



Developing a portfolio performance index for the PAYG solar sector

Guidance paper

November 2018

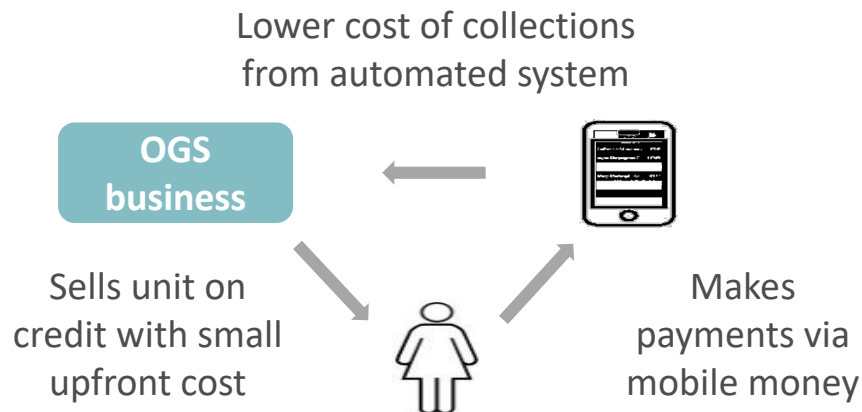


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Context

Limited data on the financial and operational performance of PAYG models may limit quality of decision making and growth of sector

PAYG has accelerated uptake of off-grid solar



Lack of data poses barrier to investment

- Limited data available on historical performance, although GOGLA sales data is a step in the right direction
- Absence of standardized definitions for operational and financial performance indicators restricts structured assessment of PAYG businesses
- Lack of transparency hinders understanding of business model dynamics

Common KPIs could help investors assess and compare performance of PAYG companies

- An industry-wide portfolio performance index would:
 - Enable comparability given evolving business models and need to understand portfolio health given varying products, payment periods, repossession strategies etc.
 - Streamline and harmonize the due diligence process for investors
 - Provide structure and help predict future performance based on companies product portfolios
 - Enable operators to improve their customer targeting and credit risk assessment capabilities

Industry process required to agree whether common KPIs and a performance index are required to improve decision making

GOGLA, the World Bank, and IFC have taken the lead to develop standardized metrics to assess PAYG portfolio performance



Develop set of industry KPIs

Develop data collection tools

Analysis of data currently collected

Run pilot with operators to collect industry feedback

Develop framework for portfolio performance index



IMPACT LAB

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This guidance paper outlines options and a roadmap for GOGLA to establish an anonymized portfolio performance index for the PAYG sector based on industry feedback

Our methodology

This paper builds on the KPI pilot and industry consultations to develop a framework for a PAYG portfolio performance index

1

Feedback from KPI pilot

- Reviewed GOGLA/WB KPI definition and calculation documents
- Assessed aggregate results of GOGLA's initial KPI data collection pilot with 7 PAYG companies
- Analyzed feedback on relevance and ease of calculation of indicators provided by ~10 PAYG companies

3

Industry consultations

- Discussed options for an index with PAYG companies, including KPIs, data collection systems, and incentives for reporting

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2

Review of other indices

- Examined the implementation of performance indices in the microfinance and mobile money industries
- Assessed implementation challenges, key success factors, and potential impact on investment flows into the industries
- Identified key learnings for the potential implementation of a PAYG index

4

Development of options

- Developed a framework for establishing an anonymized portfolio performance index for the PAYG sector based on the industry view
- Outlined options for the implementation of a potential index, including data collection, aggregation, comparability and reporting
- Highlighted key risks associated with the different alternatives

Review of other performance indices

Microfinance and mobile money are examples of industries where performance indices have increased transparency and data quality



Microfinance



Mobile money

Motivations for index

- Enable FSPs¹, investors and policy makers to make **better decisions**
- Establish comprehensive set of indicators for **benchmarking**

- Enable providers to **benchmark performance** against peers
- **Stimulate investment** through increased sector transparency

Indicators

- **>100 financial, operational and social performance KPIs** – built upon SEEP Network metrics through industry working groups

- Collect >80 KPIs annually
- **~20% of KPIs revised annually** to reflect business model changes after consultations with operators

