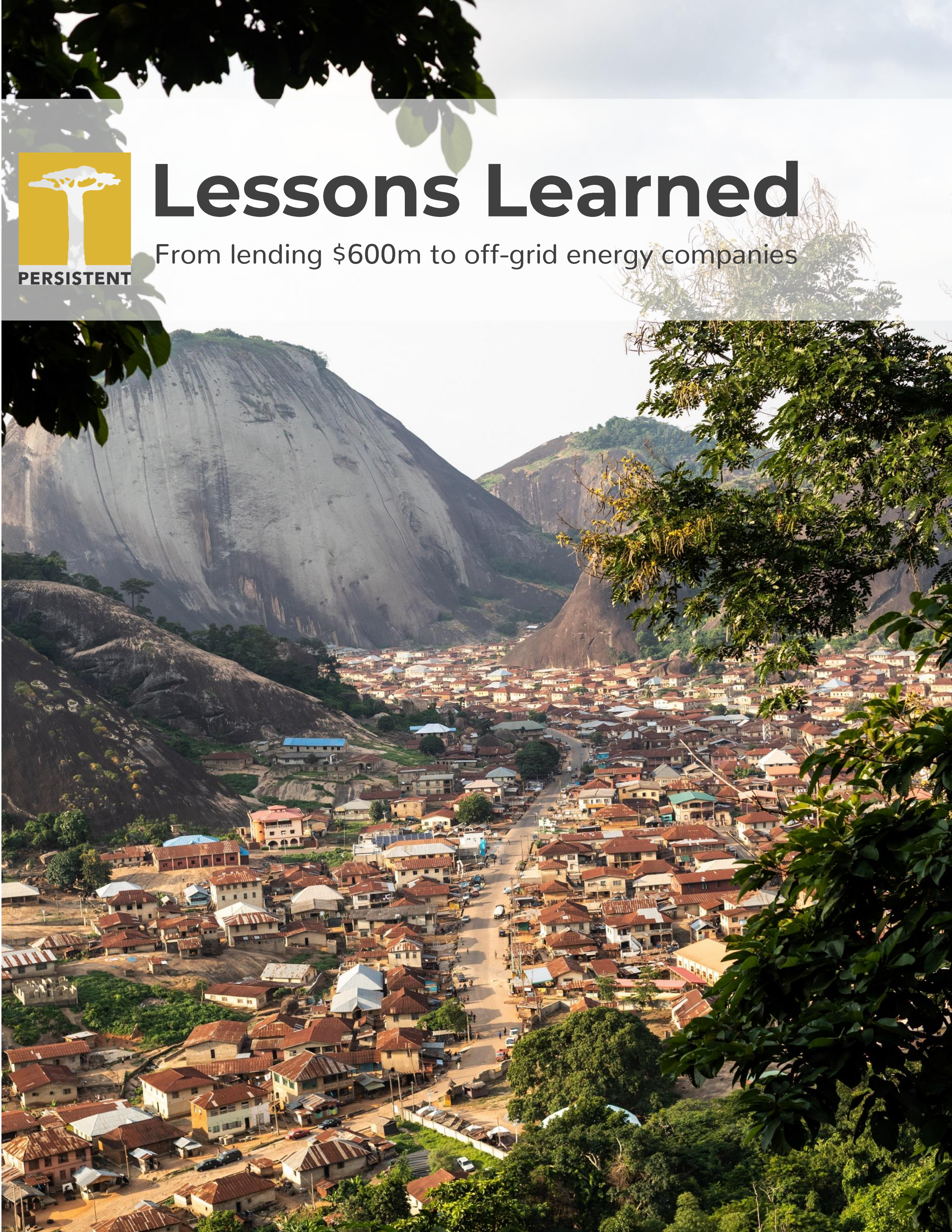
PERSISTENT

Lessons Learned

From lending $600m to off-grid energy companies



Lessons Learned from Lending $600M

Lessons Learned: Panel Discussion

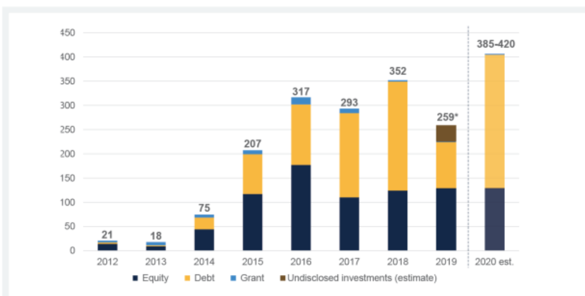
At the GOGLA Forum in Nairobi six active lenders to PAYG companies - SIMA, SunFunder, responsAbility, OIKO credit, Lendahand and CDC Group - shared their lessons learned and provided an outlook on the sector. Below is a structured summary and reflection on the key points that came up.

