

WEBINAR

Introducing the PAYGo PERFORM Key Performance Indicators

29 June 2021 at 9:00 AM (ET)



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LOGISTICS



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Opening Remarks



Russell Sturm
International Finance Corporation



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PAYGo PERFORM

The PAYGo Performance, Reporting and Measurement (PERFORM) KPIs are the result of a collective, transparent, industry-led process to standardize financial reporting and key performance indicators for the PAYGo solar industry.



Timeline

Nov. 2018: Launch Initiative

2019: More than 24 Working Group meetings to refine KPI definitions

2020: Data collection pilot with 8 companies to test practicality

Jun. 2021: KPIs v2.0 Technical Guide to be published

Going forward: Industry adoption, benchmarking

Why PAYGo PERFORM?



~\$6-11 B

Investment need for off-grid solar through 2030

- Investors often don't **understand** the off-grid solar business – leading to inappropriate metrics and lack of confidence in their appraisals.
- Perception of risk is high; difficult to **promote** the off-grid solar sector without neutral, understandable, trustworthy, standardized information.
- No current ways to benchmark operations in order to understand performance and **enhance performance**

PAYGo PERFORM: An Industry-Led Initiative

- ✓ Benchmarking
- ✓ Transparency
- ✓ Increased investment flow
- ✓ Improved allocation of capital
- ✓ SDG 7

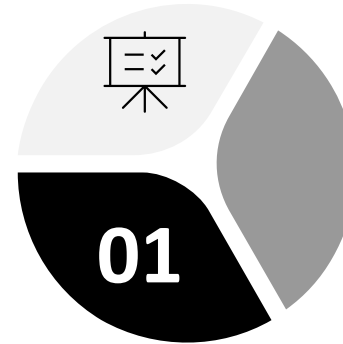
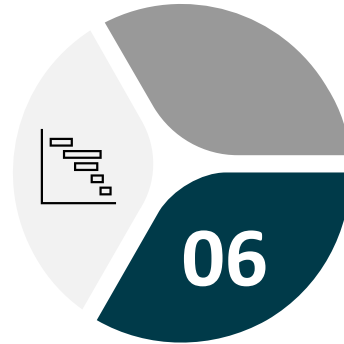
PAYGo PERFORM's output:

A standardized nomenclature for describing PAYGo company performance and a reporting mechanism that will facilitate tracking, investment screening, and industry insights

PAYGo PERFORM Use Cases

Developing market intelligence

PERFORM KPIs enable benchmarking and enhance market insights across PAYGo solar stakeholders, informing strategic decisions and improving the overall understanding of sector performance.

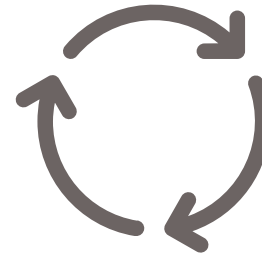


Analyzing financial, operational, and risk performance.

The metrics themselves give insights and can enable more advanced and deeper analyses.

Reporting and monitoring investments

Enables funders to track investment performance, while also easing the reporting burden on companies, and allowing for management and tracking of a PAYGo solar companies portfolio.

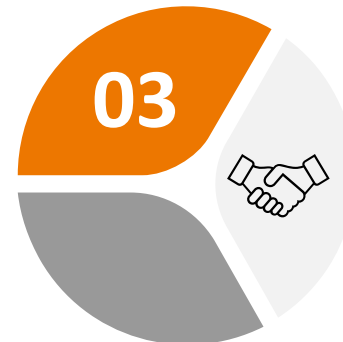
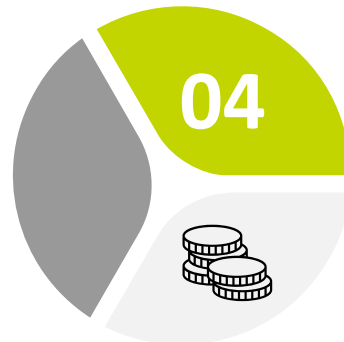


Facilitating investment appraisals

Interesting for funders when screening a company and conducting due diligence.

Designing milestone and disbursement payment structures

Payments are triggered by achieving certain goals or milestones defined using the PERFORM KPIs.



Structuring deals

KPIs could be a basis to set targets or form covenants for a contract.

Introducing the PAYGo PERFORM KPIs



Nicky Khaki
CGAP



Roan Borst
GOGLA



Kevin Kennedy
*International Finance
Corporation*



Send your questions through the chat box.

Select “**Everyone**” from the drop-down menu to ensure your question is seen by the moderator.

Three categories of KPIs

1

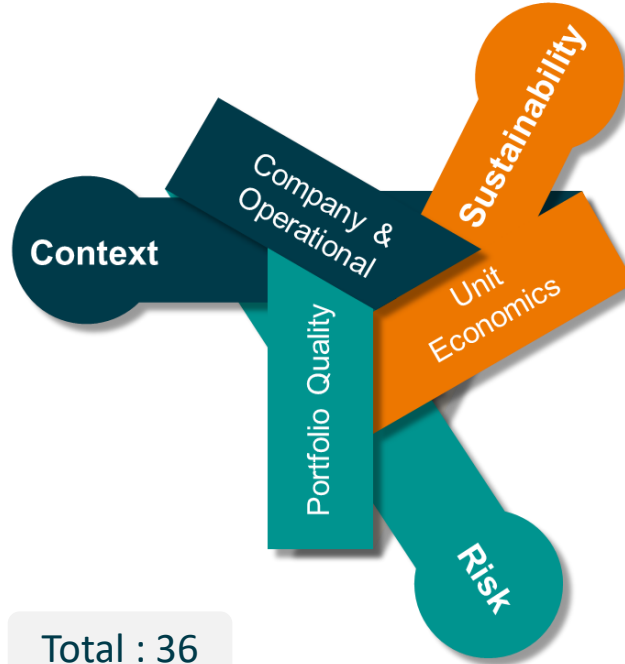
Company & Operational

1. Sales Model
2. Sales Distribution Model
3. Country Sales
4. Total Net Sales
5. Repeat Sales
6. Product Sales
7. Average Selling Price
8. Sales per Distribution Channel
9. Sales Point Rate
10. Net Promoter Score

2

Portfolio Quality

1. Receivables Portfolio Size
2. Receivables Portfolio Growth Rate
3. Collection Rate
4. Write-off Ratio
5. Receivables at Risk
 - a) Using Consecutive Days Unpaid
 - b) Using Collection Rate
6. Repossession Ratio
7. Contractual Credit Period
8. Effective Credit Period