Data collection

- **1,033 FSPs reported** in 2015
- Collect data via an XBRL platform, as prior Excel process was time intensive and error prone

- Collected data from **>200 mobile money providers** in 2017
- Data collected via Excel, but data consolidations resource heavy

Reporting

- Summary of **standard KPI data available in free annual reports**
- **Advanced benchmarking tools require subscription fees**

- **Data publicly available in *State of the Industry* annual reports**
- Mobile money providers receive tailored benchmarking reports

Other indices demonstrate the importance of responsiveness and providing businesses and investors with relevant industry insights

1

Choice of data collection methods result in trade-offs between ease of reporting, aggregation and data quality



Continue to test potential data collection methods for PAYG index, and assess trade-offs between quantity and quality of data submitted

2

To ensure business model coverage, other indices have both core and optional metrics or update KPIs regularly



Ensure that KPIs accurately capture evolving PAYG models and portfolios, and adapt metrics as required

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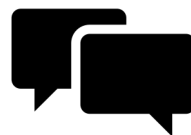
Tailored benchmarking reports and online reporting platforms provide industry insights for a range of stakeholders



Ensure data collected provides investors with ability to evaluate risk/return and allows PAYG companies to establish their market position vs. competitors

4

MixMarket and GSMA have been responsive to the reporting challenges that companies face and feedback provided



Continue to hold consultations to collect feedback on indicators, data collection, and usability of index outputs

Framework and options

Our framework for establishing an anonymized PAYG portfolio performance index consists of four key components

KPIs



Establishing an index will require defining the number, scope, and complexity of metrics used to track PAYG portfolios

Data collection



Selecting an appropriate data collection system and defining a clear submission process will maximize reach

Communication



Defining channels and frequency of interaction with businesses providing data to ensure responsiveness

Reporting



Ensuring index data provides relevant insights for businesses and investors creates an incentive to report

For each of the components highlighted, we provide options and recommendations for GOGLA and highlight the key trade-offs associated with selecting one option over another

Successfully implementing an index will require balancing the complexity, scope and comparability of KPIs

Feedback from KPI pilot, industry consultations, and review of other indices:

Harmonized versus standardized KPIs

***Standardized KPIs** require precisely the same definitions and methods of calculation for all companies regardless of business model, while **harmonized metrics** are designed to maximize aggregation and comparability by providing clear definitions but allowing for some flexibility in methods of calculation*

- **Current KPIs are standardized**, with same definitions for all businesses
- PAYG businesses noted that current standardized KPIs do not adequately account for differences in product type and payment terms
- **Investors emphasized need for standardized definitions across the industry** – comparability is secondary and can be done on case by case basis

Number and scope of indicators

- Currently 13 KPIs focused on financial performance of PAYG portfolios, but market feedback is that a more holistic index which incorporates more customer and operational data would maximize usefulness

Definitions and calculations

- Several PAYG businesses highlighted significant challenges in submitting KPIs during the pilot, due to lack of clarity around definitions and assumptions
- Many businesses assess portfolio performance using different KPIs, or similar KPIs but with alternative definitions – PAR30 highlighted as problematic
- No common definition of terms such as active account and default rate

A set of standardized KPIs which can be compared within clearly defined peer groups of PAYG businesses is a realistic step forward

	Options	Risks / Considerations	Recommendations
Harmonized versus standardized metrics	<ul style="list-style-type: none"> • Implement harmonized KPIs to maximize comparability • Refine standardized KPIs, and build on existing taxonomy to define peer groups for benchmarking 	<ul style="list-style-type: none"> • Comparability increases the usability of the index • However, investors stress need for standardized definitions and too much flexibility could reduce data quality 	<ul style="list-style-type: none"> • Implementing standardized KPIs will ensure data quality and help investors improve assessment of PAYG businesses • Align further with stakeholders on definitions and peer groups
Number and scope of indicators	<ul style="list-style-type: none"> • Expand to cover customer and operational data 	<ul style="list-style-type: none"> • Trade-off between no. of KPIs and willingness to report 	<ul style="list-style-type: none"> • Run another pilot involving broader stakeholder group before final roll out
Definitions and calculations	<ul style="list-style-type: none"> • Further refine KPI definitions • Provide worked examples for calculations 	<ul style="list-style-type: none"> • Consider capacity gaps of operators • Will not be possible to attain complete consensus on KPIs 	<ul style="list-style-type: none"> • Evaluate potential for standardized core metrics & a number of peer group specific KPIs