Background

The sector has borrowed just about $600m over the last 4 years to reach around 18m households with TIER 1 (or more) level access. We note that on the one hand much of that debt - as far as it is still outstanding - will need to be refinanced and, given that we are talking about an addressable market of 100m households, we need to grow that number at least 5x over the next 4 years. So we thought it would make sense to take stock and highlight some lessons learned and provide an outlook to all stakeholders.

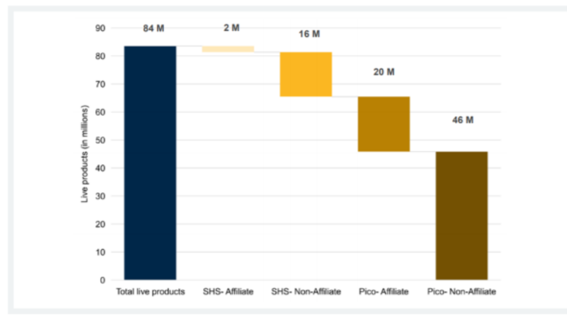
The 2020 Global Off-Grid Solar Market Trends Report shows that about 600m has been lent to off-grid energy companies over the last 4 years...

Figure 10: Capital Invested by Type (2012–2019, 2020 Est.)



...in order to reach about 18m households with TIER 1+ access.

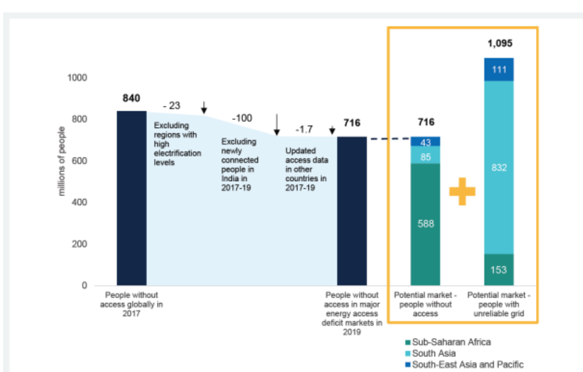
Figure 3: Global Estimate of Live Products by Product Segment (as of H1 2019)

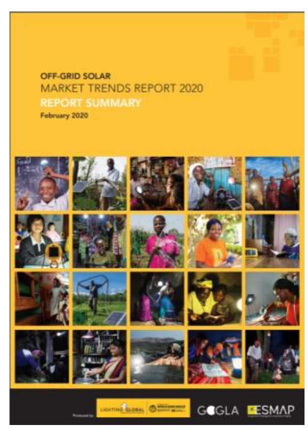


Source: Vivid Economics & Open Capital Advisors analysis of GOGLA live product data and MTF data.

Much growth potential remains. We have reached about ˜18m households with TIER 1+ access and ˜100m households is the considered addressable market.

Figure 7: The Potential Market in Sub-Saharan Africa and Asia-Pacific Consists of 716 Million People Without Electricity Access and More than 1 Billion with an Unreliable Grid





Lesson Learned About the PAYG Sector

Growth takes more time

If there is one main learning that we heard echoed on the panel - and really throughout the conference - it was this: Initial growth expectations were too high. Growth has taken longer than expected, reaching profitability has taken longer and more cash was 'burned' in the process.

Lessons Learned for Lenders

Structure matters

In 2019 we have seen in practice that lenders who had ring fenced assets have been in a good position and most likely better position than senior secured lenders to the holding company. While there are high costs associated with setting up an SPV structure, these costs have - at least in the Mobisol case (and a near identical situation that was avoided) - proven to be a sound investment[1].

Structure matters because back-up servicing could work

Stefan Issler of responsAbility, explained that, as they were presented with the possibility of Mobisol's insolvency, the firm was able to engage two different companies as potential back-up service providers that offered to collect out the receivables for the lenders to the SPV. While he expected some disruption and some loss due to such a transition from the originator of the assets to the back-up servicer, it would have been manageable in his view.

There is more supply of debt than there is capacity to absorb such debt

Mathilde Girard of CDC Group expressed the point that was echoed by several other of the panelists: "There aren't that many companies at a scale that they can easily absorb USD 10m in debt or more." James Todd of Oikocredit expressed the view that "There may be too much uncritical funding in the sector. We position ourselves as financing the missing middle of the market and have certainly seen pressure at both ends from concessionary funders and DFIs broadening their scope and risk appetite." And, we would add, the fact that the six large lenders on stage that all expressed their interest and desire to invest more in the near future is an indication of very strong supply indeed.

A renewed focus on asset quality is needed

All panelists expressed the view that "credit quality comes before credit quantity" and that the sector as a whole needs to focus on the issue of portfolio quality. Brian McConnell pointed out that more "specialization on distribution, customer service and end-customer finance" maybe needed to achieve sustainable collection rates. Avi Jacobson reiterated that it is important to monitor and report in a transparent way on the quality of a portfolio.