3

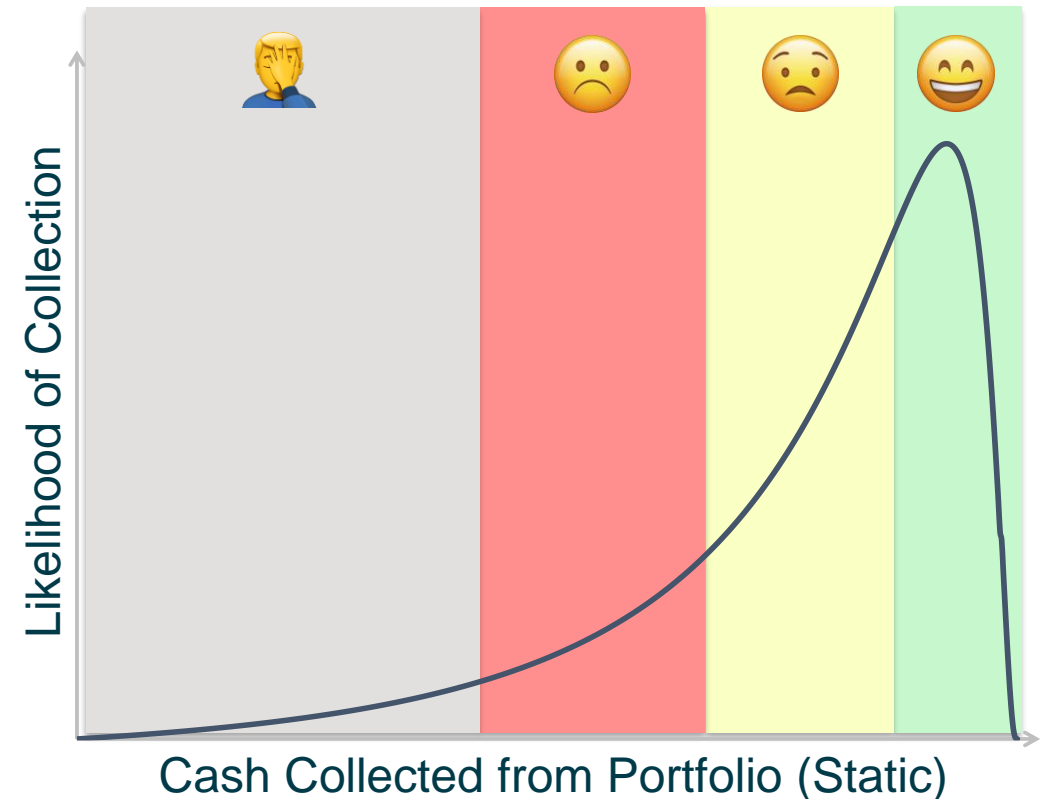
Unit Economics

1. Total Cash Receipts from PAYGo
2. Contribution Margin
3. EBT Margin
4. Sales & Maintenance Cost Ratio
5. COGS Ratio
6. Fixed Cost Ratio
7. Provision Expense Ratio
8. Financial Expense Ratio
9. Fixed Operating Cost Ratio
10. Unit Follow-on Payments
11. Unit Customer Deposits
12. Unit Cash Sales
13. Unit Device Cost
14. Unit Contribution Margin
15. Unit Sales & Distribution Cost
16. Unit Servicing & Maintenance Cost
17. Unit Credit Cost
18. Liquidity / Total Costs

Portfolio Quality KPIs Overview

Helping draw the distribution of repayment

- Credit sale + 🧪 → Cash
- Distinctly PAYGo: asset financing, payment flexibility, lockout technology, etc.
- 8 KPIs, 5 subcategories:
 - Repayment: Collection Rate
 - Risk: Receivables at Risk (RAR), Write-off, Repossession
 - Size: Outstanding Receivables
 - Growth: Outstanding Receivables Growth
 - Tenor: Contractual & Effective Credit Periods
- Have a slice: period of measurement, cohorts, geography, product, etc.
- Don't forget: “Intra” & “Inter” relationships



PAYGo Collection Rate and Risk

Collection Rate can be a useful tool for risk screening and segmentation

	1	2	3	4	5	6	7	8	9	10	Collection Rate
Customer #1	\$		\$	\$	\$	\$		\$	\$		70%
Customer #2	\$						\$				20%
Customer #3	\$			\$			\$			\$	40%
Customer #4	\$		\$	\$	\$	\$	\$	\$	\$	\$	90%

- If we use traditional PAR30 (Portfolio at Risk), all customers are “at risk” by period 5
- If we only use RAR30 (Consecutive Days Unpaid) evaluated after period 10, only Customer #2 is “at risk”
- If we instead apply a *threshold* of 50% collections, Customer #2 and #3 are considered at risk

Firm Level KPIs – the Challenge

KPIs present a hybrid business model in a comprehensive, consistent and coherent way



Solar Sales

- Sales oriented
- Stock purchases
- Distribution costs
- SME cash flow
- Short cycle

Solar Finance



- Credit oriented
- Portfolio management
- Customer service
- Financial cash flows
- Long cycle



What is a sale?

What are the elements of profitability?

Are credit provisions fixed or variable?

Not Just For External Consumption

KPIs help companies measure and benchmark their performance and find areas for improvement. Better informed businesses can be more responsive to client needs and offer better service to their customers.

Unit and Firm Level KPIs – a Solution



Familiar cost categories and formulae such as Contribution Margin etc from both sides of the business model



Easy to adapt
Choose frequency according to capacity



Vs.



Use cash receipts as a proxy for sales until common accounting policies agreed



Stop Press!!
Accounting Guidelines
Briefing Imminent

Fixed, Variable and Semi Variable Costs

All costs eg credit provisions remain identifiable within clear categories

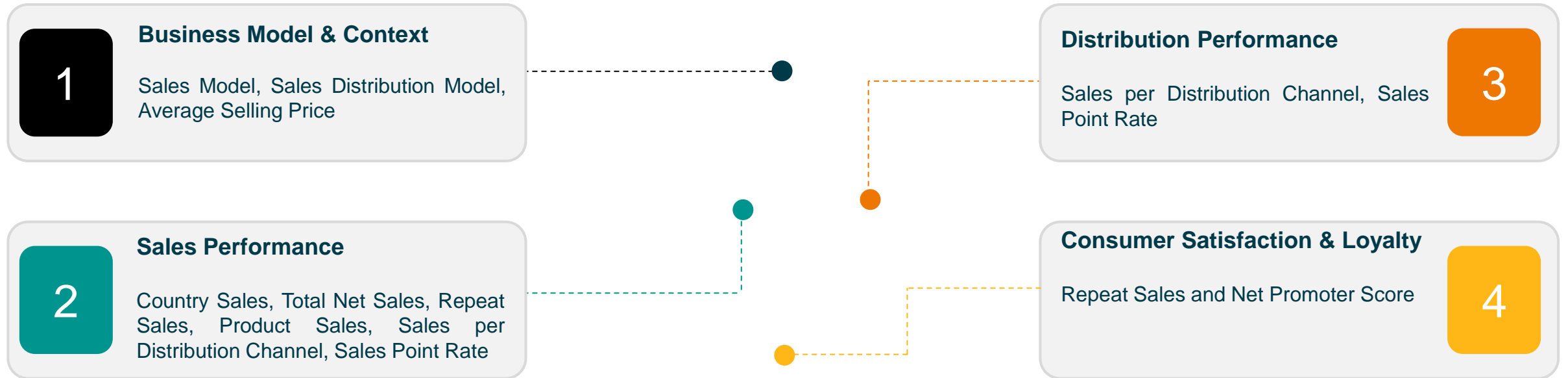


Credit provision policy still to be defined

Financial KPIs should be presented as the foundation of a discussion about policies and key variables

