many different iterations.

The total number of registered end users exceeded 2,400 historically for BnF and grows by over 100 every month. Clients pay once per month, though some clients will pay in instalments, increasing the number of monthly payments. The average value per transaction is US$ 22 with an average of 1,560 transactions per month. Client satisfaction, as measured by drop out rates is not a relevant measurement for financing of solar products. There was no staff turnover at BnF during the project period. There are no savings or insurance products. These products are not permitted with BnFs registration and not relevant given the methodology.

Financial sector level

It is early to predict full imitation effects. However, considering the interest from solar companies, we expect imitation to follow. The solar companies will demand similar services from other financers as the market continues to expand. The process however will continue to be slow as the financers are looking to protect themselves while they gain confidence in the new market.

3. LESSONS LEARNT

The design and implementation of the intervention worked well. It is sometimes difficult to bring two different companies to work together because they each have their own operational responsibilities. However, in this case both companies' leadership wanted the project to succeed and the partner solar companies saw the advantage to the financing. The only major adjustment to the planning was around the Kenyan elections and concern around violence or disruption associated with that. Violence did affect some areas of the country and some rural travel was restricted, but it did not affect the project overall.

Operationalizing the MIS and onboarding new partner companies always takes more time than anticipated. To integrate the MIS code needs to be developed to establish a portal so that data can be downloaded automatically. This adds an additional step to developing a new partnership which brings additional complexity because of confidentiality and system compatibility. Also, partner companies need to manage their ongoing operations which means they are diverting time from one activity to start another. This inevitably results in delays in setting up new partnerships, even when both parties are keen to make it happen.

The intervention achieved its main goals and this can be further built upon. We anticipate that there will be further upscaling when fresh funding arrives and contributions from this intervention will bear fruit going forward. Challenges around election violence were beyond anyone's control and it was possible to shift some dates around to achieve the same goals. Expansion to Northern Kenya was not a direct success. However, the goal to reach underserved regions of the country was met by other actors, thus meeting the overall goals of SCBF. The report correctly identified foreseen challenges. Those challenges combined with first movers already established proved to be barriers too significant to overcome. Power Africa (a USAID funded program which promotes clean energy) advised that solar penetration levels in the Northern region of the country were similar to other regions of the country. The solar partner reacted properly by withdrawing from the region when they realized it was not financially viable. The marketing study of Northern Kenya was quite good, but it should have provided more information on solar competitors.

The design and implementation included having partners who were committed and invested in the intervention's success. Developing new partnerships worked to the advantage of solar partners and consequently they were interested in the success of the intervention. The fact partners had something to gain from the work being conducted contributed to the success of the partnership. Sometimes partnerships just add work to staff without tangible benefits. Other than election relation violence, the greatest challenge was related to having to take the hard decision to withdraw from Northern Kenya. This was a business decision STK took. The overall trainings and learnings were not lost however as staff were relocated to other regions and the company continues to use the products. It is difficult to say what should have been done differently. One can not always predict how markets would develop or how politics will affect daily work. The work itself was successful and we now have new loan products for SMEs. Lending to SMEs will continue and expand going forward thanks to the project.

Note: *Without contrary remarks from your side, we may use the pictures of this report for SCBF publications (e.g. annual report). Please state caption and, if needed, credits. Please provide photos at high resolution (ideally JPEG).*

---

[i] The World Bank Group (*year*). Worldwide Governance Indicators database. Washington, DC. http://databank.worldbank.org. Accessed (*insert date*)