Securitization: Unnecessary Complexity Or Key to Financing the DESCO Sector?

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Contents

Introduction ......................................................................................................................... 4
Measuring the Value of Securitization ................................................................................. 5
Basics of DESCO Finance ................................................................................................. 6
  DESCos are Asset Heavy ................................................................................................. 7
What is a Securitization and How Does it Work? ............................................................... 8
  Securitization Defined ...................................................................................................... 8
  (a) Pooling Assets ............................................................................................................ 8
  (b) Selling the Assets ......................................................................................................... 8
  (c) Creating Asset Backed Notes .................................................................................... 10
  Selling the Asset Backed Notes ...................................................................................... 12
  Model Term Sheet ........................................................................................................... 12
A Securitization Pricing Model .......................................................................................... 12
  Step 1: Estimate expected cash flows ............................................................................... 12
  Step 2: Calculate present value of expected cash flows .................................................. 13
  Step 3: Determine the notional value (principal amount) of the notes .............................. 13
  Step 4: Structure the payments of the notes bought by investors ..................................... 13
  Step 5: Negotiate interest rate on notes .......................................................................... 14
  Step 6: Use the waterfall model to simulate return/loss scenarios based on deviations from the expected payment plan .................................................................................. 15
  Step 7: Simulate performance of notes given deviations of realized vs. expected cash flow .......................................................................................................................... 15
Securitization 2.0: Beyond the Basic Structure ................................................................. 16
  Tranching ......................................................................................................................... 16
  Revolving Securitization Facilities .................................................................................. 17
  Warehouse Financing .................................................................................................... 19
  Single or Multiple Special Purpose Vehicles? ............................................................... 20
Other Structured Finance Options for DESCOs ............................................................... 20
  Yieldcos ......................................................................................................................... 21
  Revenue Notes and Equipment Trust Structures .......................................................... 22
Advantages and Disadvantages of Securitization ........................................................... 22
  Disadvantages .............................................................................................................. 22
  Advantages .................................................................................................................. 23
Conclusion: Securitization Will Be the Cornerstone of DESCO Sector Finance..... 26
  Our Recommendation .................................................................................................... 26
  Beyond DESCOs: The potential for securitization of small consumer obligations ............ 26
Annex A Model Term Sheet
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The Authors also thank BBOXX Ltd. and Oikocredit International for their entrepreneurship and hard work in bringing BBOXX DEARs 2015-1 to fruition.
Introduction

In December 2015 the first asset securitization was completed by a distributed energy services company (DESCO). A special purpose vehicle subsidiary of BBOXX Ltd. issued asset backed notes – named Distributed Energy Asset Receivables, or DEARs – secured by approximately 2,500 customer installment sales contracts. The contracts represented the unpaid portion of the purchase price of BBOXX’s solar home systems sold to customers living without electricity in Kenya. Oikocredit International, a global impact investor, purchased the Kenyan shilling denominated notes for KES 52,000,000.1

As our confidence grew in 2014 that the DESCO sector would be a game-changing financing mechanism for off grid energy access, we began to ponder how capital would be mobilized to provide the enormous amount of debt financing that would be needed to support the sector’s development. We began to think through the structure, rationale and feasibility of securitization as the cornerstone financial instrument for growth of the sector. We approached Oikocredit and BBOXX with a proposal to launch the first securitization late that year. Oikocredit was interested in the financing as a way to begin investing in DESCOs. They were also interested in pioneering a financial instrument that would support broader industry wide growth of DESCOs. BBOXX was entrepreneurial enough to invest the time, skill and energy to launch the first transaction, even though they knew that it alone would not be cost effective.

The DESCO sector is booming and the leading companies are entering a stage of rapid growth, with voracious needs for capital. As we approach the anniversary of the sector’s first securitization, now is a good time assess whether our thesis - that securitization will be the cornerstone of financing the DESCO sector - remains sound.

This article will make that assessment. First, we will describe how securitization can work in the DESCO sector, providing basic structure, terms and pricing theory. We will also discuss possible variations on the basic structure, referring to related financing structures used in Western markets. The article will then describe the advantages and disadvantages of securitization and how securitization can anchor any growing DESCO’s corporate finance strategy.

Although the BBOXX DEARs 2015-1 transaction has not opened a floodgate of securitizations yet, securitization is likely to become a key financing tool for DESCOs in the years ahead. This is because it can provide a DESCO with:

- Access to new debt investors that would not otherwise finance a DESCO;
- Access to local currency debt that matches the currency of the DESCO’s revenues; and
- A diversification strategy in its debt portfolio, easing its reliance on one group or type of lender.

This assessment was recently shared in a piece by Bloomberg New Energy Finance.2

Size matters. The first securitization was small – barely $500,000 in Kenyan Shillings. In Western markets a $100 million securitization would be considered small and perhaps $50 million the

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minimum. We think DESCO securitizations can attract investors with offerings as small at $5 million. But economies of scale won’t be realized unless a company raises much more debt this way.

Although it is expensive to start a securitization program and interest rates paid to asset backed note investors are high today, as the market develops and investors in important African local currency markets become comfortable with this asset class, costs and rates will come down. African institutional investors are seeking investment grade, medium term corporate debt to build balanced portfolios. DESCO asset backed securities are the perfect product for them. But unless several DESCOs use securitization as part of their comprehensive financing strategies, demand for these securities will never develop.

Consequently, every DESCO that is building to scale should seriously consider establishing a securitization program. A securitization will bring new debt investors to the company and will provide a natural hedge by matching the currency of a DESCO’s revenues to its debts. Granted there is an upfront investment in establishing a program, but that cost is recovered over time. Moreover, as additional investors enter the securitization market, and capital markets like Kenya’s develop, access to capital and costs of borrowing will drop, making securitization very attractive.

Measuring the Value of Securitization

How do we measure whether securitization is a promising financing mechanism that is worth the cost and effort of DESCOs to develop?

There are three important criteria to consider:

- Can securitization give DESCOs access to capital that would not be available through conventional borrowing?

There is currently insufficient debt capital available to finance the rapidly growing DESCO sector. Local commercial lenders have been slow to provide conventional cash flow lending. Impact and other international debt providers are struggling to meet demand, even as they and their borrowers face the currency risk inherent in dollar based loans. Will securitization unlock a new class or classes of debt investors and thereby bring more capital into the market? Moreover, if the day comes (and we hope it will) when commercial banks will lend DESCOs conventional working capital loans, will the diversification of a securitization program strengthen a DESCO’s capital structure?

- Can securitization provide DESCOs with access to less expensive capital than conventional term or working capital borrowing?

“Less expensive capital” cannot be measured only by interest rates. A borrowing DESCO must also measure the transaction costs of structuring, closing and maintaining a securitization program compared to conventional financing. No company should embark on a securitization program unless it intends to issue multiple series of asset backed notes as it grows, amortizing the cost of creating the complex structure over multiple financings. Moreover, one must measure the “cost of collateral”, i.e. how much collateral is required to be dedicated to a securitization financing compared to the collateral required for a comparable conventional financing.

- Can securitization provide DESCOs the ability to borrow in the same currency as their cash flows?

DESCOs create assets consisting of customer contracts representing the purchase price of a solar home system or the leasing cost of energy services. DESCO customers pay in local currencies. Borrowing in dollars to finance customer payments in local currencies subjects a DESCO to significant currency risk: any devaluation of the local currency will correspondingly increase the
cost of repayment of a dollar loan. DESCOS need borrowing sources that are denominated in the same currency as the cash flow they will be generating to service that debt.

Each of the three criteria above is from the perspective of the DESCO-borrower. But there is also an investor-lender perspective to each question:

*Are there investors attracted to the risk profile of asset backed securities that would like to lend to DESCOs but are not lending today?*

*Do the features of a securitization – diversification of assets, separation of assets from originator risk, match funding by currency to eliminate FX risk – make DESCO asset backed securities an attractive investment?*

*Where a DESCO should ask whether securitization is less expensive than a conventional borrowing, an investor’s sensitivity is to the rate of return as compensation for risk. If an asset backed security is a lower risk asset than a loan to a DESCO, then the investor will happily accept a lower rate. While this rate may still seem high compared to mature-market borrowing, as we will see below, development of a DESCO securitization market should drive these rates down over time.*

**Basics of DESCO Finance**

Before discussing a securitization, it is useful to describe what a DESCO needs capital for. ³

At its core, a DESCO acquires inventory (solar home systems, appliances, other products) and sells or leases it to customers in return for periodic payments. A DESCO may need some property, plant and equipment for its operations: trucks, warehouses, office space, tools to repair products, etc., but these costs are relatively small. Most of the capital a DESCO uses is to

- Purchase inventory held for sale or lease to customers, and
- Finance the installment sale of the DESCO’s products to its customers or, finance the leasing of the DESCO’s energy services offering to its customers.

The capital needed to finance inventory held for sale or lease is working capital – it finances short term assets that will be sold within 6-12 months. Working capital “revolves” – is used, recovered and reused - as inventory is bought, sold and new inventory is bought. Most inventory is purchased in US dollars. Because DESCO inventory is sold relatively fast, the inventory cost is recovered in a short period of time. As a result, a DESCO faces only a short term currency risk financing inventory in dollars even though it sells or leases its products and services in local currencies.

In contrast, the capital to finance DESCO customers must be longer term. In the case of an installment sale to a customer, the DESCO needs to finance the purchase price of the product over the term of the customer contract (or at least until the DESCO recovers its cost of goods sold). In the case of a lease of an energy product to customers, a DESCO must finance the cost of the product until recovered by customer lease payments. In either case, this revenue stream is in local currency, making it imprudent to finance these assets in dollars without adequate protection against devaluation of the local currency against the US dollar.

The challenge in financing a DESCO is financing the customer receivable. Financing inventory should be straightforward, but only if the inventory lender knows that the DESCO can repay the

³ A more detailed discussion of the basics of DESCO finance can be found at http://www.persistentnrg.com/#!Financing-the-DESCO-sector/mhqg1/578cc6030cf256540e9d13cb
inventory loan with a financing of its customer receivables once it sells or leases the product to the customer.

Financing customer receivables can be done using securitization.