Company and Operational Indicators

Contextualizing and tracking companies



Use

Gain understanding

Deduce
Ops. performance

Infer typical
Financing needs

Perform
Benchmarking

PAYGo PERFORM Tools & Knowledge Products

Data Collection Pilot Report

Lessons learned from the data collection pilot as well as the journey to getting to KPIs v 2.0.

Technical Guide

The Technical Guide sets out in concise terms what the KPIs are and how each of them should be calculated.

Excel Tool

Accompanies the Technical Guide. It makes it easier for companies or investors to calculate or report on the metrics.

PAYGo Solar Industry Accounting Challenges Guide

This work will highlight the need for commonly accepted accounting guidelines, by using priority cases and potential treatment as tools.

Technical Guide Sneak Peek

Portfolio Quality

III. KEY PERFORMANCE INDICATORS AND DEFINITIONS

Portfolio Quality Indicators: Measuring Credit Risk

THE PORTFOLIO QUALITY INDICATORS PROVIDE stakeholders with a high-level perspective on the risk posed by a PAYGo solar company's credit portfolio – in essence, a company's ability to translate a PAYGo sale or unit deployment into payment in full.¹¹ Unlike the case with traditional lenders, most PAYGo solar contracts are characterized by flexible payment schedules enabled by tools such as remote lock-out technology and digital payments. The PAYGo solar industry's unique features fundamentally affect payment behavior and the expression of risk in a credit portfolio. For this reason, in developing the PAYGo PERFORM KPIs, we reviewed existing portfolio quality metrics from adjacent industries such as microfinance, but we also considered new indicators (e.g., Receivables at Risk using Collection Rate) that reflected some of the industry's distinguishing traits. The portfolio quality indicators presented below characterize portfolio size, growth and contract tenor, which are all essential to understanding the scale and nature of a portfolio's risk. These indicators should be considered a starting point and can also be modified and combined to highlight different attributes of a company's receivables portfolio, illuminate relevant trends across peer groups, conduct cohort or vintage analysis and more.¹² Like the other groupings of KPIs in the technical guide, these should be viewed alongside the other sets for appropriate context.

For example, when comparing two companies, one may exhibit riskier portfolio quality than the other but may also be better at compensating for that risk in ways that would only be expressed in the Unit Economics KPIs (e.g., wider margins). This also means that it is best to align periods of measurement across relevant KPIs, especially amongst the related Portfolio Quality KPIs, to ensure a full and consistent accounting of credit risk and other portfolio-related dynamics.

Portfolio Quality KPIs Overview

KPI	What It Measures
1.1 Outstanding Receivables	Portfolio Size
1.2 Outstanding Receivables Growth	Portfolio Growth
1.3 Collection Rate	Cash Conversion
1.4a Receivables at Risk using Consecutive Days Unpaid – RAR(CDU)	Risk (ex-ante)
1.4b Receivables at Risk using Collection Rate – RAR(CR)	Risk (ex-ante)
1.5 Write-off Ratio	Risk (ex-post)
1.6 Repossession Ratio	Risk (ex-post)
1.7 Contractual Credit Period	Tenor
1.8 Effective Credit Period	Tenor

11 While contract and definitions may vary from company to company, we use credit interchangeably with receivables, loans or expected payments.
12 See <https://www.action.org/risk-management-101-guide-portfolio-quality-analysis>

1.3 Collection Rate

Ratio of all collected receivables payments over total receivables payments due for a period (does not include deposits)

CALCULATION
Cash receipts from follow-on payments during the period
Scheduled follow-on payments during the period

RECOMMENDED HEADLINE MEASUREMENT
Period of measurement – One year
Frequency – Monthly
Shorter-term periods of measurement can be helpful for risk trend analysis but should consider seasonality.

RELATED KPIs
Write-off Ratio and Repossession Ratio are KPIs that receivables streams can “escape to” from Collection Rate. If a company decides to write off a customer's receivables or repossesses their solar device, that customer's receivables payment history will be removed from — and effectively improve — the Collection Rate calculation.

USE OF METRIC

- Collection Rate is a distinct metric for the PAYGo solar industry that captures the flexible nature of the payment plans.
- This KPI measures how quickly a company's customers tend to pay off their units, specifically how “on-track” their payments are relative to the <Contractual Credit Period> (see KPI below). Given fixed payment amounts, the lower the overall Collection Rate, the lower the internal rate of return on the unit/loan.
- Collection Rate has been shown to be a reliable indicator of risk as well. Customers with lower Collection Rates appear less likely to complete their payment obligations. As such, Collection Rate can be an effective tool to identify risky portions of a company's portfolio or, equivalently, risky customer segments. (For further detail see <Receivables at Risk using Collection Rate – RAR(CR)> KPI below and <Portfolio Risk Regression Analysis> in the Appendix).

NOTES

- Collection Rate is tracked by all PAYGo solar companies but with different methodologies. In calculating **Scheduled follow-on payments during the period** (the denominator in the Collection Rate equation), companies are encouraged to move toward standardization and include:
 - Follow-on payments for all active contracts that fall due within the period (including contracts signed before and during the period);
 - Follow on payments for customers past their initial contractual term;
 - The regular payment scheduled for the period, regardless of whether a customer makes a larger prepayment in the period or in the past (e.g., the scheduled payment should be \$10 in September and \$10 in October, even if the customer pays \$20 in September and \$0 in October). Resulting distortions are temporary and will smooth out over time and over an aggregate portfolio;

Unit Economics

Company and Operational Indicators: Contextualizing Companies and Tracking Operations

THIS GROUP OF METRICS IS MADE UP OF TWO distinct categories: Company and Operational Indicators. Company Indicators were inspired by some of the common metrics that are tracked to inform the Global Off-Grid Solar Market Report and generate a profile of a business and its products. The basic sales metrics that comprise this category of indicators tell the main story of a company's sales performance and provide meaningful context for the rest of the PAYGo PERFORM KPIs. As a result, they can help investors and other stakeholders to make sense of a company's business model and infer its financing needs. Operational Indicators cover a company's operational performance, which contributes to financial performance in the long run and should therefore also be tracked alongside the Company Indicators. Operational Indicators contribute to a fuller understanding of a company's performance and can be used to make operational improvements.