Stakeholders agree GOGLA should be responsible for data collection but are unsure of the most appropriate data collection system

Feedback from KPI pilot, industry consultations, and review of other indices:

Organization responsible for data collection

- Businesses and investors strongly feel that **GOGLA is best placed to collect data and manage an index**, as it is the industry association and has already established a trustworthy relationship with PAYG companies (e.g. through monthly collection of sales data via online portal)
- Most stakeholders consulted did not see a need for a 3rd party for data collection or management of an index, and emphasized the need to **ensure the privacy of companies reporting**
- If 3rd party was to be contracted to implement an index, GOGLA would need to establish rigorous controls and a clear process for oversight

Data collection system

- The market is unsure over the most appropriate system for data collection, but **emphasized the need for simplicity, security, clarity, and restriction** (i.e. form or submission tool immediately rejecting inappropriate data points)
- The advantages of Excel as a submission tool are familiarity and limited need for training of businesses, but is prone to error and will be resource intensive at the data cleaning and aggregation phase
- The data collection platform that was developed by Village Power (VP) is simple to use and has the functionality required for data collection, and could be handed over to GOGLA to eliminate concerns about data security

Our consultations also highlighted clear trade-offs associated with granularity and collected raw data versus calculated KPIs

Feedback from KPI pilot, industry consultations, and review of other indices:

Raw data versus calculated indicators

- The majority of businesses are not comfortable sharing raw data, and would **prefer calculating indicators to avoid misinterpretation of their raw data** due to nuances in their business models
- A minority of PAYG businesses consulted highlighted that **submitting raw data points rather than calculated KPIs would be preferable** as this would reduce level of effort and back and forth over calculation issues
- All PAYG stakeholders and GSMA emphasized that clear definitions and providing worked examples on the computation of the different indicators is a key step in implementing a successful index

Granularity of data

- **Clear trade-off between comparability of portfolio performance** across models, within peer groups, or between specific product types **and the level of granularity of data required**
- Comparing portfolio performance of the different products sold by a company will require submission of calculated KPIs at the product level or raw data at the level of individual sales; however, this will have implications for the data collection system, process and level of effort required
- **Significant risk that requesting data at very granular level will result in reduced submission rates**

Further pilots, consultations, and assessments are required before selecting final data collection system and process

	Options	Risks / Considerations	Recommendations
Organization responsible for data collection	<ul style="list-style-type: none"> GOGLA responsible for data collection and analysis Data collection managed by 3rd party but hosted on GOGLA website, with GOGLA establishing appropriate controls 	<ul style="list-style-type: none"> Limited capacity within GOGLA team to carry out data collection at scale Involvement of 3rd party could raise concerns around privacy for PAYG businesses 	<ul style="list-style-type: none"> Detailed assessment of level of effort required to collect, clean, and aggregate data required Parameters of index need to be well defined before assessment
Data collection system	<ul style="list-style-type: none"> PAYG businesses submit data in Excel files with clear parameters, restrictions and data security controls Online data collection platform used to collect data 	<ul style="list-style-type: none"> Excel submissions may still pose aggregation challenges Platform may require substantial training for businesses and may require significant iteration 	<ul style="list-style-type: none"> Assess functionality of VP platform, and pilot as data collection platform hosted on GOGLA website Collect further feedback before selecting system

To maximize initial reporting, data should first be collected at the company level before exploring options for further granularity

	Options	Risks / Considerations	Recommendations
Raw data versus calculated indicators	<ul style="list-style-type: none"> • Businesses submit calculated KPIs based on definitions and examples • Collect raw data points and calculate KPIs manually or via data collection platform 	<ul style="list-style-type: none"> • Errors in calculation will be difficult to trace if calculated KPIs are submitted • Raw data may be misinterpreted due to lack of understanding of model nuances 	<ul style="list-style-type: none"> • Collect calculated KPIs but implement “sample check” of subset to ensure data quality • Ensure context to KPIs (e.g. business model) is always provided in reports
Granularity of data	<ul style="list-style-type: none"> • Continue to carry out data collection at the company level • Request product level KPIs for all businesses to improve data quality and enhance comparability 	<ul style="list-style-type: none"> • Lack of granularity limits comparability and therefore usefulness of index • Trade-off between granularity of data requested, and level of effort and willingness to submit 	<ul style="list-style-type: none"> • Initially roll out index collecting data at company level • Gauge willingness of businesses to submit KPIs by product, and roll-this out over time to maximize usefulness

