LOGISTICS

1. This is an audio broadcast. Attendee microphones will remain muted during the entire webinar session.

2. To ask questions during the webinar, please use the Chat box on the right-hand side of the Webex session. Please submit your question at any time during the webinar presentation.

3. To ensure your question is seen by the moderator, select “All Participants” from the drop-down menu when sending the question.

4. The webinar recording will be emailed to all attendees and registrants.
Speakers

Nicky Khaki  
CGAP

Alexander Sotiriou  
CGAP

Miguel Soriano  
IFC

Avi Jacobson  
SunFunder

Geoff Manley  
CDC Group

Wanji Ng’ang’a  
GOGLA
PAYGo PERFORM Webinar:
How Far We Have Come

July 10, 2019
Off-Grid Solar has a $2.5 bn Funding Gap

Total forecasted funding needs and expected sources of capital
Billions USD (2017-2022)

Source: GOGLA 2018 Deals Database; Dalberg OGS 2017-22 Financing needs model

Expected external funding from publicly announced sources
$1.6 – 1.8

Internal funding
$1.1 – 1.3

Total forecasted funding needs
$5.1 – 5.7

New external funding to be raised
$2.4 – 2.6

Forecasted use of funds by companies
% of total funding needed (2017-22)

Consumer loan receivables
66%

Inventory
25%

Capex
9%

The OGS sector will need >USD 5 bn over the next 5 years, a substantial ~USD 2.5 bn+ funding gap relative to projected available funds; this is primarily to fund working capital needs
Why PAYGo PERFORM?

“Transparency”
“How can I measure their operational and financial performance?”

“What is important for investors?”
“Need to attract more financing to grow”
“How can I benchmark myself?”

Time for the industry to adopt common reporting standards and greater transparency to aid PAYGo firms, as well as current and potential investors.
PERFORM To-Date

2016-17: Develop Draft KPI Framework
- GOGLA and Lighting Global Convene DESCOS and Investors

2018: KPI 1.0
- January: Hong Kong Off-grid Solar Conference
  ➢ Outputs: KPI Technical Guide, Taxonomy, and Data Playbook
- April: CGAP joins GOGLA and IFC on PAYGo PERFORM
- June-November: Consultations and Pilots
- November: Workshop @ Unlocking Solar Capital Kigali; PERFORM Introduction
- December: Webinar to CG Outlining PERFORM
  ➢ Mandate from CG to Form Working Groups

2019: Progress on KPI 2.0
- January-March: Structure Working Groups (Overall KPIs, Portfolio Quality, Unit Economics)
- March-June: Working Groups Meet, Deliberate, and Make Recommendations
- June: Workshop @ GOGLA AGM Amsterdam
  ➢ Progress Update
  ➢ Gather Feedback for Pilot
Working Groups – Leadership

KPIs

Portfolio Quality

Unit Economics

Nicky Khaki
SG Coordinator
CGAP

Anish Thakkar
Co-founder
Co-chair PQ Working Group
Greenlight Planet

Fabio Eucalipto
CFO
Co-chair PQ Working Group
Persistent

Tobias Ruckstuhl
Principal
Co-Chair PQ Working Group
Persistent

Geoff Manley
Investment Director
Co-chair UE Working Group
CDC Group

Miguel Soriano
SG Coordinator
IFC

Shagun Jain
Head Strategic Partnerships
Co-chair UE Working Group
Rural Spark
Consultative Group
*Comprised of all Stakeholders*

Steering Group
*IFC, GOGLA, CGAP*

Technical Working Group(s)
*Made of members from CG & Experts as appropriate; co-chaired by company & investor representatives*

Consultative Group

Steering Group

Recommends formation of Technical Working Group(s) (TWG)

Accepts CG's request and constitutes a TWG; coordinates groups & participants; and sets expectations in terms of time, resources, budgets, etc.