DESCOs are Asset Heavy

DESCOs have been financed in a conventional venture capture manner. Companies have been launched with seed capital from “angel” investors and, if successful, have raised institutional venture equity.

Unlike technology-based startups, however, DESCOs are “asset heavy” businesses. Financing hundreds of thousands of customers’ purchases or rentals of solar home systems and appliances requires substantial capital. It is not practical or desirable to raise all this capital as equity. Moreover, the revenue stream from customer purchases and rentals is significant and predictable, making them ideally suited for financing by borrowing.

If current rates of growth in the DESCO sector continue, we project that significant borrowing will be required across the DESCO sector. By 2020 it may be $2-3 billion.4 While this would be an exciting opportunity for commercial banks and debt financiers in developed markets, there has been little interest from local lenders in most markets in financing DESCOs.

While we expect local commercial lenders to become comfortable lending to DESCOs over the next several years, we also believe that local term debt investors – pension funds, insurance companies and asset managers – can also be attracted to the sector.

4 See http://www.persistentnrg.com/#/Financing-the-DESCO-sector/mhgs1/578cc6030cf256540e9d13cb
**What is a Securitization and How Does it Work?**

**Securitization Defined**

Securitization is a process whereby a company pools a group of its assets and then sells those assets, or the payment stream associated with those assets, in the form of a security.

A basic securitization structure for a DESCO would look like this:

*Figure 1 – Basic Structure of a Securitization*

Let’s unpack the definition and the diagram.

(a) Pooling Assets

The key to a successful securitization is to select a group of homogenous assets that generates regular cash flow. This could be mortgages on homes,\(^5\) consumer loans for goods such as cars or credit card debt,\(^6\) or corporate debt obligations.\(^7\) A group of assets must have a predictable payment stream to be eligible for securitization – in other words, there must be predictability, within an acceptable margin of error, that the contracts will pay as and when due.\(^8\)

(b) Selling the Assets

*The Special Purpose Vehicle*

One of the complexities of a securitization is the need to isolate the pool of assets in a manner that is suitable to create a security attractive to investors. This is typically accomplished by transferring the assets to a special purpose vehicle, or SPV. The key in transferring the target assets to an SPV is to legally separate them from the DESCO and its other affiliates. Only by achieving a legal

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\(^5\) Mortgage-backed securities.

\(^6\) Asset backed securities.

\(^7\) Often referred to as Collateralized Loan Obligations (CLOs) or Collateralized Debt Obligations (CDOs).

\(^8\) As we will see below, overcollateralization of the asset pool is used to cover the failure of assets to pay when due.
separation can investors in asset backed notes have assurance that future financial troubles of the
DESCO will not impair the investor’s ability to collect payment on the securitized assets to repay the
debt.

How – and how successfully – an asset pool can be separated from the originating DESCO (usually
called the “originator”) will depend on the business structure of the DESCO (nature of its contracts,
how it books and collects payments, etc.) and the ability to “service” the assets in the event that the
originating DESCO ceases to be the servicer of those assets.

Business Structure of the DESCO. It is essential to be able to isolate the pool of assets to be
transferred to the SPV. This means segregating the assets within the DESCO’s accounting and
operating systems and being able to segregate the payment stream from those assets so that
they flow into the SPV with no or a minimum amount of interface with the originating DESCO. Ideally customers will use mobile money to pay their obligations and those proceeds will flow
directly from the mobile money provider into the SPV’s bank account without involvement of
the DESCO. This however may not be practical. While this is not fatal to the securitization, it
affects the level of risk associated with the asset backed securities being issued (i.e., if the cash
flow is successfully separated, the securities will have a higher credit quality).

“Servicing” Securitized Assets. Since an SPV has no operations or employees, it must contract
with another party to collect customer payments and perform any obligations it has to
customers under the contracts. In the DESCO context, this servicer must monitor payments,
take action on defaulting customers, and provide customer maintenance, warranty and related
services. In this early stage of the DESCO sector, only the DESCO that originated the customer
sale is capable of doing all of these things. This was also the case fifty years ago when the first
mortgage-backed securities were issued.9 If a DESCO securitization market develops, we would
expect standard protocols to be developed to enable third party servicers to manage
securitized asset pools. And we would expect a class of third party servicers to establish itself
as capable of providing backup servicing.

There are variations on how to create an SPV and transfer the asset pool to the SPV in each of the
African countries we have studied as markets for securitization. In Kenya, where the BBOXX DEARs
2015-1 transaction was done, the ideal SPV vehicle is a limited liability partnership, or LLP. An LLP
is a partnership for Kenyan tax purposes. As a result, any profits earned by the LLP are taxed to its
partners. This means that, unlike dividends paid by a corporation, any distributions to the partners
by the LLP are not taxed when distributed (i.e., each partner of the LLP has already reported and
paid any tax required on its share of the LLP’s profits). This allows the originating DESCO to own
the SPV and consolidate the SPV with the DESCO for tax purposes and to freely transfer excess cash
from the SPV as part of the securitization financing process.

Transferring the Asset Pool to the SPV

Transferring an asset pool to the SPV would seem simple: the originator sells assets to the SPV and
takes back the proceeds of the securitization financing as purchase price.

This legal transfer of title to assets from the originator to the SPV is effective in most countries to
vest in the SPV all the legal rights to the assets sold. Although there are variations from country to
country, the SPV’s rights in the pooled assets are generally very strong and adequate to assure

9 As you will see in the attached model term sheet, the DEARs structure provides for a successor servicer to assume the
DESCO’s servicer duties, with full right of access to the DESCO originator’s systems to manage the SPV’s customers in the
securitized asset pool.
investors in the SPV’s asset backed notes that they will have first claim on the revenue stream from the pool of assets.

In the African countries we have analyzed for securitizations, the difficulty in conveying assets from the originator to the SPV is the value added tax, or VAT. Most countries treat a purchase and sale of assets as a transaction that is subject VAT, even if made between affiliates. The solution to avoiding VAT varies from country to country. In Kenya, the assignment of receivables as collateral for debt is exempt from VAT. While this will not enable the SPV to acquire full legal title to the originator’s customer contracts or the underlying solar assets financed, it would allow the SPV to acquire most of the legal rights to the payment stream (i.e., the right to receive all payments under the customer contract). A better solution in Kenya takes full advantage of the LLP structure: the originator can contribute the asset pool to the SPV as a contribution of capital, assigning all its legal right, title and interest to the SPV. When the assets are securitized and sold, the SPV can distribute the proceeds to the originator as a return of capital without any VAT or dividend taxes.

Protecting the SPV’s Investors from Originating DESCO Credit Risk

Separating the SPV from the originating DESCO to protect the investor’s rights of buyers in the SPV’s pool of customer contracts requires three basic things:

- **Limited Powers.** The chartering document of the SPV will limit the corporate functions that the SPV has legal authority to engage in. As you will see from the sample term sheet attached, this is typically limited to buying the assets to be pooled, financing them and carrying on all activities incidental thereto.

- **Formalities.** Following legal formalities is intended to buttress the legal separateness of the SPV. If its formalities – separate board, separate books and records, formal proceedings – are not respected, the SPV may be treated as a part of the originating DESCO. If this were to happen, the originator (or its creditors) may claim that the SPV’s assets belong to the originator and investors in asset backed notes are merely creditors of the originator. This would compromise their status as the sole creditors with rights in the asset pool.

- **Blocking Stake.** It is also important to ensure that the SPV is not operated in a way disadvantageous to asset backed noteholders. The most common threat would be that a DESCO owner of the SPV, facing financial trouble, would seek access to the cash flow from the SPV’s asset pool. This may be done by requiring the SPV to distribute assets to the DESCO owner, or by taking corporate action to consolidate the SPV with its parent, as in a merger, under insolvency law or by other means. To eliminate this risk the SPV would typically have an independent minority owner that has a consenting vote to any major action such as a merger, distributions or commencement of insolvency proceedings. In DEARs 2015-1 securitization, Persistent Energy Capital holds a 1% stake in the SPV to serve this function.

(c) Creating Asset Backed Notes

Once the pool of customer contracts has been transferred to the SPV, the SPV is in a position to issue debt securities supported by those assets. These securities are commonly referred to as “asset backed notes”. A typical securitization will establish the asset backed note structure in the following way:

**Designation of Trustee, Paying Agent, Administrative Agent**

Where multiple investors purchase asset backed notes, an agent must be hired to collect cash, hold collateral and distribute periodic debt service payments to noteholders. Although there is little
corporate trust activity in the markets we have examined\textsuperscript{10}, we would expect to develop corporate trustees that would perform these functions as the securitization market develops.

\textit{Pledge of Asset Pool}

To secure the asset backed notes, the asset pool of customer contracts and all rights associated with them will be assigned and pledged to the Trustee as collateral security for the benefit of the noteholders.

\textit{Isolation of Cash Flow Proceeds of the Asset Pool}

The SPV would create dedicated deposit accounts into which all collections from its assets will flow and be distributed. Other than the “General Account” described below, all of these deposit accounts would be under the complete control of the Trustee for the benefit of the noteholders, blocking the SPV and originating DESCO from any access to these accounts.

\textbf{Collection Account:} A “Collection Account” would be the central receiving account for payments on the asset pool. All receipts by the SPV would flow through this account.\textsuperscript{11}

\textbf{Payment Account:} A “Payment Account” is established to control the disbursement of all payments related to the asset backed notes. This includes not only debt service on the notes, but payments of taxes\textsuperscript{12}, servicer fees, costs of collection and other fees and costs relating to the securitization.

\textbf{Reserve Account:} The “Reserve Account” is typically established to hold reserves of cash for the noteholders. An agreed minimum cash reserve is established to provide liquidity to the noteholders. For example, the asset pool customers may have been slow to pay amounts due during a payment period, leaving the Trustee short on cash to pay quarterly debt service. In this case the Trustee could draw on the Reserve Account to make up any shortfall in payments to noteholders. The Reserve Account might also serve as additional collateral, such as in the case where the asset pool pays faster than the amortization schedule on the notes and must be held until payment is due.\textsuperscript{13}

\textbf{General Account.} The “General Account” is the SPV’s unrestricted deposit account. Funds in this account are not part of the noteholders’ asset pool. The SPV can freely spend these funds or distribute them to its parent company, subject to country laws and standards of prudence.