The success of a portfolio performance index will require regular communication and responsiveness to business feedback

Feedback from KPI pilot, industry consultations, and review of other indices:

Engagement during data submission period

- Although GOGLA have moved in the right direction on indicator specificity, significant clarification on indicator definitions were required during KPI pilot
- Several PAYG businesses highlighted that responses to queries were often not timely or at a sufficient level of detail – this led to delays or non-submission
- MixMarket assign analysts to businesses submitting data for the first time, walking them through submission process and providing ongoing support
- If a portfolio performance index for the PAYG sector is to be rolled out at scale, a **significant investment of time and resource will be required to educate and support businesses and ensure adequate data quality**

Revisions to KPIs, systems and process

- Rapid pace of change and business model evolution in PAYG solar sector means modifications to an index will be inevitable to maintain relevance
- MixMarket and GSMA have been successful in establishing broad industry indices through **regular engagement on appropriateness and usefulness indicators and systems, acting quickly on feedback from, and clearly communicating changes**
- Numerous workshops, conferences and multiple stakeholder discussions on industry KPIs and data collection have been held, but often, one-on-one or smaller consultations are more effective for collecting meaningful feedback

GOGLA should consider establishing a dedicated “help desk” to provide rapid technical support to businesses during submission

	Options	Risks / Considerations	Recommendations
Support and feedback during data submission periods	<ul style="list-style-type: none"> GOGLA team responsible for KPI pilot continues to provide support Establish dedicated “help desk” to provide support to companies during submission periods 	<ul style="list-style-type: none"> Capacity of current GOGLA team limited due to other initiatives Help desk will provide quality support but will be more costly and resource intensive 	<ul style="list-style-type: none"> During subsequent pilots spending time one-on-one with businesses will enable GOGLA team to be more effective Establish dedicated help desk when scaling index
Annual engagement on revision to indicators or data collection process	<ul style="list-style-type: none"> Ad-hoc revisions to indicators, systems and process driven by need Establish annual forums for agreeing revisions to KPIs and improvements to systems and process 	<ul style="list-style-type: none"> KPIs do not reflect new models, or poor data collection system results in low response rates Lack of consistency due to repeated changes to KPIs and process 	<ul style="list-style-type: none"> Establish annual forums but monitor effectiveness Set annual limits on revisions to KPIs and systems to maintain consistency, and communicate modifications clearly

Maximizing usefulness of index data through benchmarking and industry insights will incentivize reporting across the industry

Feedback from KPI pilot, industry consultations, and review of other indices:

Improved benchmarking and investor decision-making

- PAYG businesses want to assess the performance of their portfolio relative to peers regionally and globally, but **lack of transparency around portfolio performance and limited understanding of what “good looks like”** (e.g. in MFI sector PAR30 <5% seen as indication of portfolio quality) is a barrier
- Despite increased YoY investment flows into sector, there is still a small investor based focused primarily on a few established PAYG companies
- **Improving investor decision making ability through access to data a key motivation for businesses**, particularly smaller companies who want to demonstrate the viability of their business models vs. established players

Enhanced industry insights

- As the sector evolves and multiple off-grid solar products are sold via PAYG models, the **breadth and depth of information required by industry stakeholders increased significantly**
- Data collected as part of a portfolio performance index could be used to produce industry insights on topics such as portfolio quality, risk and financing options, therefore maximizing the value of data collected
- MixMarket and GSMA have demonstrated that **producing high quality annual sector performance and thematic reports are also an effective means of attaining buy-in and incentivizing reporting**

A staggered approach to rolling-out reports, insights, and industry tools should be taken to ensure quality and manage level of effort