Researches and deliberates (drawing resources from SG)

Opportunity for additional diligence and input (drawing resources from SG) before making final recommendation to the Steering Group

Considers CG recommendation with necessary support and implements
Agenda

1. Progress Update Working Groups
   • KPI WG
   • Unit Economics WG
   • Portfolio Quality WG

2. Timeline and Next Steps

3. Mini Debate on Key Issues

4. Q&A

5. Closing and Appreciation
1. Progress Update Working Groups
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   - Unit Economics WG
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5. Closing and Appreciation
Three Categories of Indicators

Company Indicators
- Publicly available information
- Not sensitive
- Helps to understand the context of a company

Financial Indicators
- PQ and UE KPIs

Operational Indicators
- Operational benchmarking
- Proposed to be a set of standardized indicators to be used internally only
- Not (yet) to be reported against
## Company KPIs 2.0 – Overview and Calculations

<table>
<thead>
<tr>
<th>KPI Name</th>
<th>Definition</th>
<th>Calculation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales Model</strong></td>
<td>Pick all that apply:</td>
<td>• Scale of 0-100% for each response based on a revenue share from the sales model(s) and the related distribution model(s).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Sales Model: □ PAYGo □ Cash</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Distribution Model: □ Direct PAYGo Sales □ PAYGo Via Partners □ B2B □ B2C □ Other (explanation to be requested in a comment).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Geographical Area</strong></td>
<td>• In which geographical areas are you serving customers?</td>
<td>• Answer provided on a scale of 0-100% based on revenue share from the selected regions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• (more than 1 answer possible) □ East Africa □ West Africa □ Southern Africa □ South Asia (except India) □ India □ Southeast Asia □ South/Central America □ Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Net Sales</strong></td>
<td>• Net total number of units sold from the business’s start of operations</td>
<td>• All sales units discounted by returns &amp; repossessions measured from the business’s start of operations</td>
<td></td>
</tr>
<tr>
<td><strong>Portfolio Size</strong></td>
<td>• Total number of customers in portfolio an/or total USD value of the accounts receivable from PAYGo contracts.</td>
<td>• # of active [Contracts]/Reported Accounts Receivables Value.</td>
<td></td>
</tr>
</tbody>
</table>
### Operational KPIs 2.0 – Overview and Calculations

<table>
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<tr>
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<th>Definition</th>
<th>Calculation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average Selling Price</strong></td>
<td>• Mean price of all systems sold for each of the sales models adopted (PAYGo and Cash sales).</td>
<td>• Sum of sales revenue/ # systems sold.</td>
<td>⬤</td>
</tr>
<tr>
<td><strong>Sales per distribution channel</strong></td>
<td>• Sales per distribution channel represented as a percentage of the total units sold. Agents (%), Wholesalers (%), Shops (%) and/or Other (%)</td>
<td>• For each individual distribution channel: Number of units sold (in that distribution channel) / Total number of units sold</td>
<td>⬤</td>
</tr>
<tr>
<td><strong>Sales point churn rate</strong></td>
<td>• Fraction of sales points that have gone inactive over the previous 90 days, grouped by sales distribution channel. Agents (%), Wholesalers (%), Shops (%) and/or Other (%)</td>
<td>• For each individual distribution channel: Sum of sales points that have gone inactive (in that distribution channel) / average # sales points (in that distribution channel)</td>
<td>⬤ ⬤</td>
</tr>
</tbody>
</table>
| **Warranty Cost**                 | • Warranty cost represented as a percentage of the sales revenue.          | • Total warranty costs / Total sales revenue  
• Alternatives are  
• Total warranty costs/ total number unit lost  
• Total installed warranty costs all time/total collections of all time (might be difficult to calculate) | ⬤      |
| **Net Promotor Score**            | • Measure the loyalty that exists between a provider and a consumer.       | • How likely is it that you would recommend our company/product/service to a friend or colleague? The scoring for this answer is most often based on a 0 to 10 scale. | ⬤      |
Next Steps for the KPI WG

- Gather feedback from consultative group on set of PQ indicators and KPIs as a whole:
  - Completeness,
  - Explanatory power,
  - Gaps / Loopholes,
  - Ease of calculation, and
  - Willingness to report and feedback on proposal to not report externally on Operational Performance indicators

- Finalize formulae by selecting headline periods of evaluation and thresholds
  - To be informed by empirical data and insights provided by working group participants, consultative group, and, eventually, through the pilot
  - Further develop beyond headlines to relevant variations / cohorts
Agenda