\textit{Funds Flow Waterfall}

Payments received from the asset pool sold to the SPV and pledged to secure asset backed notes are distributed in what is commonly referred to as the “waterfall”. In a typical securitization the waterfall payments would be made in the following order:

\textit{First,} to pay taxes owing by the SPV relating to the contract pool;

\textit{Second,} to pay Trustee fees and expenses;

\textsuperscript{10} Corporate trustees are required for any public corporate debt issuance. The absence of corporate trustees in the markets is likely because there is little public issuance of corporate debt.

\textsuperscript{11} As we discuss further below, if an SPV has multiple tranches of asset backed notes outstanding, the Collection Account would receive all payments for all pools of assets. The Trustee would then allocate those collections based on which noteholders owned the assets for which payment was received.

\textsuperscript{12} Sometimes a dedicated tax account is created to segregate payments for taxes.

\textsuperscript{13} Or, if there are no prepayment penalties on the notes, the excess proceeds could be applied to prepay the notes.
Third, to pay servicing fees to the servicer;  
Fourth, to pay interest due on the asset backed notes;  
Fifth, to the pay defaulted interest;  
Sixth, to pay due and overdue principal;  
Seventh, to the Reserve Account to the extent needed to comply with liquidity and collateral covenants; and  
Last, to the General Account of the SPV.

Selling the Asset Backed Notes

The Trustee, the SPV and the note purchasers enter into a note purchase agreement providing for issuance of the asset backed notes. The Trustee, through the trust indenture and collateral documents, holds all rights in asset pool and Collection, Payment and Reserve Accounts, as trustee for the benefit of the asset backed note holders.

Model Term Sheet

Annex A of this article contains a model term sheet for a basic securitization.

A Securitization Pricing Model

How does a DESCO pool customer contracts and price an asset backed note issuance? Here is a simple multi step model to get started.

Step 1: Estimate expected cash flows

Each asset consists of expected cash flows associated with a customer or a system. This is the case if the DESCO offers a fixed installment plan, i.e. 24 monthly payments of $7, or if the DESCO offers a true pay as you go plan, whereby the customer can unlock a system with irregular payments. In case of a pay as you go plan, the payments are not fixed and the company needs to estimate the expected payment amount and period.

- A company that offers a fixed payment plan to its customers is unlikely to strictly enforce payment defaults. Rather it is likely to build grace periods into every contract.  
- A company that repossesses systems from defaulting customers for reuse will have to develop an expectation of the number and timing of the cash flows they can generate with such a reused system.  
- A company that leases its system would expect that customers sometimes miss payments but continue to pay afterwards, until the point when the company ends the lease and recovers the system.  
- A company that offers true pay-as-you-go financing would have to develop an expectation of how much revenue it will collect from each customer on average.

In each model, the company develops an expectation of the size and timing of cash flows. Investors should carefully review the assumptions for the expected cash flows behind any asset backed note:

- If a company offers a fixed payment plan (i.e., an installment sale contract), total expected payments will not exceed total contractual payments and, because of likely occasional
defaults, are likely to extend beyond the contractual payment schedule. It would be conservative to assume that total expected payments are lower than contractually agreed payments and will occur over a longer time frame.

- Of course, expected cash flows will be supported by the company's experience. Although old customers’ payment practices won't predict new customers’ payment practices, the company’s track record in managing its customer contracts over long periods and across broad geographical areas will give investors (and credit rating agencies rating asset backed notes) greater confidence in the company's expected cash flows from a given pool of contracts.

This article presents a simplified model for the pricing of a securitization. In reality, a model which estimates the deviation of future payments relative to contractual payment schedules can become quite complex.

Such models will also depend on a company's strategy when it comes to repossession/reuse of systems from customers who have defaulted. The complexity in this market versus conventional credit markets is that DESCO customer contracts usually assume a certain level of payment default and give customers flexibility in making payments.

Step 2: Calculate present value of expected cash flows

Once the expected cash flows have been determined (timing and size) we can calculate the present value (PV) of the asset pool by discounting each cash flow. One can choose to discount the cash flows with the "risk free" benchmark interest rate (for example 15%). This risk-free rate is the interest rate at which the government can borrow money. Or, one can use a discount factor comprised of the "risk free" rate plus a risk premium reflecting the risk of nonpayment on the asset pool (for example 15% plus 5%). They key is that the present value of the receivable pool is likely to be overestimated if we use the risk-free rate for discounting. Accordingly, the advance rate, or overcollateralization (the proportion of cash advanced against the value of the receivable pool) should be lower in cases where the risk free rate is used for discounting.

Step 3: Determine the notional value (principal amount) of the notes

If the present value of the expected cash flows from the asset pool is 100 the note should have a notional value (principal amount) equal or less than 100. The difference is overcollateralization of the notes by the asset pool, giving investors better than 1:1 asset coverage. The discount of the notional value to the asset pool value is a function of the credit quality of the pool and the interest rates born by the notes that are backed by the pool. The discount is determined by supply and demand (i.e., demand by note investors at a given level of collateralization).

Step 4: Structure the payments of the notes bought by investors

Investors buy a note that is paid with the cash flows associated with the asset pool. The timing and size of the payments that investors receive should therefore be as similar as possible to the timing and size of the aggregated payments in the cash flow stream. Where there are mismatches, more cash reserves need to be maintained, increasing the cost of the program for the originating DESCO.
Step 5: Negotiate interest rate on notes

Investors in the notes take a risk that is higher than the risk of a benchmark security (i.e., a government bond of the same maturity). Accordingly, they should receive a risk premium return of the benchmark security’s rate that compensates them for the risk of not receiving a payment under the note. The level of risk and right interest rate to compensate for that risk could be estimated from a bottom up analysis of the probabilities associated with each cash flow or top down with a scenario analysis. The bottom up analysis of each cash flow’s probability will be very complex and depend on the ability to correctly predict such probabilities. The top down analysis will be simpler and show the performance of the note in certain scenarios such as “[80%] of expected cash flows are collected” (see also Step 7 below). We recommend showing the performance of the notes in well-defined scenarios. The interest rate on the notes will then ultimately be set by supply and demand (i.e., demand by note investors at a given rate).

The following provides a simple illustration of the steps in a theoretical issuance of 6 month asset backed notes:

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Contractual agreed cash flow period</th>
<th>Month/quarter/year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sum of contractual agreed cash flows</td>
<td>30.00 LCY</td>
</tr>
<tr>
<td></td>
<td>Expected cash flow period</td>
<td>Estimate</td>
</tr>
<tr>
<td></td>
<td>Sum of cash flows</td>
<td>28.50</td>
</tr>
<tr>
<td></td>
<td>In percent of contractual total</td>
<td>95%</td>
</tr>
</tbody>
</table>

| Step 2 | Interest Rate period | 1.00% | 1% | 1% | 1% | 1% | 1% | Market Interest rate over period |
|--------|----------------------|-------|----|----|----|----|----------------------------------|
|        | DF cash flow         | 99%   | 98%| 97%| 96%| 95%| 94%                |
|        | PV cash flow         | 5.64  | 5.59| 5.53| 5.48| 5.42| -                  |
|        | PV sum of cash flows | 27.86 |     |     |     |     |                    |

<table>
<thead>
<tr>
<th>Step 3</th>
<th>Advance rate</th>
<th>70% of PV</th>
<th>Input</th>
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<td>Step 4</td>
<td>Note Notional</td>
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<td>LCY</td>
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<tr>
<td></td>
<td>Note duration</td>
<td>6 months</td>
<td>Input</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 5</th>
<th>Note interest rate</th>
<th>2.50%</th>
<th>Input</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Principal payment, period</td>
<td>3.23</td>
<td>LCY</td>
</tr>
<tr>
<td></td>
<td>Interest payment, period</td>
<td>0.48</td>
<td>LCY</td>
</tr>
<tr>
<td></td>
<td>Note cash payment, period</td>
<td>3.71</td>
<td>LCY</td>
</tr>
<tr>
<td></td>
<td>Sum principal payments</td>
<td>19.37</td>
<td>LCY</td>
</tr>
<tr>
<td></td>
<td>Sum total payments</td>
<td>21.09</td>
<td></td>
</tr>
</tbody>
</table>

Note: The interest rates depicted here are per period (i.e. month or quarter) and not per year. A 1% monthly rate is approximately a 12% annual rate.
Step 6: Use the waterfall model to simulate return/loss scenarios based on deviations from the expected payment plan.

Given a defined waterfall, one can simulate the cash flows in various scenarios.

**Step 6 Waterfall**

<table>
<thead>
<tr>
<th>Scheduled Cash flows from asset pool</th>
<th>5.70</th>
<th>5.70</th>
<th>5.70</th>
<th>5.70</th>
<th>5.70</th>
<th>-</th>
<th>as per estimate model input parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default rate vs expectation</td>
<td>-0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Actual received</td>
<td>5.70</td>
<td>5.70</td>
<td>5.70</td>
<td>5.70</td>
<td>5.70</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Taxes</td>
<td>-0.10%</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>-</td>
</tr>
<tr>
<td>Trustee fees</td>
<td>-0.10%</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>-</td>
</tr>
<tr>
<td>Service fees</td>
<td>-0.50%</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>-</td>
</tr>
<tr>
<td>Reserve account initial balance</td>
<td>5.66</td>
<td>7.61</td>
<td>9.63</td>
<td>11.73</td>
<td>13.92</td>
<td>10.20</td>
<td></td>
</tr>
<tr>
<td>Less interest due</td>
<td>(0.48)</td>
<td>(0.41)</td>
<td>(0.33)</td>
<td>(0.25)</td>
<td>(0.17)</td>
<td>(0.09)</td>
<td></td>
</tr>
<tr>
<td>Less principal due</td>
<td>(3.23)</td>
<td>(3.23)</td>
<td>(3.23)</td>
<td>(3.23)</td>
<td>(3.23)</td>
<td>(3.23)</td>
<td>(3.31)</td>
</tr>
<tr>
<td>Reserve account after payments</td>
<td>1.95</td>
<td>3.97</td>
<td>6.07</td>
<td>8.26</td>
<td>10.52</td>
<td>6.80</td>
<td></td>
</tr>
<tr>
<td>Past due amount</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Reserve / next period payment</td>
<td>0.5x</td>
<td>1.1x</td>
<td>1.7x</td>
<td>2.4x</td>
<td>3.1x</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Max ratio reserve / debt service</td>
<td>3.0x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment to operator</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.32</td>
<td>6.80</td>
<td></td>
</tr>
<tr>
<td>Adj reserve account balance</td>
<td>1.95</td>
<td>3.97</td>
<td>6.07</td>
<td>8.26</td>
<td>10.20</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Payment to note holder</td>
<td>(19.37)</td>
<td>3.71</td>
<td>3.64</td>
<td>3.56</td>
<td>3.48</td>
<td>3.40</td>
<td>3.40</td>
</tr>
<tr>
<td>Loss of principal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment to issuer</td>
<td>19.37</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.32</td>
<td>6.80</td>
</tr>
</tbody>
</table>

Step 7: Simulate performance of notes given deviations of realized vs. expected cash flow.