	Options	Risks / Considerations	Recommendations
Improved benchmarking and investor decision-making	<ul style="list-style-type: none"> • Tailored reports benchmarking businesses against regional and global peers for all KPIs • Online reporting platform with interactive dashboard capability 	<ul style="list-style-type: none"> • Both options may require high level of effort depending on system automation • Developing online platform with advanced benchmarking tools potentially costly 	<ul style="list-style-type: none"> • Provide tailored benchmarking reports to attain buy-in but automate where possible • Stagger roll-out of online platform, and explore compatibility with collection tools
Enhanced industry insights	<ul style="list-style-type: none"> • Annual reports outlining sector trends with a focus on maximizing investment in sector • Thematic studies on topics such as unit economics, credit risk and cash flow 	<ul style="list-style-type: none"> • Minimum number of businesses per peer group required to produce useful reports • In-depth studies will require several years of time-series data to generate insights 	<ul style="list-style-type: none"> • Only disaggregate findings by peer group in annual reports once dataset is sufficiently large • Hold consultations to identify most relevant topics for thematic studies

For the each framework component, we outlined a number of options that GOGLA can select from to establish an industry index



KPIs

- Harmonized
- Standardized
- Portfolio performance only
- Include ops and customer KPIs
- Refine KPI definitions
- Provide worked examples of calculations



Data collection

- GOGLA managed
- 3rd party managed
- Collect via Excel datasheets
- Collect via online platform
- Submit calculated
- Submit raw data
- Company level
- Product level



Communication

- GOGLA support
- Dedicated help desk
- Ad-hoc revisions to system and KPIs
- Annual forums to collect feedback