1. **Progress Update Working Groups**
   - KPI WG
   - Unit Economics WG
   - Portfolio Quality WG

2. **Timeline and Next steps**

3. **Mini Debate on Key Issues**

4. **Q&A**

5. **Closing and Appreciation**
The Evolution of KPI 1.0 to a Unified Framework

KPI 1.0 Mapped to Unit Economics

- ARPU
- Average Total Expected Revenue
- Average Unit Cost
- Average Customer Deposit as a Proportion of Unit Cost
- Average Maintenance Cost

Unit Economics Unified Framework

Unit Revenue

- Avg. Customer Deposit
- Avg. Expected Follow On Revenue

Unit Costs

- Avg. Credit Cost
- Avg. Financing Cost
- Avg. Device Cost
- Avg. Sales & Distribution Cost
- Avg. Servicing Cost
- Avg. Maintenance Cost

Unit Gross Profit

Current KPI

New Proposed KPI
Refinement of Unified Framework to Achieve KPI 2.0

Unit Expected Payments
- Unit Customer Deposit
- Unit Follow On Payments

Unit Cost
- Unit Credit Cost
- Unit Device Cost
- Unit Sales & Distribution Cost
- Unit Servicing & Maintenance Cost

Unit Total Payments

Unit Contribution Margin

Naming Convention
- “Revenue” modified to “Contractual Payments”
- “Unit Gross Profit” modified to “Unit Contribution Margin”

Key Characteristics
- KPIs only address variable costs
- KPIs are mainly forward-looking and based on expected cash flows
- Useful to analyze unit profitability by product; do not provide significant value when looking at unit profitability of portfolio of products for entire PAYGo firm

KPI Status
- Agreed and Final
- Subject to Discussion
## Expert Advice & Feedback from WG to Resolve Key Issues

<table>
<thead>
<tr>
<th>Key Issue</th>
<th>Description</th>
<th>Proposed Solution</th>
</tr>
</thead>
</table>
| **Present Value (PV) Calculation of Follow On Payments** | • To accurately reflect the cash payments to be received, a PV calculation of Follow On Payments may be required  
• How to determine discount rate to use? | • TO BE DISCUSSED DURING MINI DEBATE |
| **Financing Cost** | • Financing cost refers to the cost of financing the inventory and receivables of solar devices  
• Since it is a fixed cost, how to allocate to a unit? | • Due to the complexities in allocating this cost to a solar device, **it has been excluded from the Unit Economics KPIs** |
| **Credit Cost** | • How to best capture the risk of non-payment / write-off?  
• Two approaches: (1) Write off ratio; (2) IFRS 9 Provision for Credit Cost | • Recommendation to use Write Off Ratio (ideally same KPI as PQ WG) approach  
• Write Off Ratio should be by product and based on historical performance |
| **Contractual vs. Actual Repayment Period** | • Given that some costs are periodic and over time, **how to account for lower collection speed?** | • Can be calculated by using **effective credit period** (nominal credit period / collection rate) |
Next Steps for the UE WG

Current set of Unit Economics KPIs

☑ Helpful to **evaluate the profitability of individual products**

☑ Help companies understand what they **need to do** in order to be profitable at a unit level

☒ Difficult to calculate from **the blended financials** when a PAYGo company has a portfolio of products

Proposed Next Steps

1. **Augment with Firm Level KPIs** to evaluate the overall profitability of PAYGo firms
2. **Development of a manual and Excel tool** to be used by both investors and PAYGo firms providing common language around the unit level KPIs and firm level KPIs

Given the adjacencies between Unit level profitability and Firm level profitability, the process of adding and defining new Firm level KPIs should be fairly straightforward
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Portfolio Quality KPIs’ Progress to 2.0

- Portfolio at Risk
- Receivables at Risk
- Receivables Portfolio Size
- Churn
- Write-off Ratio
- Receivables Portfolio Growth Rate
- Standard Deviation of Amount Ahead/Behind
- Repossession Ratio
- Prospective ancillary KPIs from KPI working group (to be discussed)
- Average Credit Period
- Collection Rate
- Original set of KPIs
- Effective Credit Period
- Newly proposed/modified KPIs
- Average Credit Period
- Portfolio Quality KPIs’ Progress to 2.0

