PAYGo PERFORM
Portfolio Quality Working Group Meeting #2

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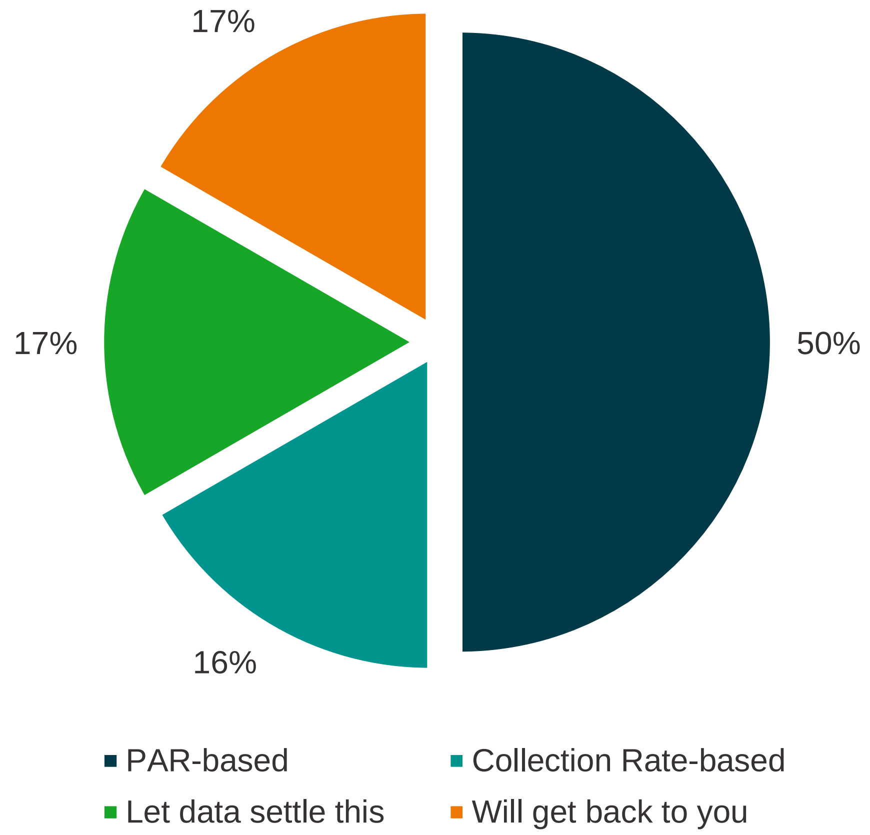
Agenda

1	Review Survey Results
2	Recommendations
3	Data
4	What’s Missing?
5	What’s Next?

1a. Loss / Default Survey #3 Results

It was agreed that both PAR and Collection Rate based measures could be used to determine portfolio ‘at risk’, internally. But, to avoid confusion, the group would arrive at a consensus and select only one measure for reporting. Before proceeding to next steps, please use this opportunity to provide any further feedback on this topic.



“I don't think there's any harm in reporting both, but one of them should definitely be the ‘headline’ metric. I suggest Consecutive days missed”

“I think cumulative days missed can functionally be covered by the utilization rate/collections efficiency”

“PayGo is inherently flexible, and our customers regularly skip a few days. As such, while we certainly look at cumulative days (relative to days activated), this is primarily an indication of slowness, not write-off. However, we believe that consecutive days being skipped is a better indicator of write-off likelihood”

-PAYGo Company

A Closer Look

Identifying Risky Receivables Streams Using the Collection Rate

- The current PAR methodology takes all customers that haven't paid in the past 30 days and places their future owed payments in the "at risk" bucket
- By using the collection we can better calibrate the cutoff so that those that pay very little don't look the same as those that pay most
- In the example below we look at 4 customers with identical contracts starting at the same time.

Period	1	2	3	4	5	6	7	8	9	10	CR
Customer 1	0	0	0	0	0	0	0	0	0	0	0%
Customer 2	10	10	10	10	10	10	0	10	10	10	90%
Customer 3	10	0	0	0	0	0	0	0	0	0	10%
Customer 4	10	10	0	0	10	0	10	0	10	10	60%

- Using the PAR methodology only Customer 1's future receivables would be considered "at risk" and Customers 2, 3, and 4 would be considered not at risk, however, if we used a collection rate of 25% as the threshold, we could also classify Customer 3 as "at risk"
- Using a threshold of 0% over the measurement period would yield the same result as using PAR, but armed with data, the collection rate can be a more versatile identifier

We would like to capture a measure of outstanding receivables streams that a company has determined it no longer expects to receive. However, companies have different triggers for this determination. Regardless, this should manifest in other indicators, such as the Collection Rate and through the unit economics KPIs. How would you define and standardize write-off?

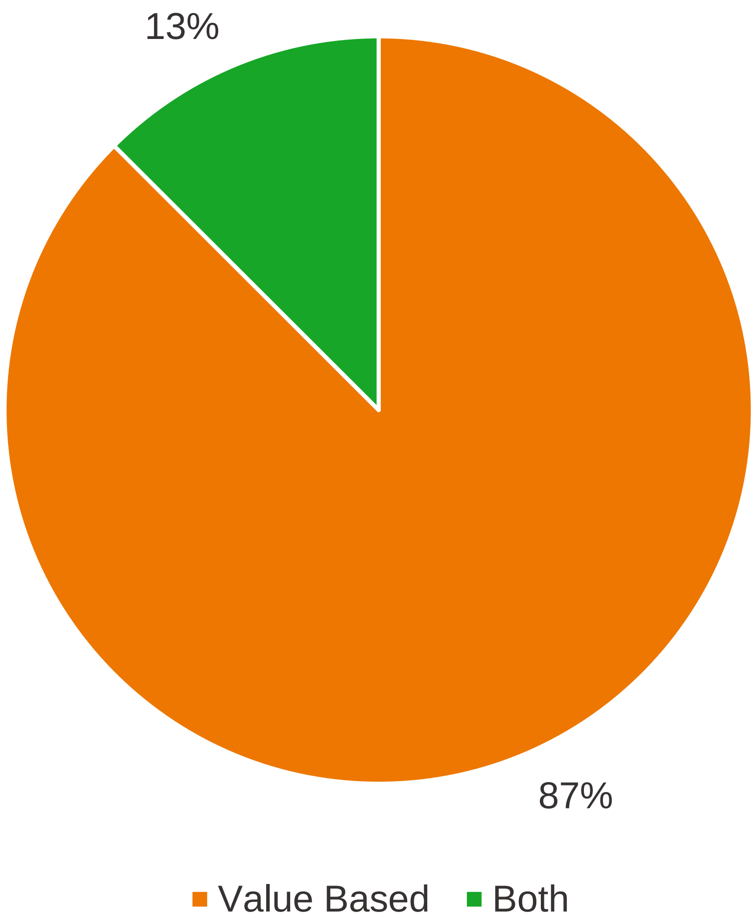
Respondents proposed:

- PAR-based measures (PAR 30/60/90/120/180)
- Values outstanding on any contract where payment has not been received in the last:
  - 30 days or more, including repossessions and returns
  - 90 - 120 days
  - 180 days
- Amount missing before full repayment (in case of lost systems that are written off) and
- Amount missing before full payment – average estimated value of repossessed unit (in case of repossession)
- A composite of Collection Rate and PAR
- Consulting IFRS 9 guidelines

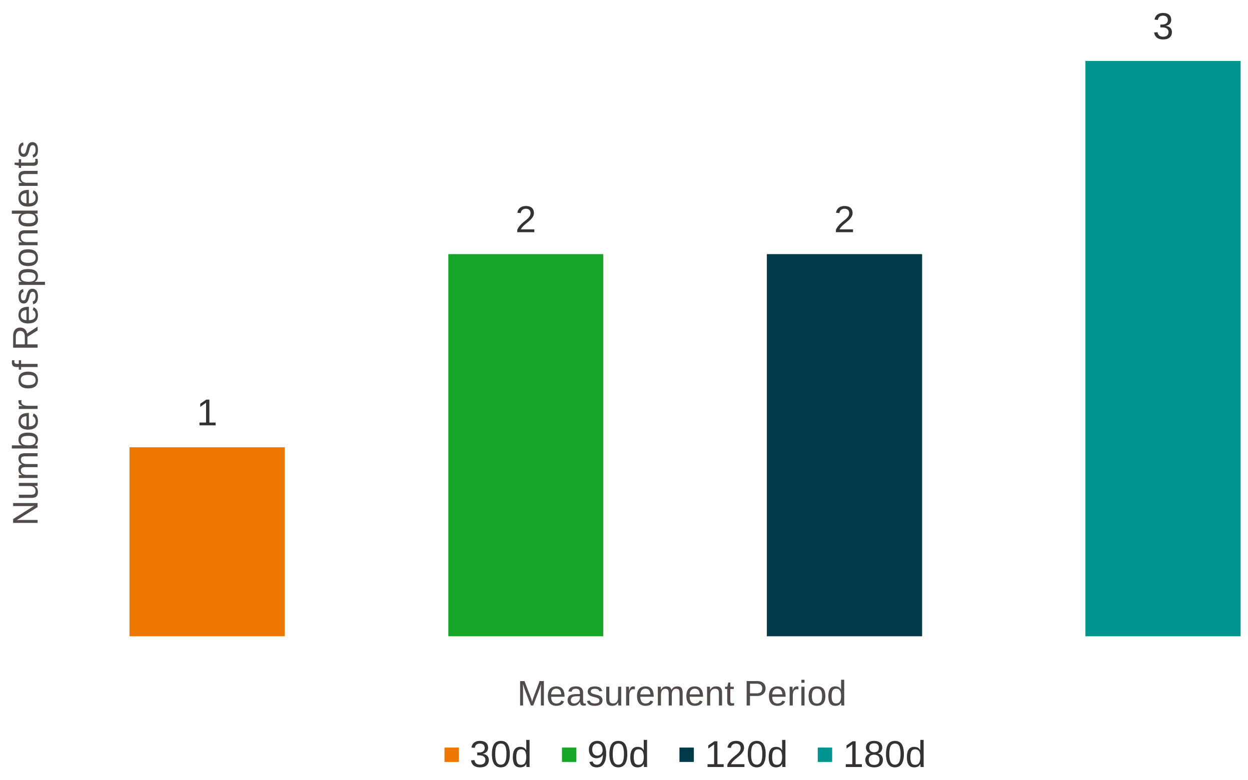
“variations could be allowed based on given company policy. Any deviation from the standard would need to be explained”

“I think this is more of an "expected write off ratio" because a customer can be written off one day (PAR 30) and "unwritten off" the next day (makes a payment). That's ok. Your expected write off ratio is everyone who has been repossessed, truly written off for accountancy purposes (allows for different internal policies) and is PAR30 or greater”

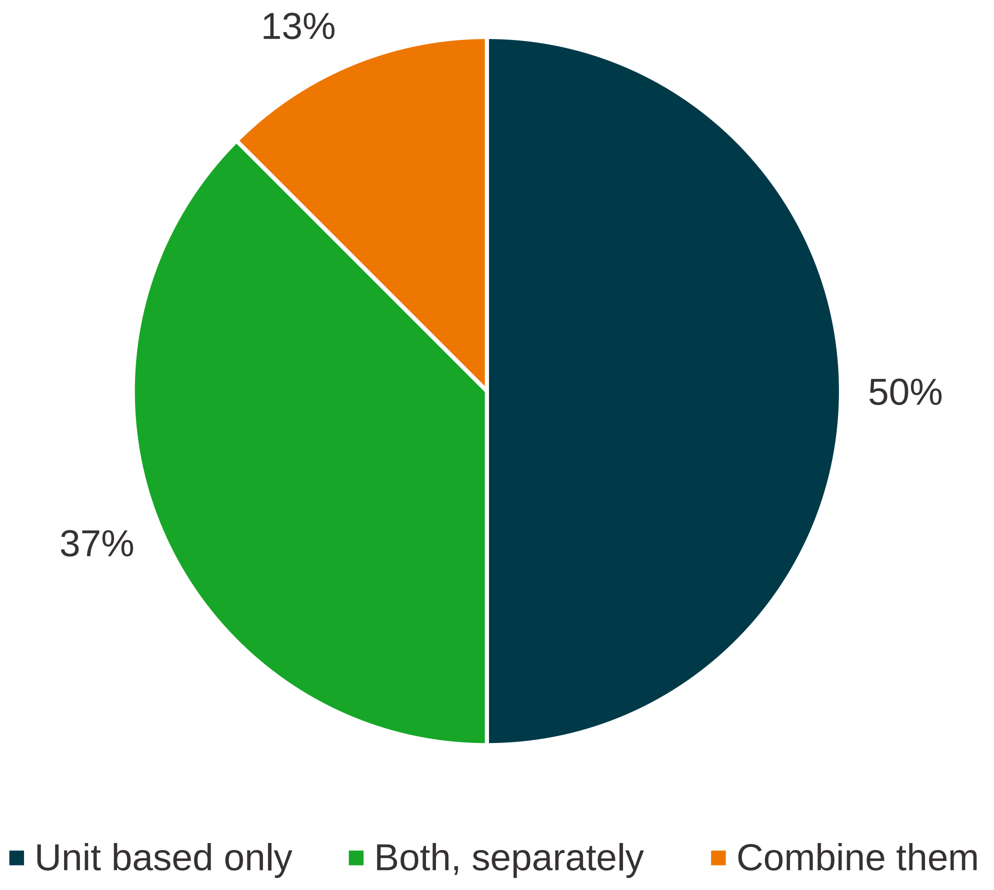
What are your thoughts on measuring write-off ratio on a value basis versus a unit basis?