In this case we show how realized deviations from expected payments would impact the repayment of note principal and the IRR on such notes.

<table>
<thead>
<tr>
<th>Dev from Expect.</th>
<th>Loss of principal</th>
<th>IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>0%</td>
<td>2.67%</td>
</tr>
<tr>
<td>10%</td>
<td>0%</td>
<td>2.67%</td>
</tr>
<tr>
<td>20%</td>
<td>0%</td>
<td>2.67%</td>
</tr>
<tr>
<td>30%</td>
<td>0%</td>
<td>0.70%</td>
</tr>
<tr>
<td>40%</td>
<td>-12%</td>
<td>-4.23%</td>
</tr>
<tr>
<td>50%</td>
<td>-27%</td>
<td>-9.62%</td>
</tr>
<tr>
<td>60%</td>
<td>-42%</td>
<td>-15.59%</td>
</tr>
</tbody>
</table>
Securitization 2.0: Beyond the Basic Structure

The structure of the first securitization in the DESCO sector described above is a mere bicycle compared to the Tesla-like securitization instruments issued in Western markets. Here are some features of more sophisticated securitizations that the DESCO sector can look forward to developing in the future.

Tranching
Tranching is the practice of issuing layers of notes to finance a single pool of assets.

*Figure 2a – Tranched Securitization Structure*

*Figure 2b – Tranched Securitization Cash Flows*
Let's look at Solar City's August 2015 issuance of $123 million of solar asset backed notes. Unlike BBOXX DEARs 2015-1, Solar City's Solar Asset Backed Notes, Series 2015-1 were of two types: a senior class (Class A) of $103 million of notes and a junior class (Class B) of $20 million of notes. The Class A Notes have a right to payment before the Class B Notes. As a result, the Class A Notes were sold to investors at an interest rate of 4.18% compared to the Class B Notes rate of 5.58%. In other words, in addition to the overcollateralization of the pool of assets in the Series 2015-1 asset pool, the holders of Solar City Class A Notes have $20 million of first loss protection from the Series B Note holders. As a result, Solar City secured an investment grade credit rating of “A” from one of the US rating agencies on the Class A Notes. With an investment grade rating, the Class A Notes were issued at a low interest rate, comparable to other “A” rated corporate debt with similar maturities. The Class B Notes, with a greater first loss risk, were sold at a higher interest rate to investors who were comfortable with a higher payment risk in return for a higher yield.

Securitizations can be issued in multiple tranches, although this would typically be done only for very large debt offerings. For example, US publicly traded private equity fund American Capital Strategies financed a significant portion of its portfolio prior to 2008 by issuing multiple tranche asset backed notes. For example, American Capital's ACAS Business Loan Trust 2007-1 issued $600 million in asset backed notes in five tranches in April 2007. Interest rates on the first four tranches ranged from LIBOR + 0.14% on the most senior tranche to LIBOR + 1.85% on the fourth lowest tranche. The fifth tranche was held by the originator and effectively served as both an equity cushion for the senior tranches and allowed the originator to retain all excess collections on the underlying assets after payment of the obligations to the senior classes.

If the DESCO sector can develop a substantial market for its asset backed notes, tranching will provide companies with flexibility to pursue investors with different risk/return investment objectives. For example, a DESCO’s asset pool may not be attractive to a conservative investor on a single tranche basis but could be made attractive if a less risk-averse investor was willing to take a first loss on a small portion of that pool in return for a higher yield. Finding investors to take riskier junior asset backed notes will enable a DESCO to raise more proceeds from an asset pool because less overcollateralization of the notes will be required. These opportunities could increase capital available to the DESCO sector.

**Revolving Securitization Facilities**

A revolving securitization facility is a note issuance where the asset pool backing the notes changes over the term of the notes. The initial assets in the pool are expected to liquidate (turn into cash payments) before the maturity of the asset backed notes. The SPV issuer is allowed to use “net” cash proceeds from the asset pool – net of payments required to be made to noteholders – to purchase more similar assets from the originator.

Revolving securitizations provide a solution to the potential mismatch between the ideal note maturity for a noteholder and the average life of the assets sold to the SPV to back those notes. For

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14 http://investors.solarcity.com/releasedetail.cfm?releaseid=927624

15 Credit ratings provide investors with an independent evaluation of the likelihood of default on debt instruments. Many investors will (and, in the case of some regulated investors like insurance companies, can) invest only in bonds and notes that have an investment grade rating. See http://www.aaii.com/journal/article/how-credit-ratings-affect-bond-valuations.html.

16 “LIBOR” is the London Interbank Offered Rate, the rate that leading world banks charge each other for interbank loans.

example, if a DESCO’s customer contracts require payment in 24 months but a DESCO would like to arrange a four year note issuance, a revolving pool securitization would fill this gap. Typically, the SPV issuer would have a reinvestment period during the term of the notes – perhaps during the first 24 months for our hypothetical four year asset backed note financing – to purchase new customer contracts. Following the reinvestment period, the asset pool would run off like a static securitization asset pool and pay off the notes.

Revolving securitizations are more complex because of the more open-ended nature of the asset pool. Although the SPV’s purchase of new assets will have to conform to eligibility criteria to assure note investors that their debt is backed by the same kind of assets as the pool is “refreshed”, there is greater risk of nonpayment than with a static pool where the assets are known on the day the notes are issued.
Warehouse Financing

It is also possible to use an SPV to warehouse customer contracts that are being assembled for a securitization pool. A typical warehouse securitization would allow the originator to sell assets to an SPV to hold in a segregated warehouse pool. Once a pool of assets is large enough to support a note issuance, the assets are re-pledged to secure a new series of asset backed notes with a fixed term. The warehouse facility would then be repaid with proceeds from the fixed term asset backed note sale and could be drawn down again to finance new assets being accumulated for the SPV’s next securitization.

Figure 3 – Warehouse Securitization

A warehouse securitization works like a revolving line of credit. Investors in a warehouse securitization would invest on similar terms to a working capital lender: the securitization would have a lending period longer than the holding period for assets in the pool, allowing the originator to utilize the facility like a working capital facility for the term of the financing. When the warehouse asset backed notes mature, a new series of notes could be sold to cover the DESCO’s warehouse financing for a future period.

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18 For example, in a $300 million warehouse securitization by Provident Funding Associates, the assets – mortgage loans originated by Provident - were allowed to remain in the warehouse for up to 60 days. http://www.americanbanker.com/bulletins/-/1006006-1.html

19 See also https://www.moodys.com/research/Moodys-ABS-RMBS-warehousing-gains-popularity-as-EMEA-smaller-originators--PR_3475147WT.mc_id=AM~RmluYW56ZW4ubmV0X1JTQI9SYXRpbmdzX05ld3NfTm9fVHJhbNNSYXRpb25z~20160425_ PR_347514
Single or Multiple Special Purpose Vehicles?

In Western markets it is customary practice to set up separate SPVs for each asset backed note issuance. The SPV is typically a subsidiary of the originator of the assets.20

The relative ease of creating corporations and trusts in places like the United States does not exist in many emerging markets. Trusts may also be used for securitizations but, as noted above, many emerging countries do not have fully developed trust laws. Uncertainty regarding the legal and tax status of trusts makes them currently impractical for DESCO asset securitizations.

Because of the relative difficulty of creating legal entities in most emerging markets, we currently recommend that a DESCO embarking on a securitization program use a single SPV for multiple securitizations. For example, in Kenya, a limited liability partnership like BBOXX DEARs Kenya LLP, the issuer of the BBOXX DEARs 2015-1 notes, could be created. The SPV would acquire (through purchase or capital contribution as discussed earlier) pools of assets and issue multiple series of asset backed notes, each series secured by a separately pledged and segregated pool of assets. Each issuance of notes would have separate Payment and Reserve Accounts to segregate cash proceeds collected from its pool of assets. A single trustee would act as trustee for all series of notes issued. The trustee would thereby be in a position to determine and allocate any disputed payments among different creditors on an impartial basis.

A multipurpose SPV could also hold a warehouse securitization facility. In effect, the SPV could finance the origination and securitization of a DESCO’s assets in an ongoing program, buying new customer contracts as they are originated by the DESCO and financing those contracts through maturity. Effectively, a securitization finance a DESCO's entire pool of customer contracts from origination to repayment.

Other Structured Finance Options for DESCOs

The securitization structure for DESCO finance described above works for DESCOs that follow a sales finance model, i.e., where the customer enters into an installment sales contract or hire purchase agreement and owns the solar assets at the end of a fixed payment period. Many DESCOs, particularly minigrid DESCOs, operate on an energy services model, i.e., selling services. Their customers never purchase the assets. For ease of reference, we will call these “Energy Services DESCOs”.

Because there is no fixed financing contract with the customers of Energy Services DESCOs, there is no asset to sell to an SPV issuer to back notes. The very nature of the relationship between the DESCO and the customer makes the separation of the revenue stream from the DESCO impossible from the standpoint of an investor in asset backed notes.

Not surprising, enterprising financiers in mature capital markets have created other structured finance variants to isolate the value of revenue streams similar to those generated by Energy Services DESCOs. Here we look at these and consider their potential usefulness in our sector.