Just because it is structured as debt, doesn't mean it's not equity risk

Tobias Grinwis of Lendahand pointed out that in his view some lenders may have in essence taken equity risk for debt like returns. Other lenders echoed this in their analysis and pointed out that if the path to profitability is longer than expected, equity is quickly burned through. And, once the equity cushion is reduced debt carries all the risk of equity.

Key Recommendations

Borrow more in local currency

While Emerging Market currencies have seen a period of stability it is important to remember that this can change quickly. A USD or EUR denominated loan at 6-8% may seem much more

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[1] Persistent had structured the first solar asset securitization for BBOXX in 2015. Since then we have argued that the complexity of a securitization is a worthwhile investment [research paper].

attractive than the equivalent loan denominated in a local currency at 10-20% interest. Yet, with revenues and net cash flows denominated in local currency, a devaluation of 5-10% can quickly produce a significant mismatch. It may be worth the cost especially after a long period of stability.

Coordinate your investors

As companies grow they will end up with senior lenders, working capital providers, mezzanine lenders and equity investors. It is important to manage the various investors interests and expectations and to put the necessary legal structures in place to be better prepared if things don't go according to plan. Put intercreditor agreements in place and keep them up to date.

Outlook

The outlook the lenders presented was cautiously optimistic. They expressed that they are now seeing some of the largest companies in the sector being profitable and that these companies should borrow more in order to grow further. The message the lenders had was essentially this: We are committed to the sector and we believe in the business model. We are here and ready to lend. But, we have also learned our lessons, asset quality, structure and the right scale are not optional, but required.

Persistent Analysis and Opinion

While Persistent is a venture builder that works with PAYG businesses from the earliest stages - we have seen our larger companies raise many millions in debt over the years. As finance manager or CFO we have raised more than $40m directly for our portfolio companies. Persistent has also structured the first solar asset securitization for BBOXX and OIKO credit in 2016.

Leverage is high and equity is in short supply

We see a mismatch between debt and equity in the market today. As growth has taken longer, it has not only 'burned' through equity positions on companies' balance sheets, it has also disappointed many of the institutional growth equity investors' expectations. This is a problem as on the one hand companies need to replenish the equity cushion on their balance sheet with equity or equity like debt (mezzanine debt) and on the other hand the investors of equity capital are counting their losses and are accordingly in very short supply. There was no equivalent equity panel at the conference and we didn't meet a single institution that was excited about putting growth equity to work.

While collection rates need to improve, credit worthiness may not be the (only) issue

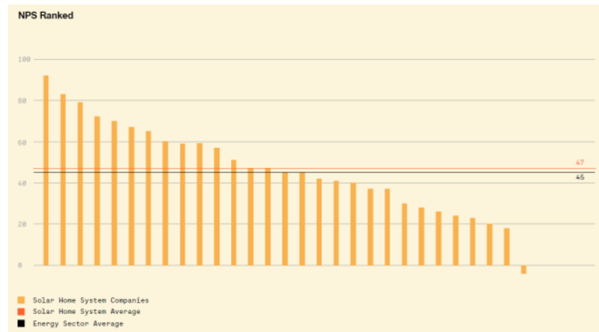
Collection rates remain a problem throughout the sector. But is it credit quality? Is it the inability of borrowers to pay or the fact that loans are pushed on people that can not afford it? We are not so sure. It could be that collection rates are in part driven by the way PAYG firms operate. When we read in the excellent report by 60 decibels that 34% of customers surveyed reported 'issues' with their service and that only 36% of those issues are being resolved on average we are wondering if these customers may stop or delay payments not because they couldn't pay, but because they don't receive the service they expect. We also note that the net promoter score (NPS)[2] of the industry is in green territory, but are equally worried if we see the

[2]Net Promoter Score® (NPS) The NPS is used the world over to gauge customer satisfaction and loyalty. NPS is measured through asking customers to rate their likelihood to recommend a product or service to friends or family

wide distribution around that average number. Some firms leave more customers unsatisfied than satisfied. It seems obvious to us that an unsatisfied customer is less likely to pay (on time) than a satisfied customer.

Net promoter score for the industry is OK at 45.

But we find the wide distribution rather worrisome.



In other words, it could very well be that better hardware and software combined with better customer service may do more to improve collection rates than sophisticated credit analysis. In this context, we also want to point to the excellent analysis Jacob Winiecki put on Medium: How to design PAYGo operational models to improve repayment.

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on a scale of 0 to 10, where 0 is least likely and 10 is most likely. The NPS is the percent of customers rating 9 or 10 out of 10 ('Promoters') minus the percent of customers rating 0 to 6 out of 10 ('Detractors'). Those rating 7 or 8 are 'Passives'. The score can be anything from -100 to 100.