Nicky Khaki
CGAP
## Portfolio Quality KPIs 2.0 – Overview and Calculations

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Receivables at Risk</td>
<td>• Renamed to decouple from MFI industry.</td>
<td>• (Remaining Value of Outstanding Receivables Streams for Which Collection Rate is Less than [Y]% Over Period [X]) / (Value of Total Future Receivables Due)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Will use empirical analysis to determine threshold for identification of risky receivables using either consecutive days of nonpayment or a sufficiently low collection rate over a given period.</td>
<td>• OR: (Remaining Value of Outstanding Receivables Streams which Have Not Paid Over Period [X]) / (Value of Total Future Receivables Due)</td>
<td></td>
</tr>
<tr>
<td>Write-off Ratio</td>
<td>• The sum of the remaining payments of receivables streams that have been terminated over the sum of the remaining payments of the receivable streams for the entire portfolio.</td>
<td>• (Value of Receivables Payments Outstanding for Contracts Written-off Over Period [X]) / (Average Value of Total Receivables Outstanding Over Period [X])</td>
<td></td>
</tr>
<tr>
<td>Repossession Ratio</td>
<td>• Ratio of repossessed units that will be redeployed over total installed units.</td>
<td>• (Units Repossessed for Redeployment Over Period [X]) / (Average Total Installed Units Over Period [X])</td>
<td></td>
</tr>
<tr>
<td>Collection Rate</td>
<td>• Ratio of all collected receivables payments over total receivables payments due for a period (does not include deposits).</td>
<td>• (Value of Total Receivables Collected Over Period [X]) / (Total Customer Payments Due Over Period [X])</td>
<td></td>
</tr>
<tr>
<td>Effective Credit Period</td>
<td>• Nominal credit period adjusted by the collection rate.</td>
<td>• (Average Credit Period) / (Collection Rate)</td>
<td></td>
</tr>
</tbody>
</table>
Next Steps for the PQ WG

- Gather feedback from consultative group on set of PQ indicators and KPIs as a whole:
  - Completeness,
  - Explanatory power,
  - Gaps / Loopholes,
  - Ease of calculation, and
  - Willingness to report

- Finalize formulae by selecting headline periods of evaluation and thresholds
  - To be informed by empirical data and insights provided by working group participants, consultative group, and, eventually, through the pilot
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What's Next for PERFORM

July 2019

Survey CG
Surveys will be circulated to the consultative group for feedback on the KPIs

September 2019

Needs Assessment
• Define which party will collect the PAYGo PERFORM data
• Assess what else is needed to perform the data piloting

Piloting Phase
Together with companies, we will test the KPIs 2.0 (beta). Based upon the testing, we can make some final alterations to improve the KPI framework.

October 2019

KPIs 2.0 (beta)
Based upon the feedback from the working groups, consultative group and steering group, we will finalize the beta version of KPIs 2.0

Kick-off October 2019

Launch Final Set of KPIs
Final iteration and agreement by the CG and SG

2020
Piloting Phase: Testing the KPI Framework with Real Time Data

- The pilot will kick off October 2019 and will be testing the KPI framework over a period of 6 months.
- The Steering Group Coordinators will provide Technical Assistance.
- We invite you to participate to the piloting phase by sending an email to paygoperform@gogla.org.
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**KPI Issue – Calculation of Unit Follow-On Payments**

- In a PAYGo business model, customers typically pay a periodic (daily, weekly or monthly) amount for a solar device during a contract length that can range between 12 months to 36 months
  - Unit Follow-On Payments = KPI defined to capture the expected contractual payments beyond the initial down payment. **Represents the largest cash inflow for a PAYGo firm**

**Key Question:** How do you accurately account for the expected cash payments that you will receive for a solar device?

1. **Present Value (PV) Basis – Use PV Calculation**
   - There is a time value of money component associated with these payments

2. **Gross Basis – No PV Calculation**
   - Performing PV calculation adds a layer of complexity in the calculation of the KPI
Option #1 – PV Basis

- By performing the PV calculation, we have a more accurate view of the expected cash payments that will be received since it considers the issue related to the time value of money.