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20 In the early days of Western securitizations originators would sell assets to independently owned SPVs and seek sale treatment for accounting, legal and tax purposes. This had the effect of accelerating income to the originator selling the assets, which was often desirable for accounting purposes but undesirable for tax purposes. This practice has largely been abandoned, in part because of structuring difficulties beyond the scope of this article and in part because the accounting “gimmick” of accelerating income via securitization became disfavored.
Yieldcos

A Yieldco is a company formed to hold operating assets that produce a predictable cash flow. Yieldcos became popular in the US solar market in the several years. Both SunEdision and NRG formed Yieldcos and sold grid scale solar power projects to them.

Yieldcos have typically offered a class of their equity securities to the public. They periodically distribute dividends to shareholders from the cash flow generated by the Yieldco's operating assets (typically tariffs from the sale of power to utilities). A typical structure looks like this:

![Yieldco Structure Diagram](image)

Source: NREL

The originator of the Yieldco must maintain a more active role in Yieldco’s operation. If the Yieldco’s assets are power plants, the originator would operate them under operation and maintenance contracts. But, like a servicer in a conventional securitization, the originator could be replaced for bankruptcy, nonperformance or other breach of its obligations.\(^{21}\)

The financing of Yieldcos with equity instead of debt reflects the open-ended nature of the cash flow stream in the Yieldco. This open-ended nature is a function of both uncertainty (unlike a debt, there is no maturity) and potential profitability (more than a fixed sum may be paid to shareholders over time).\(^{22}\) A Yieldco used to finance an Energy Services DESCO might use debt or a combination of debt and equity.

An Energy Services DESCO using a Yieldco could potentially access the same pool of investors targeted by DESCOs issuing asset backed notes. An Energy Services DESCO could take a pool of customers and contribute all rights to those customers (i.e., service contracts, ownership of the assets used by those customer, etc.) to a wholly owned Yieldco. The Yieldco would have a higher credit quality than the DESCO because it does not have all the business risk the DESCO bears in

\(^{21}\) See [https://financere.nrel.gov/finance/content/deeper-look-yieldco-structuring](https://financere.nrel.gov/finance/content/deeper-look-yieldco-structuring)

\(^{22}\) There are also certain tax benefits from the structure that benefit equity investors.
expanding the business – it has only the risk of operating the assets already in operation with existing customers. With this higher credit quality the Yieldco could issue medium term notes with a term less than the expected life of the underlying customer relationships and for less than the total expected revenue stream, providing two aspects of overcollateralization. The Energy Services DESCO, as the owner, would retain all the excess revenue not used to service Yieldco notes. Perhaps there would also be investor interest in buying equity in the Yieldco to participate in this residual revenue stream.

Yieldcos are on a bumpy road in the US, in part because of the recent bankruptcy filing of SunEdison, which had previously launched two publicly traded Yieldcos. Eight publicly traded Yieldcos in the US have raised $3.8 billion since 2013. Although the US experience is a cautionary tale, a conservative use of the Yieldco structure would be promising for Energy Services DESCOs.

Revenue Notes and Equipment Trust Structures

Other variations on the securitization structure may work for DESCOs that sell energy services.

*Revenue Notes* refers to selling the revenue stream from an asset or obligation. Revenue notes are typically a financing scheme for governments, particularly to repay construction costs of infrastructure projects such as toll roads. *Equipment Trust* structures involve segregating an operating asset or assets in an SPV and then leasing it to the user. The SPV borrows to purchase the asset or assets. When the loan is repaid title reverts to the user.

Like Yieldcos, revenue note and equipment trust structures provide tools that could be used by DESCOs to design structured finance debt instruments.

Advantages and Disadvantages of Securitization

Even the most basic securitization is more complex than a conventional loan. The added complexity of a securitization must be weighed against its benefits before any DESCO embarks on a program.

Disadvantages

*High Transaction Costs.*

Transaction costs, particularly to create the initial transaction in which a DESCO forms an SPV and securitizes its first pool of assets, can be very high. Costs of creation of the SPV, adjusting accounting systems, software and funds flows to segregate and track assets, and the costs of legal counsel to document and advise on such a complex transaction, are substantial.

*Limited Efficacy of Asset Isolation.*

Key to credit worthy asset backed notes is the successful isolation of the assets from the originating and servicing DESCO. Only noteholders (or their agent or trustee) should be able to collect payments on those assets. Isolating DESCO customer receivables and payments thereon – the primary assets being securitized - is a challenge for several reasons:

1. For all practical purposes the originating DESCO is the only entity that can effectively serve as servicer to collect the SPV's customer contracts and service the customers' systems.

2. Most DESCOs have their own proprietary operating platform (software and systems) to control customer solar home systems, manage payments and provide general operations and customer service. There are only a few operating platforms available for license by multiple DESCOs. The absence of industry-wide software and systems would make it difficult for any replacement servicer to step into the role of the originating DESCO as servicer of the SPV’s portfolio of assets. Under DEARs securitization documentation, the backup servicer has a right to access the servicer’s software and servers if the servicer is removed. This process will no doubt be inefficient if the noteholders take action to remove a servicer.

3. There is no established back-up servicer industry for asset backed securities in Africa. If the DESCO securitization market develops, it is reasonable to expect that a backup servicer industry will develop just as a mortgage servicing industry has developed for mortgage-backed securities in Western markets.

4. Directing customer payments to flow automatically to the SPV (i.e., transmitting mobile money payments directly from telecom into an SPV-owned collection account) can be challenging. Most DESCOs cannot segregate customer’s payments in order that those sold to the SPV automatically flow into a collection account and others flow directly to the DESCO. This means that collections are made into an account of the DESCO that must be swept on a daily or weekly basis into the SPV’s Collection Account. The SPV and noteholders’ interests in this “float” can be legally protected, and the daily or weekly sweep means that the noteholders are only exposed to a day or week of lost collections, but practical abuse by the DESCO remains possible.

*Reporting Complexity*

Transaction complexity leads to reporting complexity: The DESCO must be able to generate reports to noteholders on the performance of multiple asset pools as it develops a full program of financing its customer contracts through securitization. This is more daunting to a young DESCO than it will be as DESCOs mature and develop mature systems to manage their databases.

*Weak Capital Markets*

Africa’s institutional capital markets are very small. South Africa, Nigeria and Kenya have capital markets in varying degrees but there appear to be few institutional buyers of corporate debt in other sub-Saharan African countries.

This is very much a “chicken and egg” problem – supply of investment grade debt must be available to attract institutional investors and investors must be present to make it worth bringing investment grade debt to market. Building a securitization market for DESCO finance may take time in some countries.

*Advantages*

The disadvantages of using securitization are substantial, but they are largely transitory. In contrast, there are substantial advantages for a DESCO to have a securitization program as part of its overall corporate finance strategy.

*Transaction Costs will Decline*

A DESCO that creates a full-fledged securitization program that includes a warehouse financing mechanism and periodic issuances of asset backed notes should recover its upfront transaction costs relatively quickly. How quickly will depend on the volume of debt the DESCO raises. Legal costs will drop significantly as the issuances become routine.
Higher Quality Debt Instrument (Lower Cost of Funds)

There are several features of a securitization structure that make the securitized debt “higher quality” than a conventional loan directly to the DESC0. By “higher quality” we mean that the debt instrument has a lower risk of non-payment.

1. Segregation of Assets. Dedicating assets and cash flows to note investors ensures that the cash from those assets will flow first to repay the note investor.

2. Track Record. As the DESC0 borrows through successive issuances of asset backed notes, demonstrates payment rates and the ability to manage reporting, cash flow, etc., it will develop investor confidence. Higher credit ratings on its notes can be secured and investor demand for its notes should increase.

3. Tranching Enhances Asset Values. The ability of a DESC0 to “slice and dice” its asset pool, issuing tranches of asset backed notes, gives it the ability to build a portfolio of securities with a minimum interest cost.

The virtue of higher quality debt is clear: it means lower interest rates on asset backed notes compared to other debt and less collateral coverage, allowing the DESC0 to borrow more with the same pool of assets. In short, this means a lower overall cost of borrowing.

Access to Local Capital Markets

Securitization offers the possibility of borrowing from local investors in the same currency as the assets that will repay the debt.24 Many regulated institutional investors such as insurance companies and pension funds are subject to statutory investment distribution requirements. For example, insurance regulators require licensed insurance companies to invest in a diverse portfolio of high credit assets, including both government debt and investment grade rated corporate debt.

There is a securitization market in South Africa25 and developing capital markets in other African countries, particularly Nigeria26 and Kenya. Investment bankers in Kenya report that most regulated institutional investors in Kenya are “underweight” (underinvested) in medium term investment grade corporate debt.27

While the depth and appetite of African capital markets for securitization is beyond our research capabilities, anecdotal evidence suggests that the ingredient needed for the development of medium term debt capital markets in many African countries is product. DESC0s have the opportunity to offer that product and lead this market development.28

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24 Although in Kenya asset backed notes can be offered at retail to small investors, doing so is subject to greater regulation and is not likely be worth the effort in the near term. See, “Laws of Kenya, Chapter 485A, The Capital Markets Act, Section 33C” and “The Capital Markets (Asset Backed Securities) Regulations 2007”. Most other African countries do not have laws covering asset securitizations.

25 http://www.banking.org.za/securitisation


27 These reports are consistent with our own experience: Once the DEARs 2015- transaction was announced, we received several inquiries from institutional investors and asset managers seeking an opportunity to invest in the BBOXX DEARs 2015-1 notes and asking us to bring future securitization investment opportunities to them.

28 Although several attempts have been made to bring a securitization to market in Kenya since its initial enabling laws were adopted, the DEARs 2015-1 asset backed notes appear to be the first securitization in that market.
Access to Dollar Investors without Dollar Risk.

If local markets are not deep enough, DESCOs will need to raise debt in international markets. The currency mismatch between local currency assets (receivables) and hard currency liabilities creates an exposure that DESCOs – like all businesses - should avoid.

Securitization can provide an advantage in addressing this issue even when borrowing in international markets. Structured payments can more easily be swapped into hard currency payments than less well defined cash flow streams. The fact the swap party would face the SPV as counterparty in a securitization rather than the DESCO originator may further facilitate such a transaction as the SPV may have less counterparty risk than the DESCO itself.