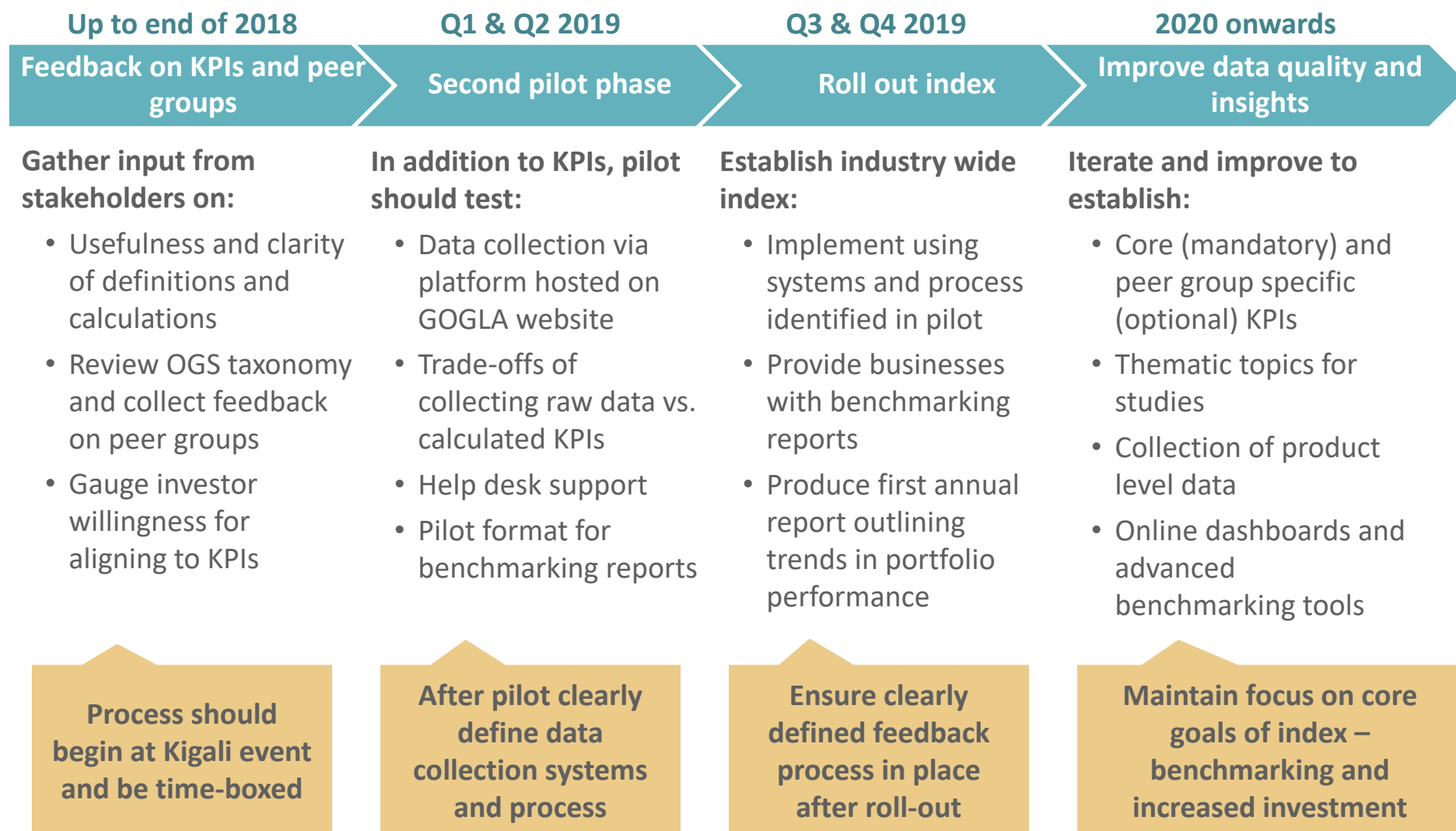


Reporting

- Tailored benchmarking reports
- Online reporting platform
- Annual reports
- Thematic studies

Next steps

An effective industry process and roadmap must take into account multiple stakeholder voices and iterate frequently



Appendix: detailed review of other performance indices

Performance indices in other industries can provide key learnings for establishing a framework for a PAYGO solar index

The microfinance (MixMarket) and mobile money (GSMA) indices can serve as useful comparisons for the PAYGO solar sector:

- These three industries all target low-income households in emerging markets and have also witnessed rapid expansion over the past years
- They also have comparable business models based on consumer lending and credit repayments
- Like GOGLA, GSMA is also an industry association taking the lead on developing an index to track industry performance

This research sought to understand 6 characteristics of the microfinance and mobile money indices:

1. Initial motivation	2. Data collection	3. Indicators	4. Reporting and analysis	5. Implementation challenges	6. Incentives
<ul style="list-style-type: none">• Understand the driving forces behind establishing an industry index	<ul style="list-style-type: none">• Types and number of org's that submit data to the index• Review data collection systems and processes, including evolution over time	<ul style="list-style-type: none">• Highlight the range and complexity of indicators• Assess the extent to which indicators vary over time and by business model	<ul style="list-style-type: none">• Analyze the methods used to publish index data• Assess the usability of online platforms for different org's	<ul style="list-style-type: none">• Understand past and current challenges faced in establishing index and actions taken to address these	<ul style="list-style-type: none">• Highlight mechanisms used to encourage reporting

MixMarket is a non-profit established in 2002 to track the performance of microfinance providers in emerging markets

1. Initial motivation for establishing index

- Founded by CGAP and funded by several foundations, MixMarket's aim to **provide data and insights which enable FSPs¹, investors and policy-makers to make informed decisions**
- Providing FSPs with a comprehensive set of indicators to benchmark their performance
- MixMarket initially focused on collecting MFI data but over time expanded to include other FSPs serving low income groups as industry evolved

2. Data collection

- **1,033 FSPs reported data** to MixMarket in 2015
- **Data is collected annually via XBRL**, the standard reporting tool for the financial sector
- MixMarket moved data collection to XBRL as the prior process of consolidating data from excel, and financial statements was time intensive
- New FSPs are assigned analysts to walk them through submission process and provide them with ongoing support

3. Indicators

Key indicators include:

- MixMarket collects **over 100 financial, operational and social performance indicators**, of which ~50 are core indicators
- Indicators cover portfolio quality, efficiency and productivity, financial management, profitability, and social and environmental impact
- Built upon initial SEEP Network² KPI framework through consultations with FSPs and investors to attain agreement on standard industry indicators