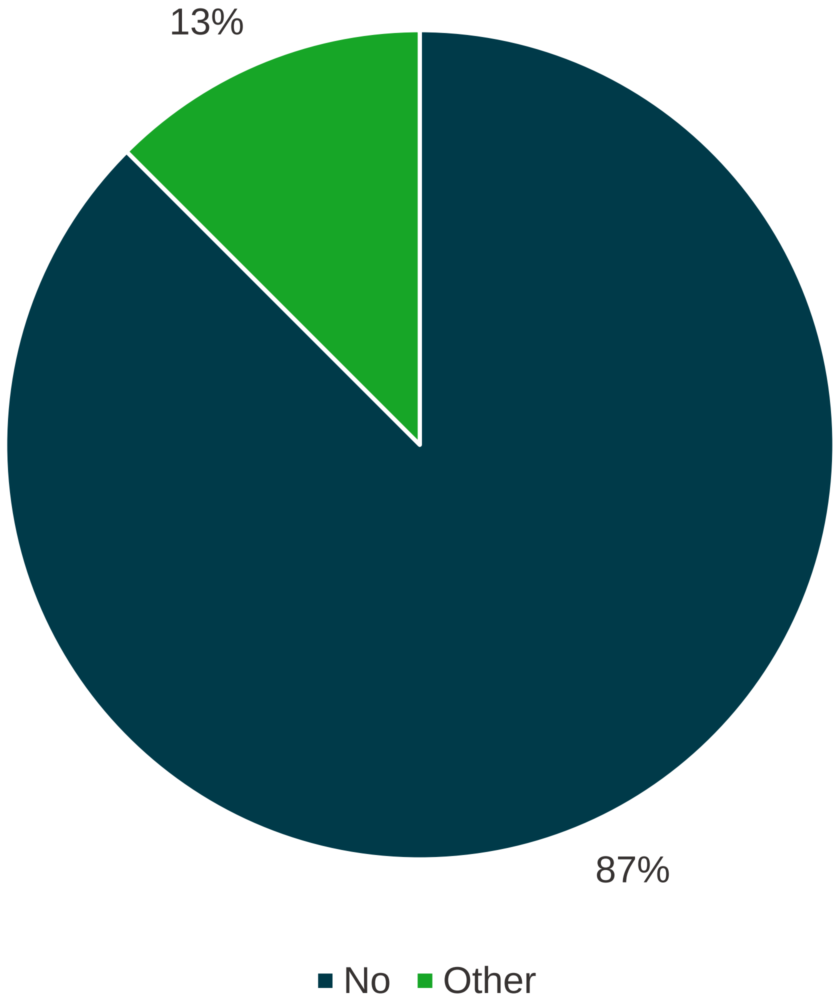
In the preceding question, a "measurement period" was referred to. What would an appropriate measurement period be? Note this will be the same period used for the repossession rate.



The subcommittee recommended a unit-based repossession rate i.e. (units repossessed for redeployment) / (total installed units) due to its simplicity and practicality, although a value-based measure would provide additional information i.e. (value of receivables under contract repossessed over a measurement period/ average value of total receivables). What is your recommendation?



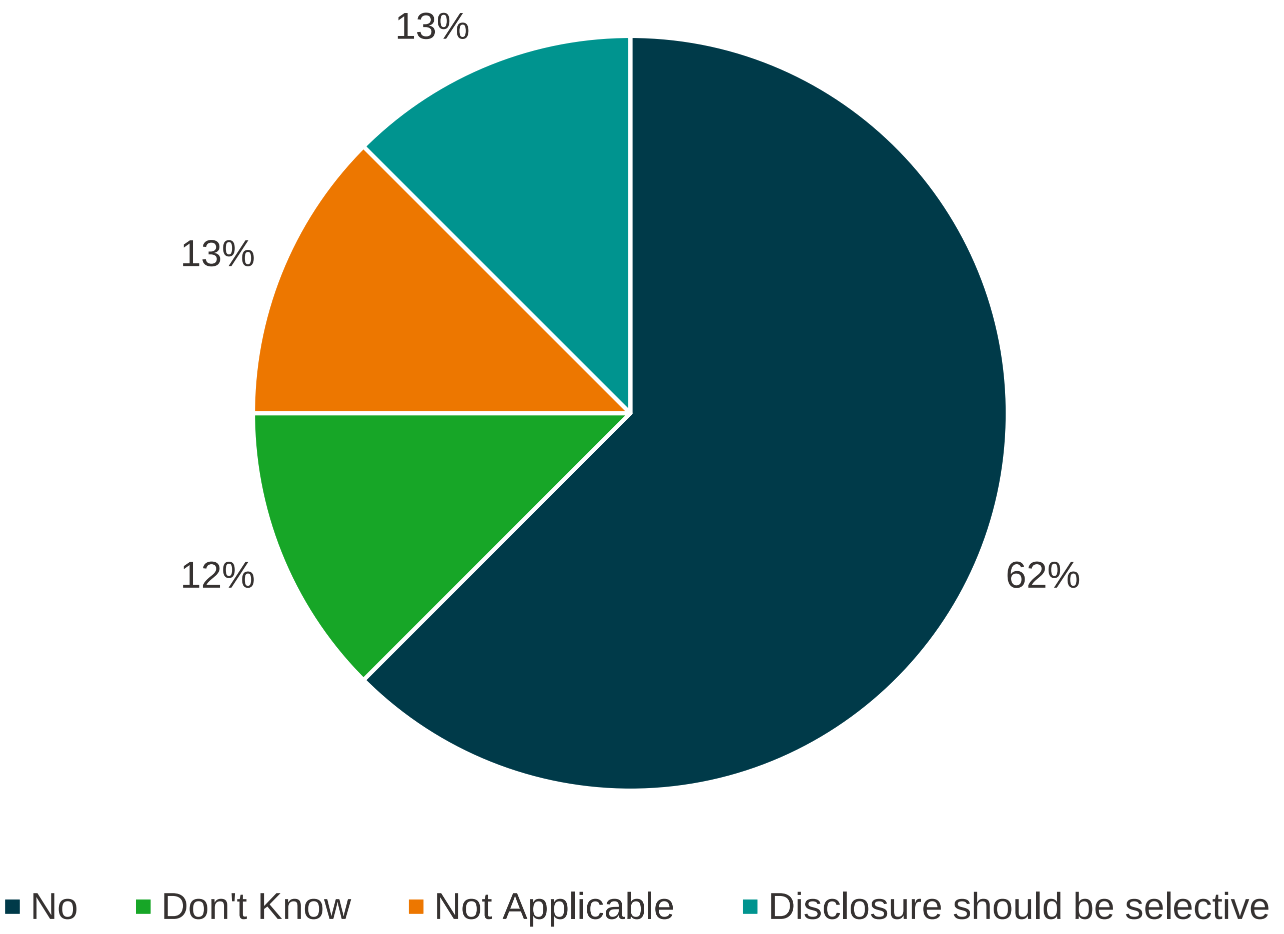
Any other missing ancillary metrics?