In an ideal scenario, the note issuing SPV would enter a matching cross currency swap with a qualified counterparty and then issue asset backed notes in local currency to local currency investors and hard currency notes to international investors side by side. While there are few institutions that would trade a cross currency swap in some of the markets in which DESCOs are scaling, some are beginning to consider this opportunity. And currently there is one dedicated hedge provider – TCX – that is ready to take the currency exposure in most markets and with DESCO asset backed securities.

Beyond using currency hedging to access debt in unmatched currencies, the ability to issue debt in different currencies without assuming currency risk may have a more subtle benefit. Sometimes market inefficiencies lead to situations where investors in one currency market have more interest in buying debt than investors in another currency market. Such a demand imbalance can lead to situations where the interest rates – which should in theory be financially equivalent – are be more attractive in one currency than in the other. Flexibility to invest across currencies with adequate hedging protection would allow a borrower to take advantage of these market incongruities.

Debt Portfolio Diversification

Even as DESCOs are successful in accessing working capital – whether from local banks or from other sources – securitization offers the potential of diversification of funding sources. This diversification eases dependence on a single source of funding. It will make a DESCO more stable as market forces fluctuate and will reduce the counterparty power of a single commercial bank or bank group as the company’s sole source of borrowing.

Markets are unpredictable. Lenders have their own issues. Loan facilities may not be renewed. Lenders appetites to take on more debt may change or be insufficient to meet your needs. While multiple sources of debt can be complex and may not be the most cost effective, such diversification mitigates a significant risk.

29 Counterparty risk is a major challenge when trading derivatives as any P&L of a given currency position is effectively a loan from one counterparty (with a positive P&L) to the other counterparty (with an equally large negative P&L).

30 For example, Kenya’s Chase Bank was suddenly placed in receivership by the Central Bank of Kenya in April of this year. http://www.businessdailyafrica.com/Corporate-News/539550-3366232-d0nk1m/
Conclusion: Securitization Will Be the Cornerstone of DESCOS Sector Finance

Debt needs of DESCOs could reach $2-3 billion by early next decade. As the sector thrives, the amount of debt needed to support it will grow. Securitization has the potential to open new debt markets to DESCOS. High quality asset backed notes will bring in new investors.

We believe, based on our own conversations with investors, the experience in developed markets and the realities of corporate finance, that institutional investors in Africa will have a strong demand for longer dated, rated, higher yielding debt instruments to match their portfolio structure and return requirements.

To structure a securitization takes time and focus. It is initially costly. But we firmly believe that the investment is worthwhile as it will open doors to commercial and institutional capital for DESCOS.

Our Recommendation

Every DESCO that is preparing to scale should be seriously considering launching a securitization program. Issuances are not economical under $5 million and become more cost effective as the size of issuance exceeds $50 million. The few DESCOs that have customer contracts that can support more than $5 million of asset-backed notes should begin their programs.

While every DESCO is different, markets will coalesce around common debt instruments. In Western markets, early asset backed note offerings had substantial variation but, over time, gravitated to common features so that investors could easily compare offerings. In the DESCO sector, every company should feel free to provide their own leadership in defining this emerging debt market. However, we also encourage collaboration and, as we have tried to do in this article, transparency, in an effort to accelerate the coalescence that will be crucial to the market.

Beyond DESCOS: The potential for securitization of small consumer obligations

The basic formula for securitization of DESCO receivables – pooling small customer receivables and pledging them to secure high quality debt securities – is also a promising source of capital for other small consumer and small business finance companies in emerging markets. This was demonstrated in October of this year when Lendable structured a first time lease receivable financing that raised $600,000 in proceeds. Investors purchased Notes from a Cayman Island SPV backed by receivables purchased from an asset leasing company that provides financing to unbanked customers in East Africa.

31 See “Financing the DESCO S-Curve” http://www.persistentnrg.com/#!Financing-the-DESCO-SCurve/mhqg1/578cc4ef0cf26df1ae598637

32 Efforts at collaboration have already begun, led by the World Bank Group and the Global Off-Grid Lighting Association to establish industry standard metrics to assess portfolio performance. See https://data.bloomberg.com/bnef/sites/4/2016/10/BNEF_WP_2016_10_07-Pay-as-you-go-solar.pdf. This is potentially quite useful if the metrics give comfort to investors and are adopted by rating agencies.
Annex A

MODEL DEARS TERM SHEET

[Originator] Distributed Energy Asset Receivables (DEARs) Series 201_–1

Issuer: [SPV]

SUMMARY OF TERMS

The following is an indicative summary of terms for the _____ Distributed Energy Asset Receivables (DEARs) Series 2016-1 securitization transaction issued by [NAME OF SPV], a special purpose vehicle created by [ORIGINATOR]. The DEARs Series 201_– is the second in a series of securitizations taken and to be undertaken by [SPV] (the “DEARs program”).

This summary does not contain all information that may be important to a prospective investor. To fully understand the terms and offering of the Notes, each prospective investor will need to read the Transaction Documents in their entirety. All of the terms described herein are qualified in their entirety by the final terms of the Transaction Documents.

I. Transaction Parties

Issuer

[SPV], a _____ corporation/ limited liability partnership (the “Issuer”). The Issuer has two limited liability partners: (i) the Originator, with an ownership interest equal to 99%, and (ii) [NAME OF INDEPENDENT OWNER], with a partnership interest equal to 1%. The Issuer is a limited purpose entity with a limited scope for the Issuer’s company purpose and powers. The organizational documents for the Issuer contain general restrictions on the incurrence of other indebtedness (other than the Notes), creation of subsidiaries, and the making of investments. The consent of the Issuer’s partners is required when making a determination as to whether the Issuer should enter into a voluntary bankruptcy. The organizational documents for the Issuer also contain separateness covenants governing how the Issuer must be operated separately and distinctly from the partners after the Closing Date. Such separateness covenants, as well as the limited liability partnership agreement, may only be amended with the consent of the partners.

The purpose to be conducted or promoted by the Issuer is to engage in the following business and financial activities:

(a) entering into and performing obligations under one or more agreements pursuant to which the Issuer may purchase, receive contributions of or otherwise acquire from time to time solar energy contracts, leases and the receivables and the related
rights and collections associated therewith;

(b) entering into and performing obligations under one or more securitizations, receivables sale facilities, or receivable loan facilities;

(c) owning, holding, selling, assigning, transferring, pledging, granting security interests in or otherwise exercising ownership rights with respect to the Issuer’s property;

(d) entering into and performing obligations under agreements reasonably related to transactions described in (a) through (c) above, including without limitation, receivables purchase agreements, servicing agreements, security agreements, fee agreements, deposit account control agreements, and hedge agreements;

(e) entering into and performing obligations under one or more credit facilities or other credit agreements from time to time with any of its partners or any of its affiliates, so long as the performance under such credit agreement is not inconsistent with the obligations, activities, and transactions described in (a)-(d) above; and

(f) engaging in any lawful act or activity and to exercise any powers permitted to limited liability partnerships organized under the laws of Kenya that are related or incidental to and necessary, convenient or advisable for the accomplishment of the above-mentioned purposes.

Furthermore, the Issuer shall not:

(a) except as contemplated by the DEARs program documents, guarantee any obligation of any person, including any affiliate;

(b) engage directly or indirectly, in any business other than the actions required or permitted to be performed under the limited liability partnership agreement or the DEARs program documents;

(c) incur, create or assume any indebtedness for borrowed money other than as expressly permitted under the limited liability partnership agreement and under the DEARs
program documents;

(d) make or permit to remain outstanding any loan or advance to, or own or acquire any stock or securities of, any person, except that the Issuer may invest in those investments permitted under the DEARs program documents and may make any advance required or expressly permitted to be made pursuant to any provisions of the DEARs program documents and permit the same to remain outstanding in accordance with such provisions;

(e) to the fullest extent permitted by law, engage in any dissolution, liquidation, consolidation, merger, asset sale or transfer of ownership interests other than such activities as are expressly permitted pursuant to the terms hereof any provision of the DEARs program documents; or

(f) form, acquire or hold any subsidiary (whether corporate, partnership, limited liability company or other).

The Issuer shall:

(a) not direct or participate in the management of any of its affiliates’ operations;

(b) at all times be adequately capitalized in light of its contemplated business purpose, transactions and liabilities;

(c) maintain its assets and transactions separately from those of its affiliates and reflect such assets and transactions in financial statements separate and distinct from those of its affiliates and evidence such assets and transactions by appropriate entries in books and records separate and distinct from those of its affiliates;

(d) preserve its limited liability partnership form and hold itself out to the public and all other persons as a separate legal entity from each partner and all other persons;

(e) not hold itself out as having agreed to pay, or as being liable, primarily or secondarily, for, any obligations of others;

(f) not maintain any joint account with any affiliate or become liable as a guarantor or otherwise with respect to any debt
or contractual obligation of any affiliate;

(g) not make any payment or distribution of assets with respect to any obligation of any affiliate or grant an adverse claim on any of its assets to secure any obligation of any affiliate;

(h) not make loans, advances or otherwise extend credit to any of its affiliates;

(i) not engage in any transaction with any of its partners, except such securitization transactions contemplated or permitted by the DEARs program documents;

(j) not merge with or into or consolidate with or into, or convey, transfer, lease or otherwise dispose of (whether in one transaction or in a series of transactions), all or substantially all of its assets (whether now owned or hereafter acquired) to, or acquire all or substantially all of the assets or capital stock or other ownership interest of, or enter into any joint venture or partnership agreement with, any person;

(k) at all times provide for its own operating expenses and liabilities from its own funds;

(l) readily identify and allocate any sharing of overhead expenses between the Issuer and each partner;

(m) strictly observe and maintain separate financial records which are and will continue to be maintained to reflect its assets and liabilities which will be subject to audit by independent public accountants;

(n) declare and pay all dividends in accordance with law, the provisions of its organic documents, and the provisions of the DEARs program documents;

(o) maintain its assets and liabilities in such a manner that its individual assets and liabilities can be readily and inexpensively identified from those of each partner or any other person, including any other subsidiary or affiliate of any of its partners;

(p) maintain its own books of account and records separate from each partner or any other subsidiary or affiliate of such partner;
(q) avoid commingling or pooling of its funds or other assets or liabilities with those of each partner or any other subsidiary or affiliate of such partner, except with respect to the temporary commingling of collections and except with respect to the partners’ retention of certain books and records of the Issuer and except to the extent that the provisions of the DEARs program documents permit such commingling;

(r) properly reflect in its financial records all monetary transactions between it and each partner or any other subsidiary or affiliate of such partner;

(s) compensate all consultants and agents directly, from its own bank account, for services provided to it by such consultants and agents and pay its own liabilities and expenses out of its own funds;

(t) maintain an arm’s length relationship with its affiliates and the partners;

(u) except as contemplated by the DEARs program documents, not pledge its assets for the benefit of any other person; and

(v) cause the partners, manager, officers, agents and other representatives of the Issuer to act at all times with respect to the Issuer consistently and in furtherance of the foregoing and in the best interests of the Issuer.