Portfolio quality

- Portfolio at risk
- Write-off ratio

Efficiency/productivity

- Loans per loan officer
- Cost per loan

Financial mgmt

- Debt/equity ratio
- Total expenses/assets

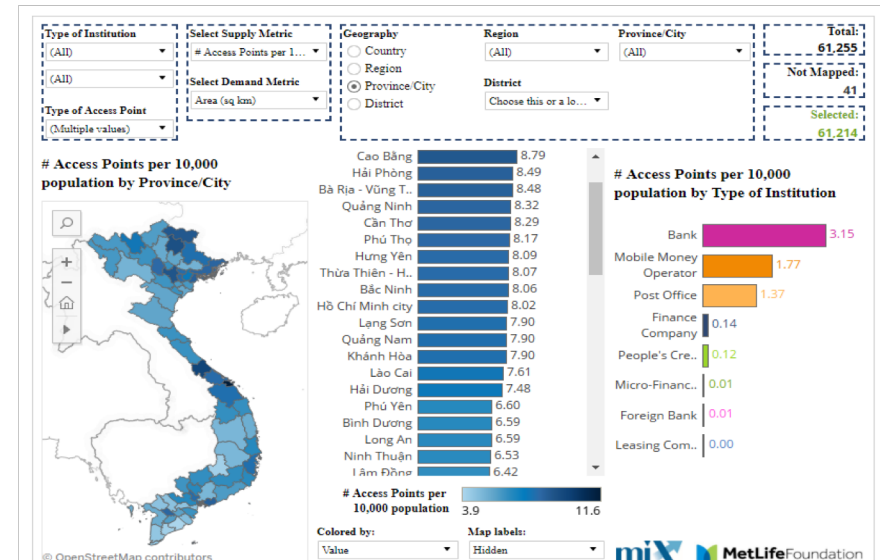
Profitability

- Return on equity
- Net operating income

MixMarket utilizes index data to provide the sector with market insights and an interactive dashboard-based reporting platform

4. Reporting platform

- **Freely available annual reports** are produced, providing summary data and charts for the standard indicators collected
- **Non-anonymized FSP snapshots are also available for free**, containing selected outreach, balance sheet and risk and liquidity metrics (e.g. gross loan portfolio, liabilities, PAR 30)
- Users have to pay a subscription fee to access full historical databases, FSPs full financial statements and advanced analytical and benchmarking tools
- **Data is also published on the FINclusion Lab platform**, which provides users with interactive drill-down dashboards to access aggregated national and subnational sector data



5. Implementation challenges

- Initial excel-based data collection system was prone to error and labor intensive
- Transition to XBRL eased reporting burden, but required simplified reporting forms to be developed to cater to non-technical audience

6. Incentives

- Investor access to the platform has encouraged FSPs to report operational and financial data
- Responsiveness to the issues raised by the org's submitting data has raised levels of trust

MixMarket established a user-friendly platform for accessing information and created an environment where organizations are comfortable sharing data

GSMA represents mobile network operators (MNOs) globally and collects industry-wide business intelligence data

1. Initial motivation for establishing index

- Launched its Global Mobile Money Metrics and State of the Industry Report (SOTIR) in order to **enable mobile money providers to benchmark their performance against their peers**
- A key motivation was also to provide an accurate picture of the extent of customer adoption
- Aimed to stimulate investor activities in the mobile money industry through increased transparency and improved decision making

2. Data collection

- **In 2017, GSMA collected data from >200 mobile money providers in 90 countries** via two Microsoft Excel files
- The first maps the types of the mobile money services carried out by the provider, while the second tailored form collects data against indicators relevant to the provider's model
- Data collection, cleaning and aggregation require several FT analysts for a few months per year

3. Indicators

- **Collect >80 metrics annually for the SOTIR report**, but reports 13 industry outreach KPIs on its online Mobile Money Metrics page
- On average, **20% of the indicators collected for the SOTIR report change annually** to reflect the evolution of the mobile money industry and ensure useful insights are being provided
- GSMA holds regular consultations with operators on the proposed modification of indicators

Key Mobile Money Metrics include:

Availability

- No. of live mobile money services

Accessibility

- Registered agents
- Active agents

Adoption

- Registered accounts
- Active accounts

Usage

- Volume by product
- Value by product

GSMA publishes data in annual reports used by mobile money operators, investors, and policy makers