One respondent reported Redeployment Efficiency, calculated as :

$$\frac{\text{Total redeployed units}}{\text{Total repossessed units}}$$

Do you see any issues with any of the discussed KPIs/metrics when it comes to practicality / ease of reporting? Willingness (from a company perspective) to report?



Anything else you would like to make note of that you didn't have a chance to, earlier in the survey?

Respondents shared the following:

- For external industry-wide reporting, the combined value-based metric (below) is preferable, as it is comparable across companies, doesn't vary much with pace of growth, and is a good base line predictor of where actual default will end up

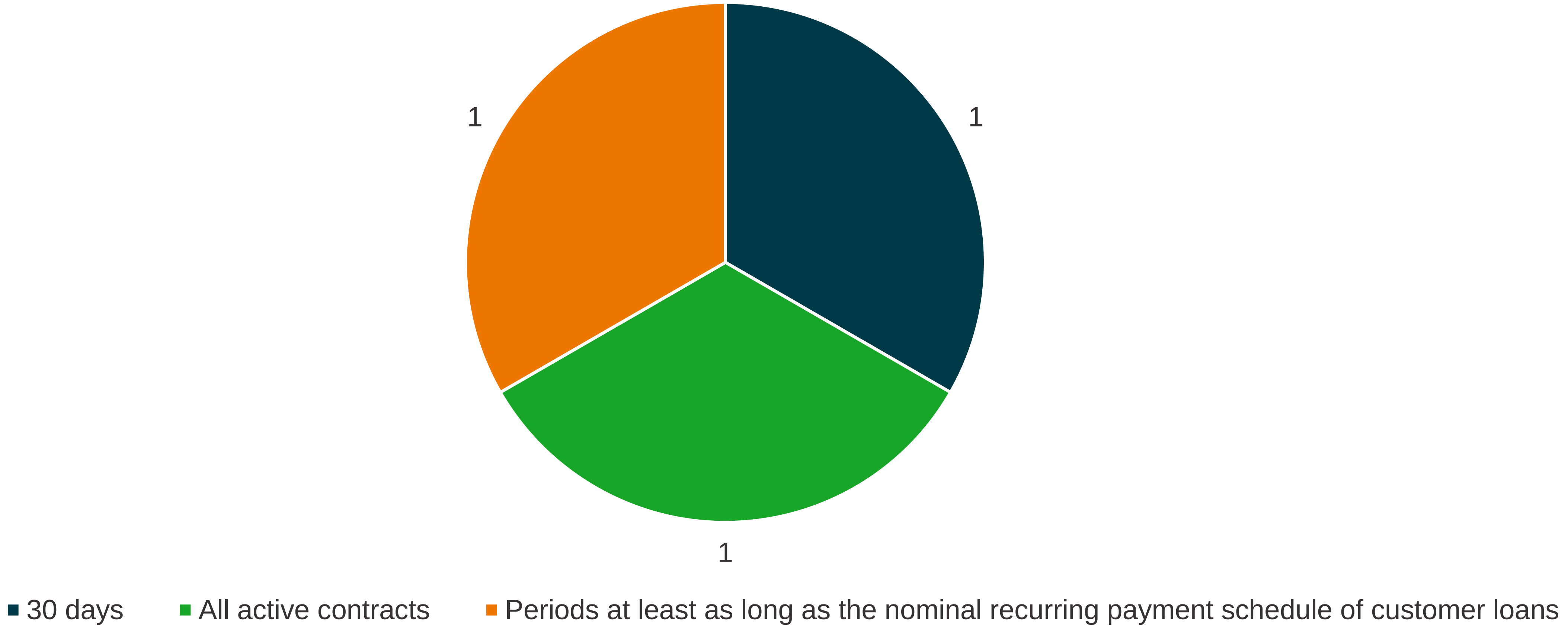
$$\frac{\text{Value of all outstanding receivable that are PAR30 or greater + repossessed + written off + returned}}{\text{Total Original Value underwritten 30 days ago}}$$

- The overall trend line of the above metric (stat) is consistent with more complicated cohort analysis: companies/ products with a stable credit quality have a stable stat, those with deteriorating credit quality have increasing stat, and those with improving credit quality have reducing stat
- As next steps, if would be good to test some realistic numbers in the formulas of KPIs discussed to check if the insights are as expected.
- Cohort overlay may still be needed to make the KPIs meaningful.