**Originator**

[NAME OF ORIGINATOR], a ______ corporation and a wholly owned subsidiary of _____ Ltd., a __ corporation (“____”), is the originator (the “Originator”) of the contracts and related debt obligations that it will sell to the Issuer pursuant to the Deed of Sale (the “Debt Obligations”). All of the contracts in the contract pool as of the cut-off date were originated directly by the Originator.

**Servicer and Sub-Servicer**

[TYPICALLY PARENT OF ORIGINATOR] shall act as servicer (the “Servicer”) and, in such capacity, will deposit collections into the payment account based on the procedures outlined in the Transaction Documents. In addition, Servicer will prepare and distribute all weekly and quarterly servicer reports in

1 A typical DESCO has a parent company that owns and operates the backend operations (software, accounting etc). That entity should be the primary servicer.
accordance with the Origination and Servicing Agreement.

The Servicer may, in its sole discretion, make advances for delinquent scheduled payments.

A local subsidiary of Servicer shall act as sub-servicer.

Trustee
________________ will serve as Trustee for the Noteholders (the “Trustee”).

II. Notes

The Notes

On the Closing Date, the Issuer will issue notes in an approximate amount of [Local Currency ____] initial aggregate principal amount (the “Notes”).

The Notes will be denominated and payable in [Local Currency].

The principal amount of the Notes is a function of the advance rate and net present value of the Contract Pool described below at closing.

Advance Rate
The advance rate against the Contract Pool described below will be [____]%.

Minimum/Maximum Investment
To be determined

Principal Payments
Principal on the Notes will be payable in ___ equal payments on a monthly basis.

Interest Payments
Interest on the Notes will accrue from (and including) the prior Payment Date to (but excluding) the current Payment Date (calculated on the basis of a 360-day year) at a rate of [____]% per annum (the “Interest Rate”); provided that, in the event that the Issuer fails to pay on any Payment Date the full amount of accrued interest on any Note, which failure continues unremedied for a grace period of fifteen (15) or more calendar days after such Payment Date, the Interest Rate shall be the Interest Rate plus 2.00% (the “Default Rate”). On the first Payment Date, interest payments will represent interest accrued from and including the Closing Date to but excluding [____], 201_.

Payment Dates
The ___ th day after the end of each calendar quarter, or if that day is not a business day, the next succeeding business day, beginning with the calendar quarter ending _____, 201_. The first Payment Date will be [longer/shorter] than a calendar quarter, i.e, from the
Closing Date until ____, 2017.

**Final Payment Date**

[______, 20__], the Payment Date on which the last scheduled payment is due.

**Prepayment**

In the event the Issuer prepays any amount due on the Notes, the Issuer shall be required to pay a prepayment premium. The prepayment premium shall be:

[TO BE SPECIFIED, IF ANY]

**Denominations**

The Notes will be issued in definitive form and in minimum denominations of [Local Currency __ ] and integral multiples of [Local Currency __ ] in excess thereof.

**III. Transaction Structure**

**The Contract Pool**

The Contracts will consist of installment sales contracts/hire purchase contracts for the sale of the [DESCRIBE COMPANY PRODUCT OFFERING] sold after [__], 20__.

The “Present Value of a Contract” will be the present value of the unpaid scheduled payments on each Contract. Defaulted contracts and liquidated contracts will be deemed to have a zero contract principal balance. The “Present Value of the Contract Pool” is the aggregate of the individual Contract present values. The Present Value of a Contract includes all scheduled payments due on or prior to, but not received as of, the cut-off date, but excludes any scheduled payments due after but received before the cut-off date.

The Transaction Documents will specify the agreed upon protocols for determining the Present Value of a Contract from time to time.

As of the cut-off date, the pool of Contracts for the Issuer had the following characteristics. Percentages are based on the Present Value of the Contract Pool as of the cut-off date:

- Present Value of the Contract Pool [Local Currency __ ]
- Number of Contracts……[__]
- Implied average discount factor………………[__]%
- Original term of the Contracts………….. [__] months
- Weighted average remaining term of the contracts ..... [__]
• Delinquency rate, i.e., value of overdue payments over
  Present Value of the Contract Pool...[__]

A “Defaulted Contract” means a Contract (i) as to which all or
any portion of any scheduled payment thereunder remains unpaid
for 120 days from the due date therefor other than as a
consequence of delays arising from the set-up of the Contract on
the books of the seller or the Servicer and other similar
administrative reasons, that in the prudent credit judgment of the
Servicer are not indicative of credit problems, (ii) which has been
charged off by the Servicer or which, consistent with customary
practices, would be charged off as uncollectible or (iii) for which,
according to the Servicer’s records, the Obligor is the subject of
an insolvency event.

<table>
<thead>
<tr>
<th>Contract Eligibility Criteria</th>
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<tr>
<td>“Eligible Contract” means each Contract owned by the</td>
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<tr>
<td>Originator, and with respect to which each of the following is true</td>
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<td>(to the extent applicable to such type of Contract) at the time of</td>
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<td>the sale of the Debt Obligations under such Contract to the Issuer</td>
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<tr>
<td>on the Closing Date:</td>
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<tr>
<td>(i) such Contract is a [LOCAL CURRENCY]-denominated</td>
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<td>obligation, and the related Obligor’s location (i.e., where the</td>
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<tr>
<td>Equipment subject to the Contract is located) is in [COUNTRY</td>
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<td>OF ORIGINATION];</td>
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<td>(ii) the Contract is not a Defaulted Contract;</td>
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<td>(iii) the Contract was originated and has been administered by the</td>
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<tr>
<td>Originator in the ordinary course of business and in accordance</td>
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<td>with Customary Practices as in effect at the time of such</td>
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<td>origination and with applicable law;</td>
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<tr>
<td>(iv) such Contract was not originated through fraud on the part of</td>
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<td>the related Obligor;</td>
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<td>(v) the obligations of the related Obligor under the Contract are</td>
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<td>irrevocable, unconditional and non-cancellable;</td>
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<td>(vi) the Contract requires that all payments will be made free and</td>
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<tr>
<td>clear of, and without deduction or withholding for or on account</td>
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<tr>
<td>of, any taxes;</td>
</tr>
<tr>
<td>(vii) such Contract constitutes a legal, valid and binding payment</td>
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obligation of the Obligor thereon, enforceable against such Obligor in accordance with its terms, except as such enforceability may be limited by applicable debtor relief laws and except as such enforceability may be limited by general principles of equity (whether considered in a suit at law or in equity);

(viii) the sale, assignment or transfer of such Contract by the Originator does not require any consent or approval by the related Obligor;

(ix) according to the records of the Servicer, the Obligor with respect to such Contract was not subject to bankruptcy or other insolvency proceedings as of the Cut-Off Date;

(x) there have been no charge-offs on such Contract or on any other Contract of the same Obligor;

(xi) immediately prior to the sale of the Debt Obligations under such Contract to the Issuer, the Originator owned and had good and marketable title to the Contracts, free and clear of any Liens, other than Permitted Liens;

(xii) with respect to which all material consents, licenses, approvals or authorizations of, or registrations or declarations with, any governmental authority required to be obtained, effected or given by the Originator in connection with the creation of such Contract or the execution, delivery and performance by the Originator of its obligations, if any, have been duly obtained, effected or given and are in full force and effect;

(xiii) the Originator has not taken any action which would impair, or omitted to take any action the omission of which would impair, the rights of the Issuer therein; and

(xiv) the Originator has satisfied and fully performed all of its obligations under the Contract.

**Servicing**

The Servicer shall take or cause to be taken all such actions as may be necessary or advisable to collect on each Contract from time to time, all in accordance with applicable laws, rules and regulations, with reasonable care and diligence, and in accordance with the Servicer’s customary servicing standards.
Collections
Obligors will make all payments on the Contracts directly into a Collection Account in the name of the [Servicer/Issuer].

Use of Proceeds
After the deposit of funds from the Note sale proceeds for the payment of expenses, the Trustee will distribute the remaining proceeds to the Originator as a payment of the purchase price of the Debt Obligations.

Cut-Off Date
[___], 201_.

Closing Date
On or about March [15], 201_ or as soon thereafter as all conditions are met (the “Closing Date”).

Transaction Documents
The “Transaction Documents” will consist of the following documents, along with any other program documents entered into by the Originator, the Issuer, the Servicer and the Trustee, relating to the solar energy service and equipment contracts and the Notes:

- **Deed of Sale**: The Deed of Sale, to be dated as of the Closing Date, among the Originator and the Issuer, pursuant to which the Originator shall sell to the Issuer all of its rights, title, interests and benefits in and to all of the Debt Obligations under the Contracts.

- **Origination and Servicing Agreement**: The Origination and Servicing Agreement, to be entered into as of the Closing Date, among the Originator, the Servicer, the Issuer and the Trustee, pursuant to which the Originator will make certain representations and warranties relating to the Contracts, agree to service the Contracts and will be responsible for repurchasing the Debt Obligations under the Contracts in the event of certain breaches of such representations and warranties. The Origination and Servicing Agreement will contain certain negative and financial covenants that will be applicable to the Servicer and its affiliates while the Notes are outstanding.

- **Indenture**: The Indenture, to be dated as of the Closing Date, between the Issuer and the Trustee, pursuant to which the Notes are issued and the Trustee agrees to perform the trust duties on behalf of the Noteholders as described herein (the “Indenture”).