Both sets of indicators are relevant when assessing the performance of a company, comparing companies or analyzing sector trends. Importantly, they can provide the basis for comparing companies like peer groups and comparing their performance using other metrics. Such comparisons makes it possible to benchmark performance against peers and to measure performance against internal indicators. Benchmarking can reveal whether a company's actions are helping to improve its results and achieve its goals. This will assist business leaders or stakeholders in making projections, taking corrective actions if necessary, and guiding the organization toward growth and profitability.

The Company Indicators and Operational Indicators consist only of a few indicators. Due to the diversity of business models in the PAYGo solar industry, it proved challenging to provide more tailored KPIs for use. The headline KPIs should typically be calculated at least once per one-year period of operation.

1 See <https://www.action.org/global-off-grid-solar-market-report>

Company and Operational Indicators Overview

KPI	Category	What It Measures
1.1 Sales Volume	Company Indicator	Business Model & Contract
1.2 Sales Distribution Model	Company Indicator	Business Model & Contract
1.3 Country Sales	Company Indicator	Sales Performance
1.4 Total Net Sales	Company Indicator	Sales Performance
1.5 Repeat Sales	Company Indicator	Sales Performance & Customer Satisfaction
1.6 Product Sales	Company Indicator	Sales Performance
1.7 Average Selling Price	Operational KPI	Business Model & Contract
1.8 Sales per Distribution Channel	Operational KPI	Sales & Distribution Performance
1.9 Sales Point Rate	Operational KPI	Sales & Distribution Performance
1.10 Net Promoter Score™ (NPS)	Operational KPI	Customer Satisfaction & Loyalty

though major business model and sales strategy changes may necessitate more frequent reporting. Companies, investors, and other stakeholders are encouraged to track the indicators more often or within different periods to keep a closer eye on their business. Tracking additional indicators specific to a region, business model, product or company can shed additional light on potential causes for meaningful change in any one metric.

Company & Operational

Unit and Firm Level KPIs: Measuring Profitability

THE UNIT AND FIRM LEVEL METRICS PROVIDE insights into profitability, the overarching measure of whether a company is prospering or not. A solid understanding of profitability is crucial to assessing the investment needed to help companies and the overall sector grow, and to achieving the energy sector's target of development finance. In this section, a standardized set of metrics, as has been developed here, maps the components of sales revenue and expenses. It can be used in numerous contexts, such as helping assess the ability of a company to service and repay its loans. Identify where it is on its path to profitability, and understand potential for its business model to reach its customers at scale.

THE CHALLENGE OF REPORTING SALES REVENUE

The challenge of reporting sales revenue when customers are paying in installments is determining at what point to recognize that a sale has been made. There are many possibilities. For instance, a company could record a sale when the equipment has been delivered to the customer. A conservative approach would be to record the sale only when the final payment has been received. In between, one could report sales in proportion to the payments received by the end of the accounting period. One can identify and test reported sales revenue will vary greatly depending on the chosen policy.

The Profitability KPIs fall into 3 groups. Firm level KPIs measure elements of profitability at the level of the financial statements. They represent performance that includes all the activities of the company. Unit Economics KPIs, by contrast, look only at variable costs and provide insights at a product level – for instance, the average device cost. This information would not normally be available on financial statements. Finally, a single measure of Liquidity is also included as useful in a sector with a high cash burn rate.

Unit and Firm Level KPIs Overview

KPI	What It Measures
1.1 Total Cash Revenue from Active Customers	Cash Revenue
1.2 Contribution Margin (Cash Receipts)	Profitability (Component Metric)
1.3 EBIT Margin (Cash Receipts)	Profitability (Component Metric)
1.4 Sales and Maintenance Cost Ratio (Cash Receipts)	Variable Cost (Component Metric)
1.5 Cost of Goods Sold Ratio (Cash Receipts)	Variable Cost (Component Metric)
1.6 Fixed Cost Ratio (Cash Receipts)	Fixed Cost (Component Metric)
1.7 Process Expense Ratio (Cash Receipts)	Fixed Cost (Component Metric)
1.8 Financial Expense Ratio (Cash Receipts)	Fixed Cost (Component Metric)
1.9 Fixed Operating Cost Ratio (Cash Receipts)	Fixed Cost (Component Metric)
1.10 Unit Follow-on Payments	Cash Flow
1.11 Unit Customer Defaults	Cash Flow
1.12 Unit Cash Sales	Cash Flow
1.13 Unit Device Cost	Cash Flow
1.14 Unit Contribution Margin	Profitability (Component Metric)
1.15 Unit Sales and Distribution Cost	Variable Cost (Component Metric)
1.16 Unit Servicing and Maintenance Cost	Variable Cost (Component Metric)
1.17 Unit Credit Cost	Fixed Cost
1.18 Liquidity / Total Costs	Cash Buffer

- The PAYGo PERFORM Technical Guide dedicates comprehensive sections to each of the three KPI categories

- Walks through each of the 36 KPIs including definitions, calculations, related KPIs, use of metrics, notes, and, when helpful, illustrations
- Appendix with quick reference guide and additional portfolio quality insights from pilot

MODERATOR

PANELISTS



Geoffrey Manley
CDC Group



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Oolu Solar



Tobias Ruckstuhl
Persistent



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How the KPIs are already being used to monitor the PAYGo Industry



Lucia Spaggiari
MFR



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Value of KPIs was demonstrated through COVID

Objectives PAYGo COVID Impact Monitor

1. Enable **companies to better understand challenging market dynamics** and inform business decisions and contingency plans.
2. Provide market insights to **inform funding decisions** that promote business continuity and promote growth of the sector.
3. **Inform the recovery and response strategies** of sector support partners and programs, to help companies and customers get targeted and effective assistance.

18,163 data points, up to February 2021

20 affiliates participating, amounting to 13 PAYGo companies



Representing 8 countries

Cohort is NOT representative of entire PAYGo sector

Market size:

Representativeness of the data based on the highest number of companies reporting (not current) and in volumes of PAYGo lighting products sold:

- Sub-Saharan Africa: 56%
- East Africa: 66%
- West Africa: 25%

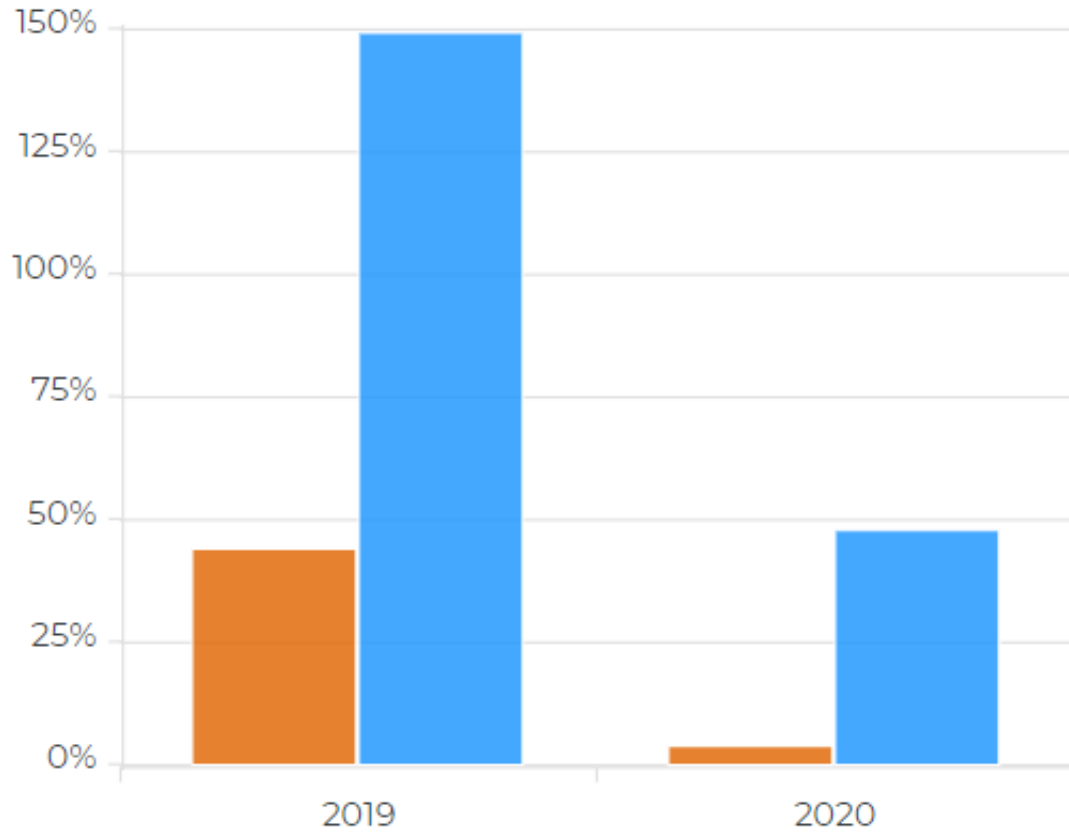
Other factors:

1. Data not weighted by company size or portfolio
2. Average presented is of affiliates, not firms

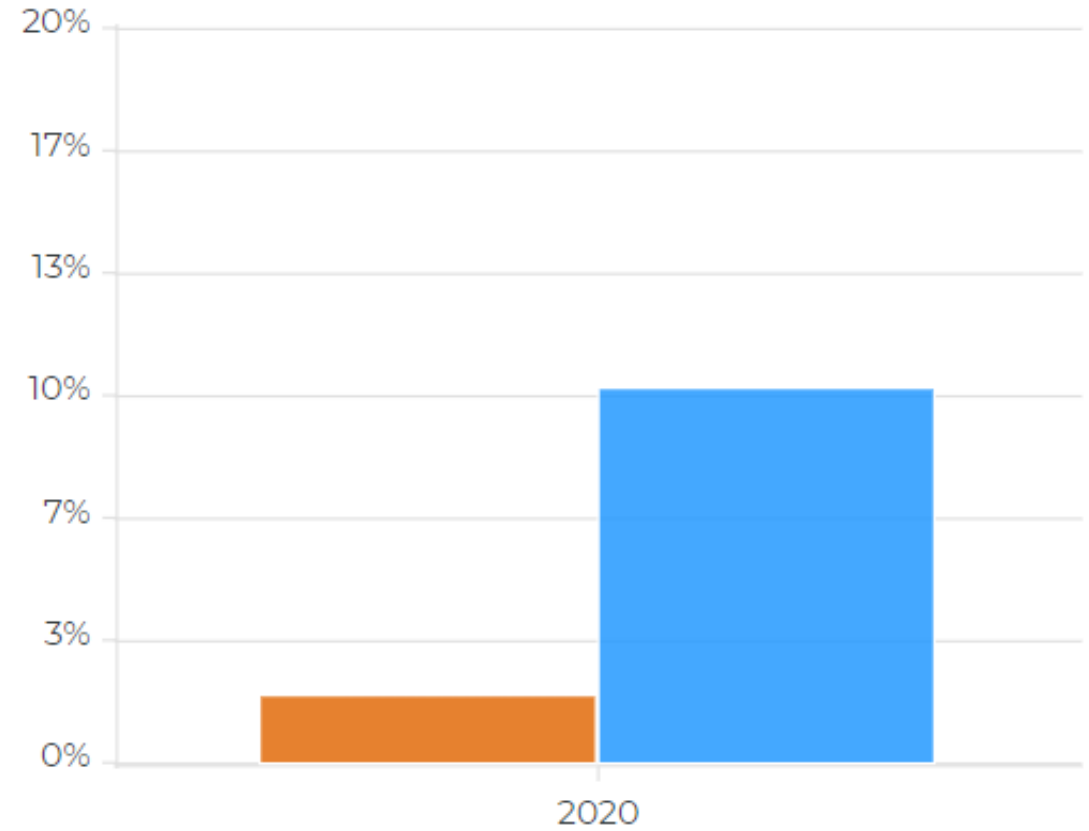
Key takeaways

1. **High standard deviation** not only during COVID but also during pre-COVID: typical performance has not emerged yet.
2. **Sales** have **slowed down**, **liquidity** as a proportion of total costs has **increased**.
3. **Write-off ratio** has **increased** since COVID 19 outbreak.
4. **Portfolio quality** shows **room for improvement**: importance of credit risk management.
5. **PERFORM KPIs** enable early benchmarking, trend analysis, and data driven decision making.

Growth in outstanding receivables



Growth in receivables generated

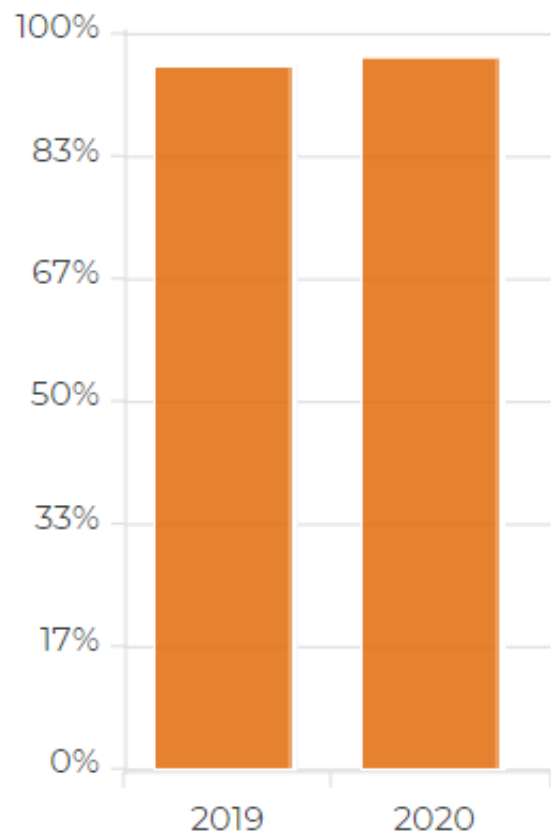


■ Medium scale firms
 ■ Small scale firms
 Median. Annual. Same firms across periods.