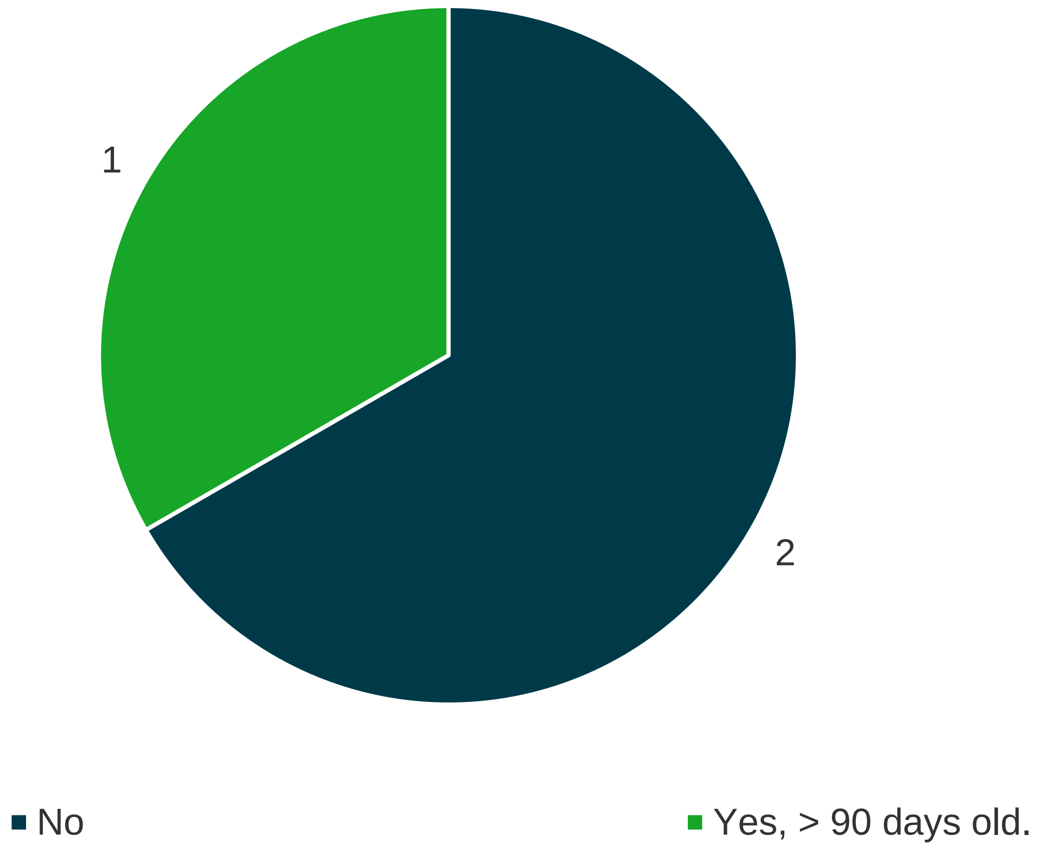
1b. Collection Efficiency Survey #3 Results

We have agreed on the formula for Collection Rate (below) that excludes deposits and covers all assets (solar or otherwise). What should the period of evaluation be, for this headline KPI?

$$\frac{\$\ \text{receivables payments collected}\ [t,t+1]}{\$\ \text{total customer payments due}\ [t,t+1]}$$



Should only contracts that have reached a certain age be included for the headline collection rate?

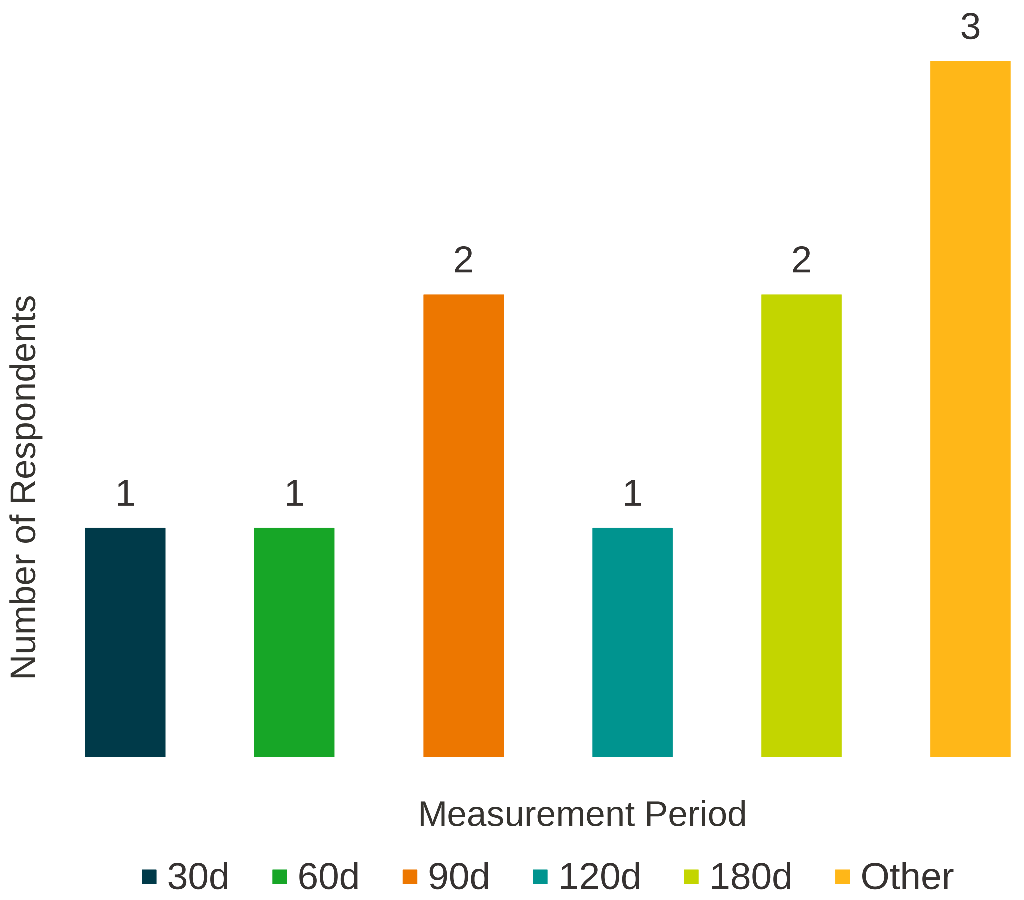


Any other comments on the headline collection rate?

Respondents reported that:

- The definitions have to be clear, especially what is excluded or adjusted for
- The period of evaluation for collection rate and the criteria for excluding contracts from headline collection rate are related, and should be consistent
- A period for evaluation must be determined based on the ‘nominal loan payment periodicity’ (NLPP). If analyses include periods less than the NLPP, they create noise.