- Consider the products offered by three different PAYGo companies:

<table>
<thead>
<tr>
<th>Gross value of payments</th>
<th>Company A</th>
<th>$100</th>
<th>Company B</th>
<th>$100</th>
<th>Company C</th>
<th>$100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract term</td>
<td>N/A</td>
<td></td>
<td>10 Years</td>
<td></td>
<td>10 Years</td>
<td></td>
</tr>
<tr>
<td>Payment terms</td>
<td>Cash Sale ($100 Upfront)</td>
<td></td>
<td>Equal payments ($2.50 every 3-Months)</td>
<td></td>
<td>Bullet ($100 at end of year 10)</td>
<td></td>
</tr>
<tr>
<td>Present Value (@r = 20%)</td>
<td>$100</td>
<td></td>
<td>$42.90</td>
<td></td>
<td>$16.15</td>
<td></td>
</tr>
</tbody>
</table>

- Assuming each company has sold 100,000 units, which one is in a better position? Using only a gross figure, you would have no way of differentiating between the three.

- But how do you calculate the discount rate? For the sake of comparison, we can pick an arbitrary figure like 20%
Option #2 – Gross Basis (No PV Calculation)

- Using the gross amount would be simple and straightforward, making it easier to calculate the KPIs and report accordingly. The gross amount could be used to do the sensitivity analysis for e.g. foreign currency risk and credit risk.

- Calculation of PV of expected payments is necessary, however, this exercise should be done by the investor since there might be some assumptions in the discount rate that the investor doesn’t agree with and will have to redo the calculation in any case.

- Defining an industry standard for the discount rate would be challenging, since it is highly dependent on the PAYGo firm.

- Ultimately, the goal is to have KPIs which are simple to calculate and define, while at the same time provide an accurate representation of the unit profitability of a PAYGo firm.
Which method of calculating "Unit Follow-On Payments" should we adopt as part of KPIs 2.0?

A. Option 1, "PV": Using Present value to discount future cash flows
B. Option 2, "GROSS": Taking the simple sum of future cash flows
C. Neither, I think a different approach would be better than either of the ones proposed
D. What’s a cashflow?

Vote for your preferred option
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Give your feedback

Looking at the collective set of KPIs, the progress is:

A. On track with some relatively minor adjustments that need to be made before the pilot
B. Moving in the right direction, but with some moderate adjustments to be made before the pilot
C. Not moving in the right direction – there are some major issues or gaps to address before the pilot

How do you feel about the number of KPIs currently proposed?

A. The proposed KPIs are all / almost all important and manageable
B. There are a handful that should be dropped, but otherwise OK
C. There are far too many and we need to significantly pare down the list
D. We need more KPIs to adequately capture necessary information
Any Questions?

1. For questions, please use the Chat box on the right-hand side of the Webex session.

2. To ensure your question is seen by the moderator, select “All Participants” from the drop-down menu when sending the question.

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A Big Thank You!

KPIs

Portfolio Quality

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João Magalhães
Head of Strategy and Business Planning
Co-chair KPI Working Group
Solaris Offgrid

Siten Mandalia
CEO and co-founder
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Investment Director
Co-chair UE Working Group
CDC Group

Shagun Jain
Head Strategic Partnerships
Co-chair UE Working Group
Rural Spark
And all Participating Organizations that Supported this Process!
We would like to hear from you and invite you to send your feedback to paygoperform@gogla.org:

- What remaining questions or feedback do you have on the KPI framework?
- Any ideas and suggestions that you think would be helpful to address that we haven’t covered during the session?
- Overall opinion of this webinar
Please take a moment to respond to the poll questions on the right-hand side of your screen.
What’s next:

1. We will email you when the webinar recording, and related materials become available on the FinDev Gateway website.

2. Visit the PAYGo PERFORM Community of Practice on FinDev Gateway: www.FinDevGateway.org/organization/paygo-perform

3. For more resources on financial inclusion, visit www.FinDevGateway.org
Thank you

www.FinDevGateway.org