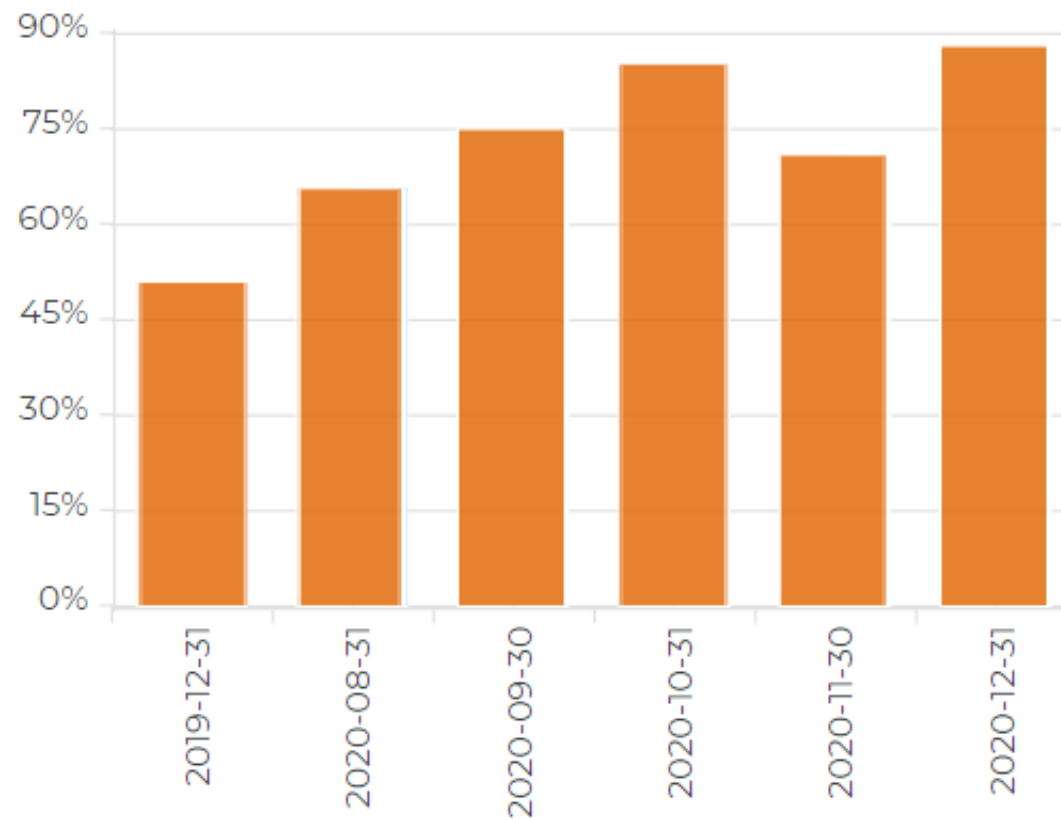
Sales growth has **continued**, albeit at a **slower** rate. Growth in outstanding receivables decreased from 108% in 2019 to 38% in 2020.

Medium scale firms (i.e. total assets 10-100 M USD) display lower growth rates than small scale firms (i.e. total assets < 10 M USD)

% Cashflow from PAYGo customers



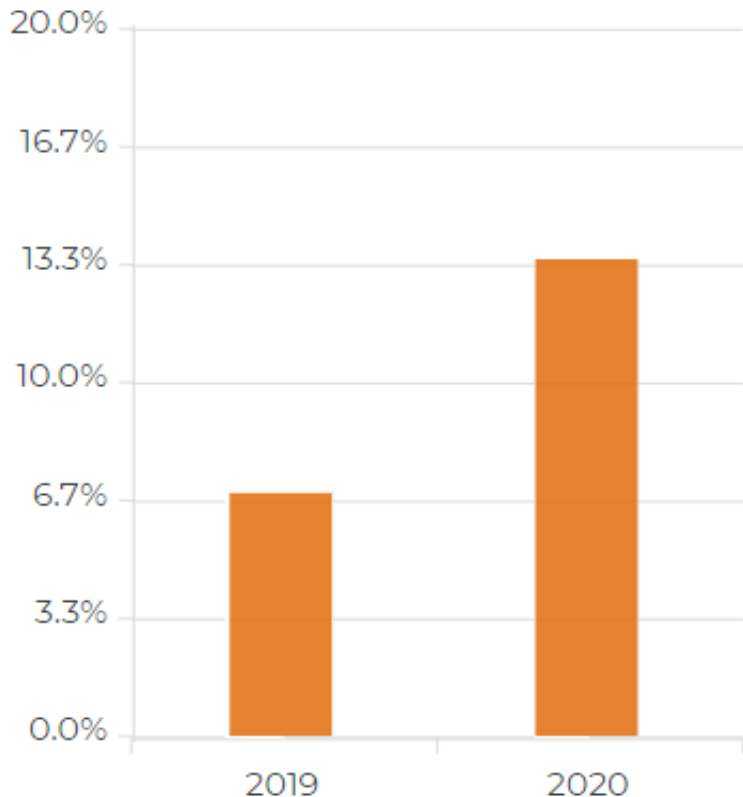
Liquidity <90 days / Total cost



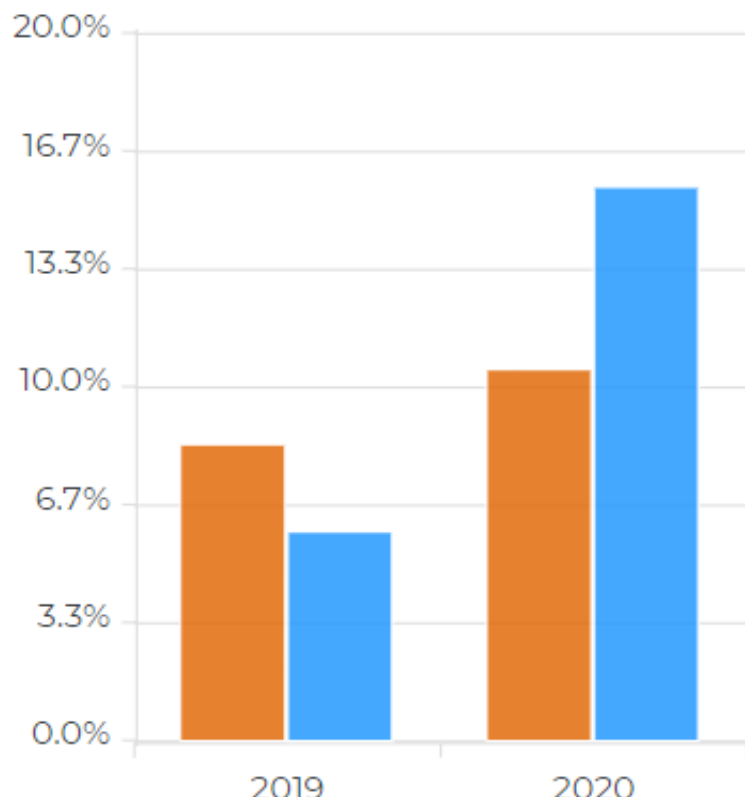
■ All firms Median. Annual (Cashflow from PAYGo); monthly (Liquidity). Same firms across periods.