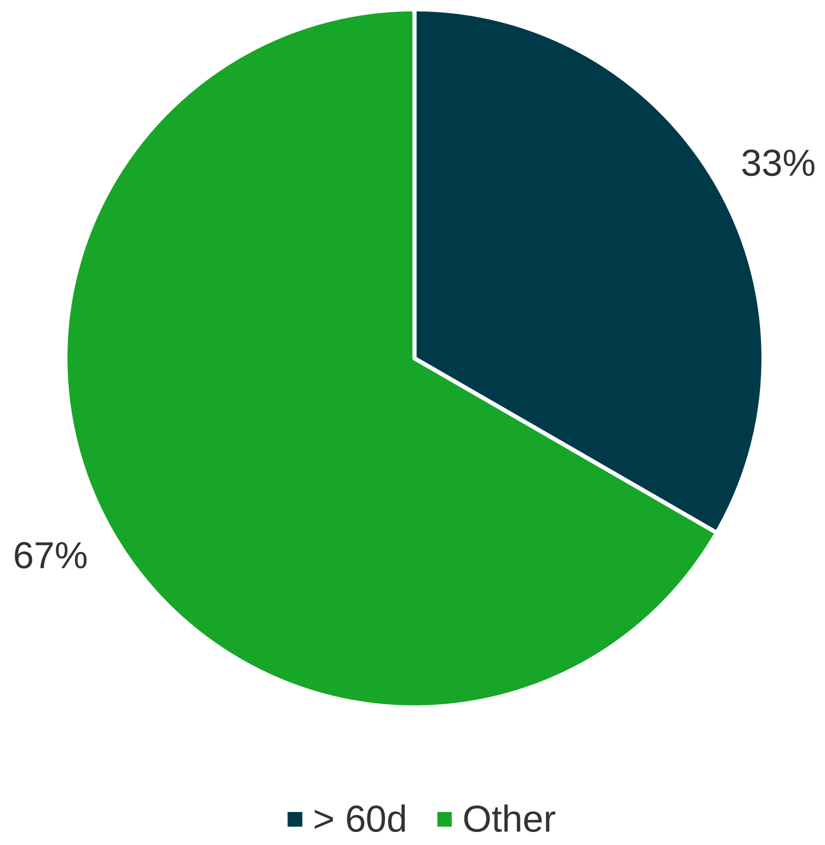
Over what different periods of evaluation should we be looking at for further analysis/insights (i.e. not for the headline reported rate) for the overall portfolio?



Other periods of evaluation suggested:

- Cohorts of 30, 60, 90,120 and 180 days
- Use and compare 30d, 90d and 180d, and generate short term trends of collection rates for these periods
- The smallest ‘calendar-friendly’ interval achievable while still being larger than the ‘NLPP’. E.g., if NLPP is 7d, then period of evaluation should be <7d. If NLPP is between 7 and 14d, then period of evaluation should be 14d.
- Can go up to 60/90d, anything larger will smooth the results.

Should only contracts that have reached a certain age be included in the ‘further analysis/insights’ indicators above? For example, if you selected last 30d in the question above, would you want to only include units/contracts that had been active for at least 60d?

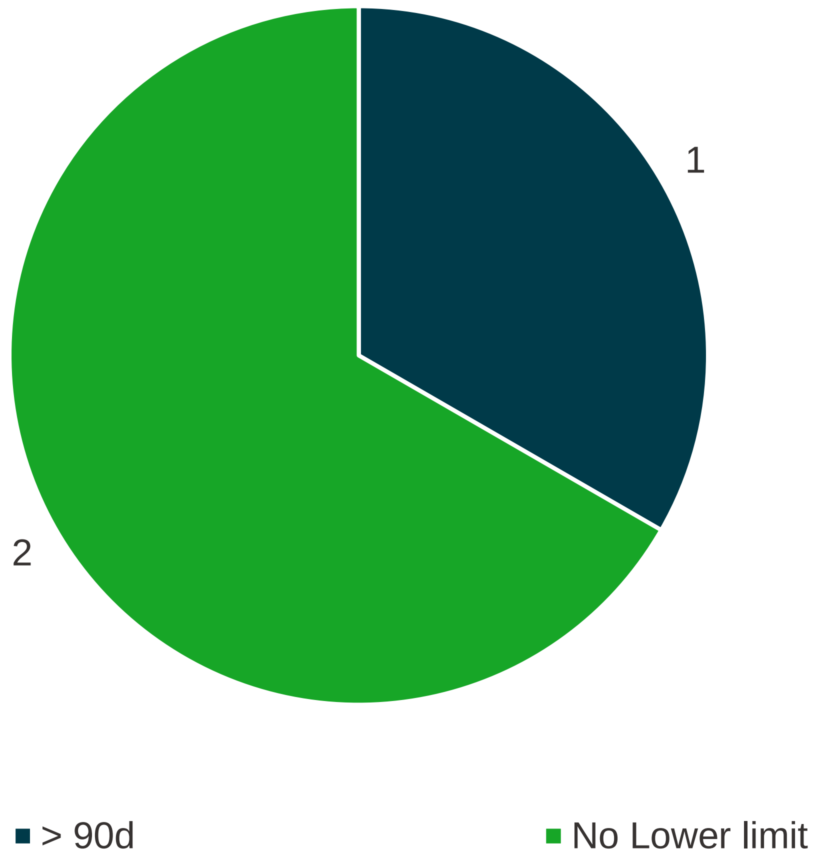


Other responses:

“Can be used additionally to understand if there are specific collection issues in the beginning or end of contracts - but it seems too complicated to combine with the above for standard KPI”

“I can see no valid reason to do this. It sounds like just a way to make the numbers sound better by masking the very real failed accounts”