4. Reporting platform

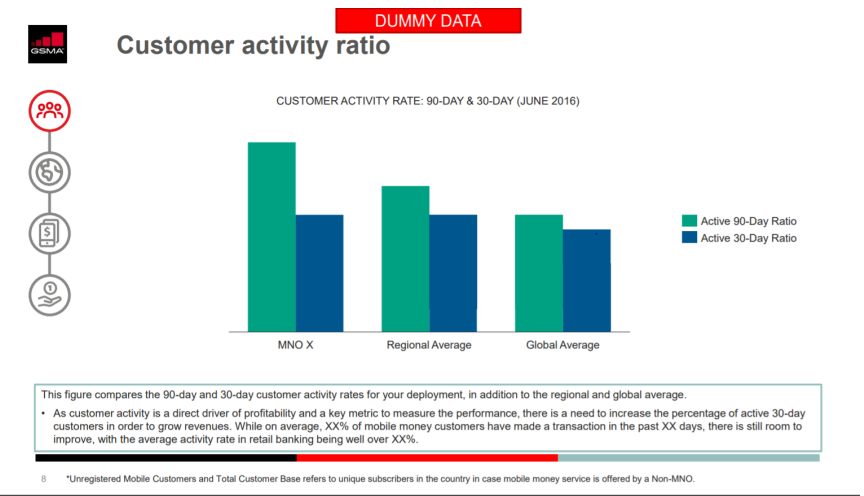
- GSMA collects, analyzes and publishes index data in annual SOTIR reports that summarize the financial health of the mobile money industry
- Mobile money data is also shared on an broader online platform (requiring a subscription) that provides info on the mobile industry and MNOs

5. Implementation challenges

- **Challenges arose in establishing common indicators** which reflected differences in business models e.g. digital vs agency banking
- Have learnt through experience that clearly defining indicators in order to avoid inaccurate calculations is a key step in ensuring consistency

6. Incentives

- User-friendly reporting templates which don't require extensive calculations encourage responsiveness
- After compiling index data for the year, **GSMA prepares a benchmarking report for each mobile money provider** which shows their performance for key indicators reported against global and regional averages
- **There is a plan to provide Mobile Money Certification** to encourage data reporting from organizations

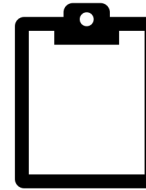


Benchmarking reports provide a clear incentive for providers to report, and can be automated to reduce level of effort required to produce them

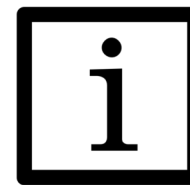
There are a number of relevant lessons that GOGLA can learn from the implementation of indices in other industries (1/2)

Collection methods vary depending on the complexity of the data. While MixMarket uses the XBRL program to collect data for >100 indicators, GSMA collect data via Excel. However, MixMarket have had to provide simplified versions of the software for organizations to report effectively

Indicators also vary in scope and complexity depending on the sophistication of the industry and goals of the index. To ensure that indicators cover the full range of business models in the sector, MixMarket have both standard and optional metrics whereas GSMA modify up to 20% of their mobile money indicators each year



Identify an appropriate data collection method taking into account the trade-offs between ease of reporting, data quality and ease of aggregation and analysis



As the industry continues to grow and business models evolve, ensure that indicators accurately capture the performance of PAYGO portfolios and adapt metrics as required

There are a number of relevant lessons that GOGLA can learn from the implementation of indices in other industries (2/2)

User-friendly benchmarking reports and online reporting platforms provide industry insights which add value to a range of stakeholders. Through interactive dashboards and reports, MixMarket and GSMA provide investors with the ability to assess risk and potential returns, and allow businesses to establish their market position versus competitors

MixMarket and GSMA have been responsive to the challenges that reporting organizations face and feedback provided.

This responsiveness has helped reduce issues that organizations encounter when reporting data, attain agreement on indicators, and strengthened levels of trust



Publishing data on online and user-friendly platform and producing tailored benchmarking reports allow different players to effectively draw industry insights, and consider whether this is appropriate for the PAYGO sector



Continue to hold consultations with PAYGO businesses and collect feedback on indicators and methods for effective collection of data, as the experience of other industries has shown this is critical to achieve widespread adoption of an industry index



Nairobi
Kenya

Black River
Mauritius

Kampala
Uganda

Lusaka
Zambia