No shift from **PAYGo sale model** to cash sale model was observed. Related to the sales slowdown, **Liquidity <90 days / Total cost** has **doubled**, from 51% (182% SD) prior to COVID in 2019 to 89% (249% SD) during COVID. 73% of firms have increased their liquidity as a proportion of total costs. However, liquidity remains low overall in absolute terms.

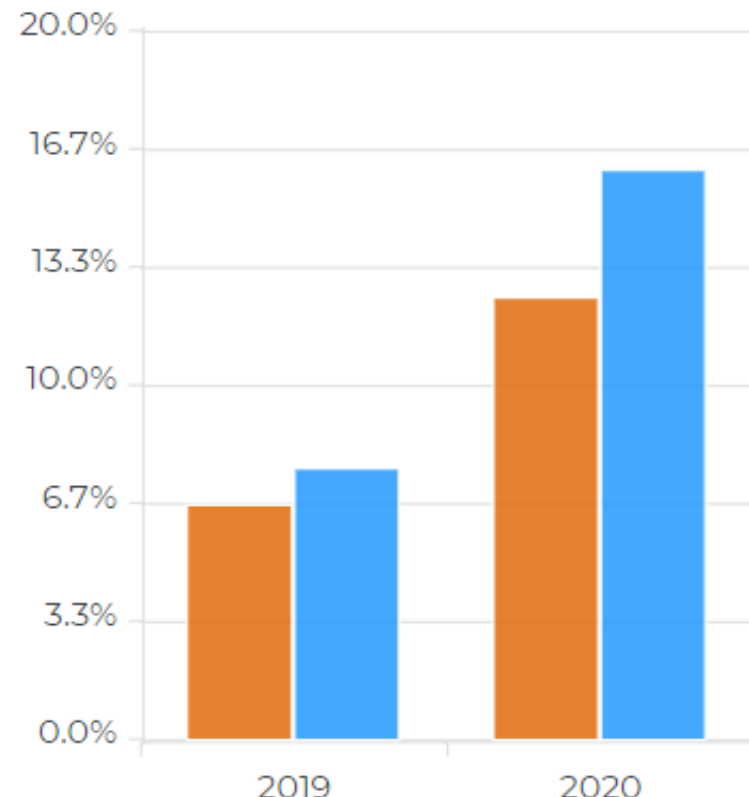
Write-off ratio



■ All firms



■ Medium scale ■ Small scale

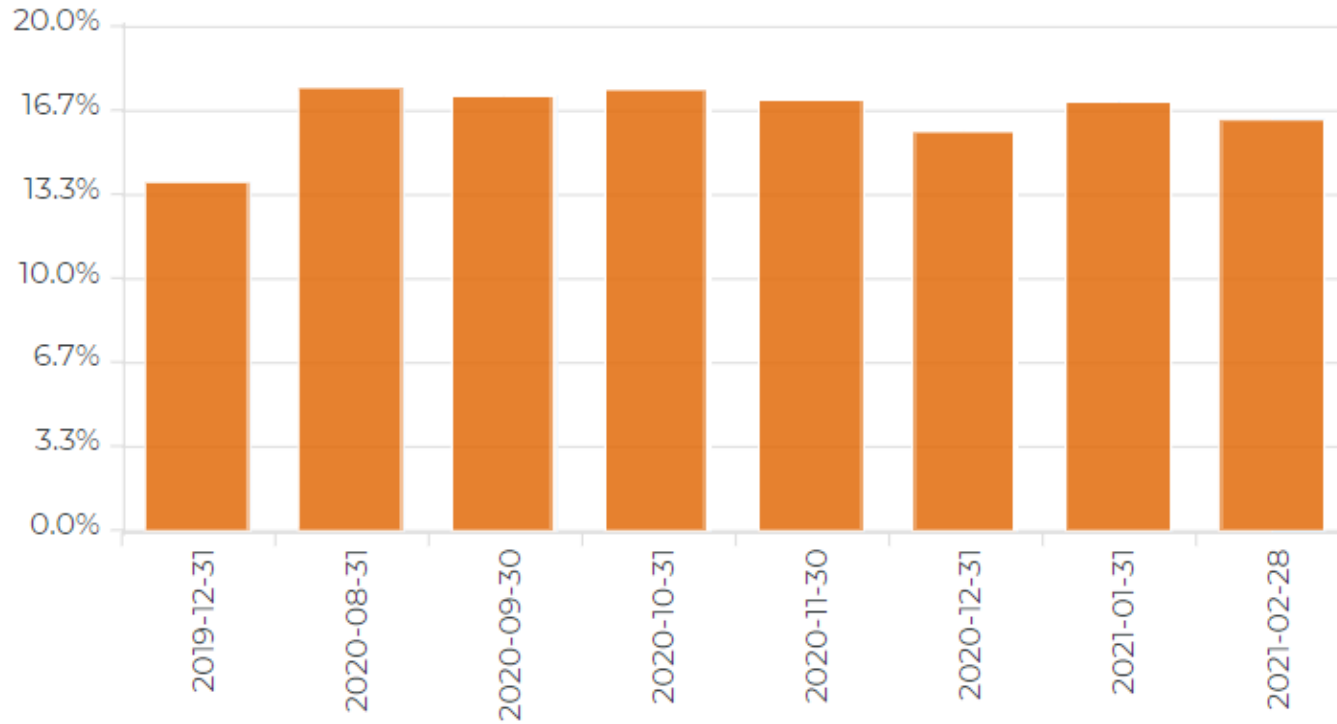


■ Eastern Africa ■ Western Africa

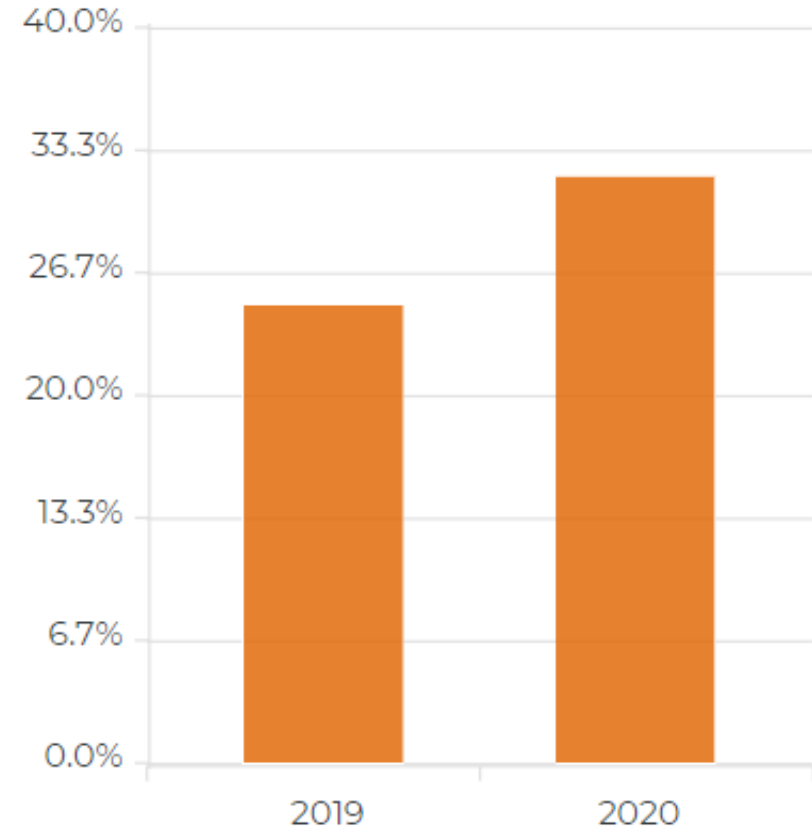
Median. Annual. Same firms across periods.

Write-off ratio increased from 6.9% in 2019 (7% Standard Deviation, hereinafter SD) to **13.6%** in 2020 (14% SD). 75% of firms experienced an increase in write-offs from pre-COVID to COVID times (statistically significant). Higher levels of variation during COVID, combined with a positive skew, suggests that some firms have written-off at significantly higher rates than before.

RAR 30 days



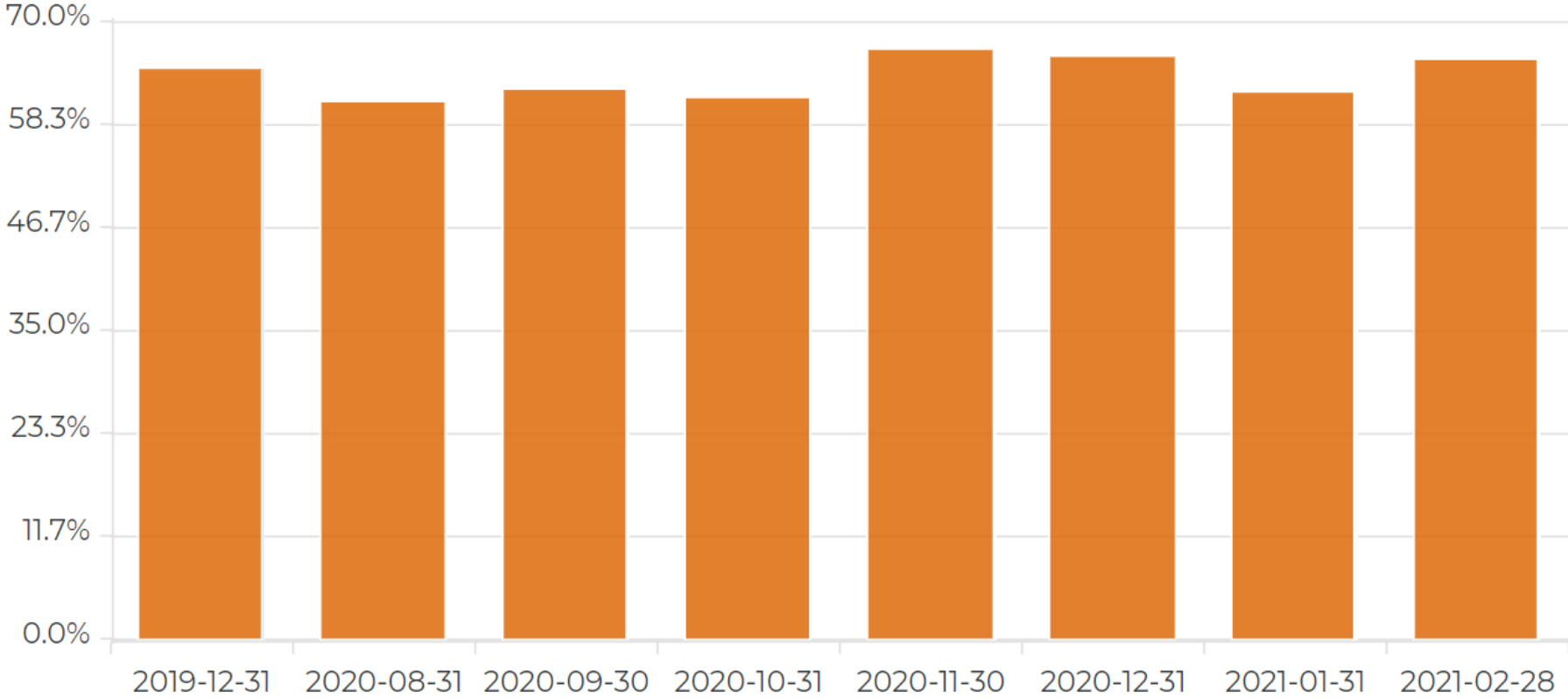
RAR 30 + write-off ratio



■ All firms. Median. Monthly (RAR 30 days), annual (RAR30 + write-off ratio). Same firms across periods.

RAR 30 increased from 13.9% in 2019 (10% SD) to 16.3% in 2021 (13% SD). **High levels of variation** reflect the varied performance of firms, both pre and during COVID, with **50%** experiencing a **decline** in **RAR 30** from pre-COVID to COVID times. However, 75% of the firms that saw RAR 30 decline saw an increase in write-offs, suggesting that **write-offs** contribute to **reducing RAR 30**.

Collection rate



■ All firms Median. Monthly. Same firms across periods.

Collection rate remained stable, increasing by 1% from 65% in 2019 (16% SD) to 66% in 2021 (14% SD). Performance is highly varied, and 50% of firms experienced a decline in collection rate. Similarly high levels of **variation** both pre-COVID in 2019 and during COVID suggest that COVID may not be the primary driver of change in collection rate. **Portfolio quality displays room for improvement.**

Q&A

Please submit your questions via the chat

WHAT'S NEXT

1

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2

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3

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