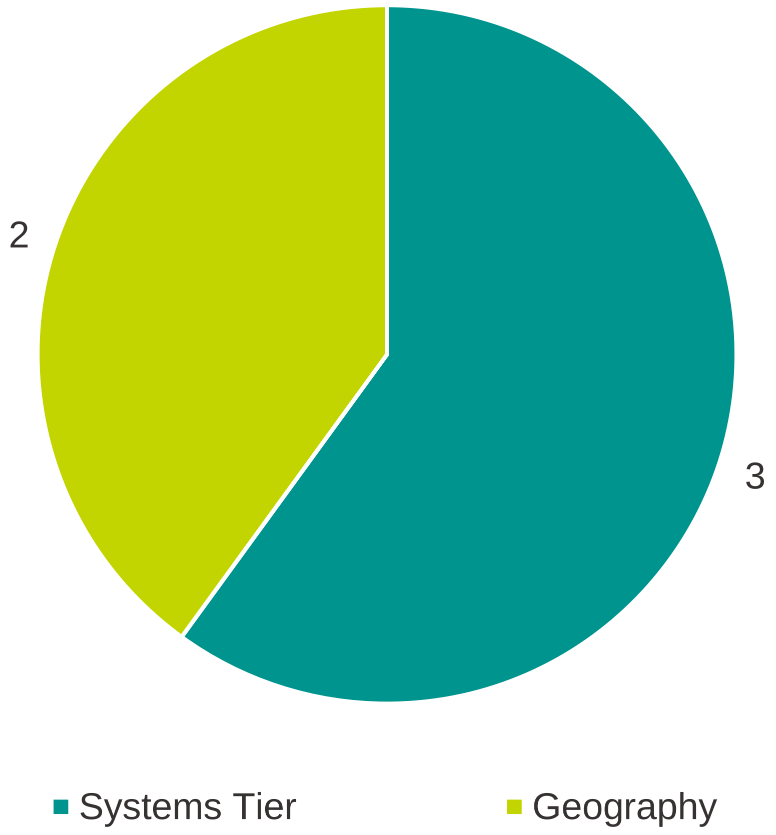
For cohorts analysis based on period of origin, what is the minimum age we should consider for comparison of sales quality? For example, if we are in month 10 of a year, should we only be comparing the collection rate of monthly cohorts that happened during or before month 7?



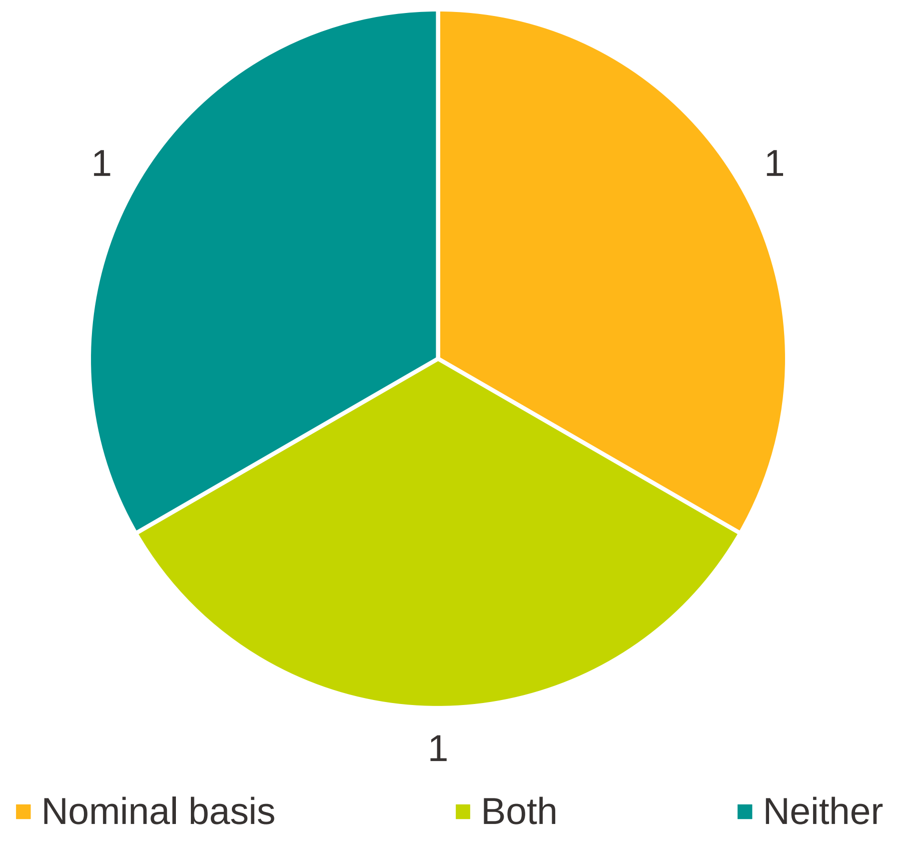
Other relevant cohorts? Check all that apply

<u>Tier Definitions</u>

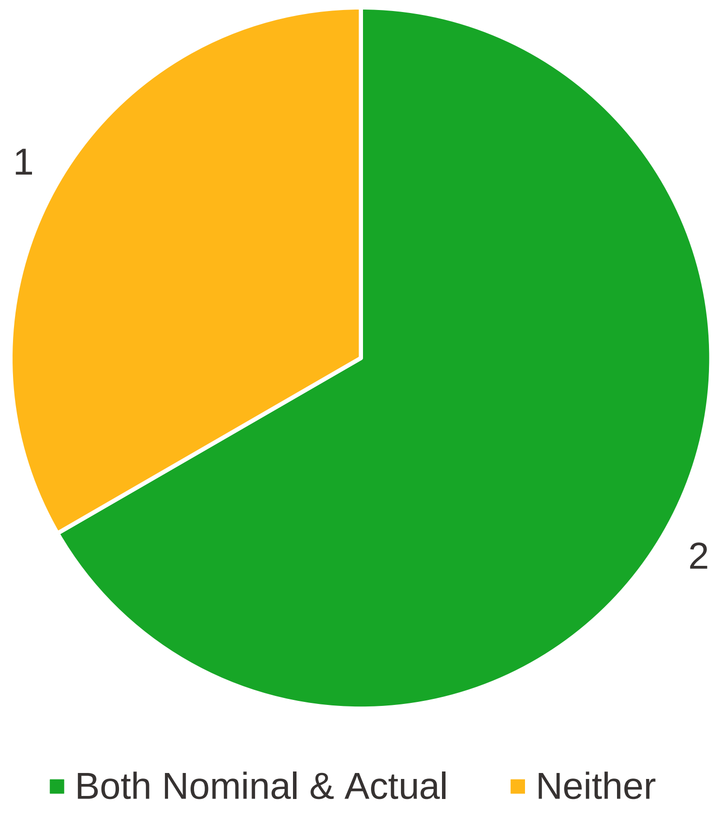
Tier 0: (0-3Wp) - solar lanterns
Tier 1: (3-10Wp) - entry level SHS
Tier 2: (3-50Wp) - SHS + appliance(s), e.g. TV
Tier 3: (50Wp +) - others



The Weighted Average Life of the Receivables (WALR) is an ancillary metric that gives one a sense of the midpoint period for the portfolios payments. Changes in the variable can also be used to indicate how additional growth is affecting the expected or actual payment streams. Do you prefer reporting WALR on an actual basis or nominal basis?