- **Deed of Charge**: The Deed of Charge, to be dated as of the

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2 Ideally, all customer in the asset pool would make payments directly into a dedicated account of the SPV. If this is not feasible, the Servicer can collect payments with a daily or weekly obligation to sweep payments into the Payment Account.
Closing Date, between the Issuer, the Originator and the Trustee (the “Deed of Charge”), pursuant to which each of the Issuer and the Originator will grant a lien over, and all its rights, title, interests and benefits in and to, inter alia, the Debt Obligations, and the Contracts and all rights incidental thereto under the Contracts, respectively, to the Trustee for the purpose of securing the obligations of the Issuer.

- **Note Purchase Agreement**: The Note Purchase Agreement, to be dated as of the Closing Date, between the Issuer, the Originator and the investors (the “Note Purchase Agreement”), pursuant to which the Issuer will offer for sale and the investors shall purchase the Notes.

- **Limited License and Escrow Deposit Agreement**: The Limited License and Escrow Deposit Agreement, to be dated as of the Closing Date, between the Issuer and a third party (the “Limited License and Escrow Deposit Agreement”), pursuant to which the Servicer and/or its appropriate affiliates will license all know-how, source code, technology and data necessary for a back-up servicer to assume the duties of the Servicer under the Origination and Servicing Agreement in the event of the Servicer’s removal, but for no other purpose. The Limited License and Escrow Deposit Agreement will provide for deposit of all source code with an escrow agent and will make mutually agreeable provision for access to [PARENT AND AFFILIATES”] cloud-based server and other applications to access any and all data related to the Contracts, to control the accessibility of the Equipment by customers who are obligors under the Contracts and such other capabilities as are available by the system.

**Governing Law**

The Notes, the Indenture, the Note Purchase Agreement, the Origination and Servicing Agreement will be governed by, and construed in accordance with, the laws of the State of New York. The Deed of Sale, the Deed of Charge and any other documents relating to the pledge, assignment and transfer of collateral located in [COUNTRY OF ASSET POOL ORIGINATION] will be governed by, and construed in accordance with, the laws of [COUNTRY OF ASSET POOL ORIGINATION], except that the Limited License and Escrow Deposit will be governed by _______ law.

**Collection Account**

On each business day, customers will deposit payments into a collection account of [the Servicer under the control of the
Trustee] (the “Collection Account”). On a weekly basis, the Servicer shall deposit all funds in the Collection Account that relate to the Contracts into the Payment Account.

The Collection Account will also receive payments that relate to contracts securing any other existing or future series of DEARs. The Servicer will deposit those payments in the Payment Account for those DEARs.

From time to time, the Originator may notify the Trustee of amounts in the Payment Account that do not constitute proceeds of Contracts. Upon receipt of acceptable documentation of such payments, the Trustee will transfer such amounts to or as directed by the Originator.

**Payment Account**

An account held in the name of the Issuer to make payments set forth below under obligations (1) through (8) under “Priority of Payments.”

**Reserve Account**

An account held in the name of the Trustee to make payments in the event that there is a shortfall to meet payment obligations (1) through (5) in the “Priority of Payments” from the Payment Account on any Payment Date.

**Priority of Payments**

On each Payment Date, the Servicer will direct the Trustee to apply available funds in the Payment Account in the following order of priority to pay:

(1) Any taxes due and owing by the Issuer in connection with the Contracts;

(2) any amounts due and owing to the Trustee under the Transaction Documents (including the Trustee’s fees, expenses and indemnities for the related collection period);

(3) any amounts due to the Servicer under the Transaction Documents;

(4) accrued interest applying the Interest Rate to the Notes according to Notes Payment Schedule;

(5) late payment of interest overdue at the Default Rate;

(6) principal to the Notes according to the Note Payment Schedule;
any other amounts due and owing to the Trustee under the Transaction Documents and not paid under clause (2) above;

(8) any remainder to the Reserve Account until the Debt Service Required Amount has been reached;

(9) to the extent that on the immediately preceding determination date the Leverage Ratio Test was not met, the amount necessary to meet the Leverage Ratio Test after giving effect to the distribution made in the preceding priorities on such Payment Date; and

(10) any remainder to the Originator, as the deferred purchase price.

At maturity, after satisfaction of all obligations with respect to the Notes, any cash remaining in the Reserve Account or Payment Account will be paid to the Originator.

All cashflows from Contracts previously associated with the Notes will be paid to the Originator if all principal and interest due to note investors have been fully paid.

If there is a shortfall to meet payment obligations (1) to (7) from the Payment Account on any Payment Date, cash from the Reserve Account will be applied to such payment obligations until all obligations have been met.

As used herein:

“Additional Amounts” shall mean, with respect to any Payment Date, the sum of such additional amounts for the Notes as may be necessary in order that the net amounts received by the related Noteholders after any deduction or withholding of payment on such Payment Date in respect of Taxes not previously paid by the Issuer, Originator or Servicer will equal the respective amounts that would have been received by the related Noteholders in respect of such payment on such Payment Date in the absence of such deduction or withholding due to Taxes.

“Taxes” shall mean any current or future income, stamp, value added, registration and other taxes and levies, imposts, funds, deductions, charges and withholdings whatsoever, and all interest, penalties or similar amounts with respect thereto or with respect to the non-payment thereof.
Debt Service Required Amount

With respect to any time of determination, an amount equal to 1.____ times the aggregate of the Debt Service Amount for the next Payment Date immediately following such Payment Date.

Debt Service Amount

With respect to a specified period of time, the sum of the amounts eligible for payment pursuant to priorities (3) and (4) in the “Priority of Payments,” without regard to the limitations imposed by the availability of funds, during such specified period of time, under the assumption that all such payments and all previous payments were fully made when due.

Leverage Ratio

On any determination date, the ratio of (a) the sum of (i) all amounts on deposit in the Payment Account and the Reserve Account, plus (ii) the Contract Pool Principal Balance, and (b) the principal amount of the Notes outstanding.

Leverage Ratio Test

On any date of determination, the Leverage Ratio shall equal [1.____3].

Events of Default

The occurrence of any one of the following events will be an “Events of Default” under the Indenture:

(a) failure to pay on any Payment Date the full amount due on any Note, which failure continues unremedied for fifteen (15) or more calendar days after such Payment Date;

(b) failure on the part of the Issuer, the Servicer or the Originator to observe or perform any covenants or agreements of such entity set forth in the Transaction Documents, which failure has a material adverse effect on the holders of the Notes and which continues unremedied for a period of thirty (30) days after written notice by the Trustee or by any holder of a Note;

(c) any representation or warranty made by the Issuer, the Servicer or the Originator in the Transaction Documents proves to have been incorrect in any material respect when made and continues to be incorrect in any material respect for a period of thirty (30) days after written notice by the Trustee or by any holder of a Note and as a result of which the interests of the holders of the Notes are materially and adversely affected; provided, however, that, in the case of a breach of representation or warranty made with respect to any Contract, an Event of Default shall not be deemed to occur thereunder if the Debt Obligations related to such

3 To be set to maintain overcollateralization level during amortization of the Notes.
Contract are repurchased or substituted in accordance with the provisions of the Origination and Servicing Agreement;

(d) the occurrence of an insolvency event relating to the Issuer;

(e) the occurrence of a Servicer Default;

(f) the resignation or termination of [PARENT] as Servicer

(g) the resignation, termination, removal or other departure of certain servicer key personnel, which will be identified in the schedules or annexes to the Origination and Servicing Agreement; or

(h) the misappropriation of funds related to the Contracts by the Servicer, the Issuer or the Originator, as the case may be (as determined by the Trustee, in its sole discretion).

Upon the occurrence and during the continuance of any event described above, holders of Notes evidencing more than 50.00% of the aggregate outstanding amount of Notes may declare that an Event of Default has occurred and that all Notes are immediately due and payable (except in the case of Event of Default (d), in respect of which such Event of Default shall be automatic). In addition, upon the occurrence and continuation of an Event of Default, the holders of Notes will have the ability to exercise certain rights with respect to the collateral, including the right to institute judicial proceedings for collection and the right to sell the collateral in whole or in part.

**Origination Fee**

Noteholders will receive an arrangement fee equal to ___% of the principal amount of the Notes at closing.

**Trustee Fees**

The Trustee will be entitled to a fee to be agreed.

**Fees and Expenses**

The fees and expenses paid or payable from available funds are limited to the Trustee fees, the servicing fee and certain expenses and indemnities of the Trustee. These fees and expenses are paid on each Payment Date. The only fees and expenses paid prior to payments to the Noteholders are the Trustee fees, the servicing fee and expenses.

**Credit Enhancement**

Credit enhancement for the Notes will consist of the excess of the Present Value of the Contract Pool over the aggregate principal amount of the Notes, which is referred to herein as “Overcollateralization.”
Overcollateralization

Overcollateralization is the amount by which the Present Value of the Contract Pool exceeds the aggregate outstanding note principal amount. Overcollateralization will be available to provide credit enhancement to the Notes. The initial amount of Overcollateralization will be [___]% of the initial Contract Pool Principal Balance).

Collateral

The primary assets of the Issuer will be the pool of Contracts primarily consisting of installment sales contracts/hire purchase contracts for the sale of the products sold in between [___], 201__ and the Cut-Off Date.

The Issuer property will include the following:

- the Contracts and all related Debt Obligations, including collections due and received after the cut-off date, purchased by the Issuer on the Closing Date;
- the Collection Account (to the extent of proceeds of the Contracts), the Payment Account, and the Reserve Account, amounts on deposit in those accounts and eligible investments in those accounts;
- rights of the Issuer under the Transaction Documents entered into by the Issuer;
- the proceeds of any and all of the above.

Breaches of Contract Representations and Warranties

In the event of the discovery of an uncured breach of any representation or warranty by the Originator with respect to a Contract that materially and adversely affects the interests of the Noteholders or the collectability thereof, the Originator will be obligated to repurchase the Debt Obligations under such Contract from the Issuer or substitute such repurchased Debt Obligations with Debt Obligations under Eligible Contracts as provided in the Origination and Servicing Agreement. Such obligation of repurchase will constitute the sole remedy of the Noteholders against the Originator or the Issuer for any uncured breach of such a representation or warranty.

Rating

To be determined.