Similarly, the Average Credit Period can also be considered on both a nominal (per KPI 1.0) and actual basis. You can also calculate either for a portfolio by summing each stream weighted by the sum of its receivables over the sum of the entire portfolio's receivables. Which of these do you feel should be reported for a company's active portfolio?

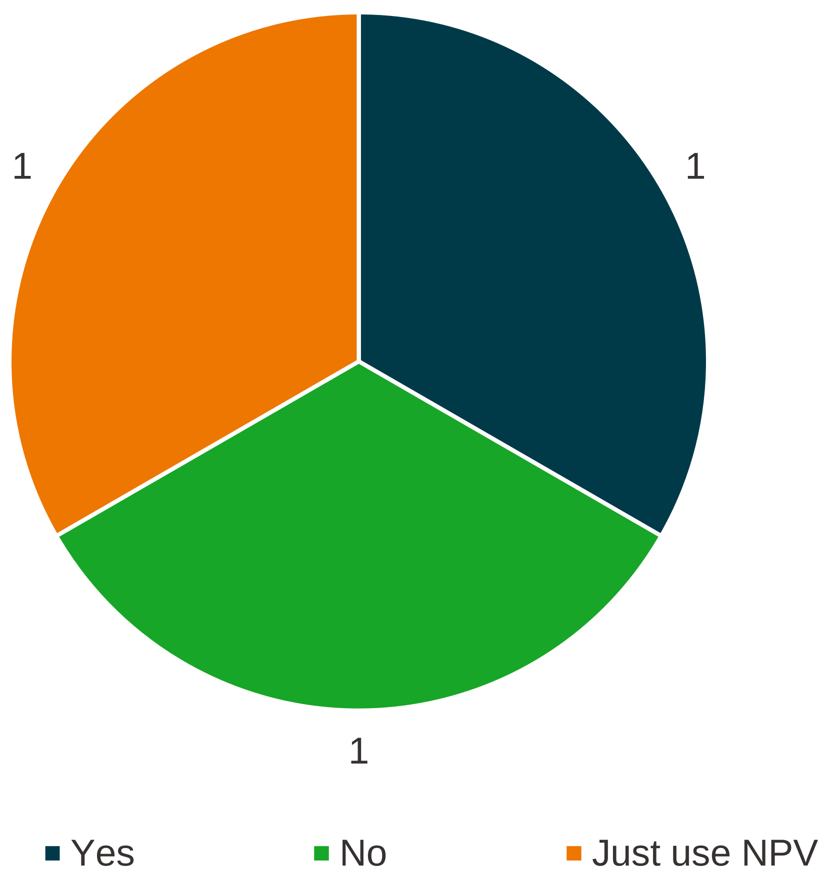


Nominal Average Credit Period: "Average nominal number of months between system acquisition and expected final payment," i.e. per nominal contract length.

Average Actual Credit Period: The average number of months a customer takes to fully pay off a system.

N.B. For portfolio values, both of these should be weighted by the sum of the each customer's payments relative to the total portfolio's receivables flows.

Would it be worthwhile to include a measure of, on average over a portfolio, how much of a receivable's payments in value occur after the nominal credit period?



Do you see any issues with any of the discussed KPIs/metrics when it comes to practicality / ease of reporting? Willingness (from a company perspective) to report?

The respondents expressed:

- The need to make definitions clear, especially what is excluded and adjusted for
- Disclosure is feasible, but since data is commercially sensitive, disclosure will be selective and aggregated
- The industry should be aware of the sampling biases and limitations to these proposed metrics, because they are rudimentary and LMDs may not have the resources to invest in analytics software
- Investors and partners should be aware that it’s possible to hide bad results in these metrics, and should be cautious, and ask additional questions

Anything else you would like to make note of that you didn't have a chance to earlier in the survey?

“Average Actual Credit Period is not easy to calculate for young portfolios”

2. Recommendations

Collection Efficiency Recommendations

- Collection Rate = $\frac{\text{\$ Total receivables payments collected [over X period]}}{\text{\$ Total customer payments due [over X period]}}$
  - net of deposits,
  - [all currently active contracts, over their full periods to date]
    - Still open for discussion + test further at workshop + pilot to finalize
- Cohorts
  - Time – 30, 60, 90, 120, 180 days with no minimum age
  - Origin - Monthly
  - Geography
  - System Size
- Ancillary
  - Weighted Actual and Nominal Credit Periods [agreement for both]

Loss / Default Recommendations

- PAR is now RAR (Receivables at Risk)
  - ➢ Still need to determine means of identifying “at risk” streams (consecutive days missed vs. collection rate < X)
  - ➢ Discuss further + Check Internal Data + Workshop + Pilot
- Write-off Ratio = $\frac{\text{(Receivables payments outstanding under contracts written-off, past [180] days)}}{\text{(Average value of total receivables outstanding, past [180] days)}}$
- Repossession Ratio = $\frac{\text{(Units repossessed for redeployment, past [180] days)}}{\text{(Average Total Installed Units, past [180] days)}}$
  - ➢ Measurement period for both Write-off and Repossession Ratios can be discussed/refined further
  - ➢ Additional value-based Repo Ratio or add to value-based Write-off Ratio?

3. Data

Refining Our Recommendations With Data

- Actual data will help us get to the next step in finalizing our KPI recommendations
  - ➢ Thresholds
  - ➢ Periods of Measurement
  - ➢ Selecting between options
  - ➢ Correlations
    - ❖ Confirming that the KPIs are representative of what we're actually trying to measure, e.g., is missing X consecutive days of payment a better predictor of future write-offs than a collection rate of < Y% for a customer over X days?
- Multi-stage process
  - Internal Working Group Guidance (i.e., getting your help)
  - Workshop + CG
  - Pilot

4. What’s Missing?

Ancillary Metrics for Discussion

- Growth
  - ➢ Current portfolio size KPI is unit-based. Do we need a growth metric based on portfolio value / size of receivables? Periods of evaluation?
- FX
  - ➢ The KPI may do away with the FX Exposure KPI. Although not directly related to portfolio quality, this would be something that investors would be interested as how it relates to company ability to service debt over time.
- Others?

5. What’s Next?

Next Steps

- Our next meeting likely will bring all 3 WGs together to:
  - ➢ Get fresh eyes and additional feedback
  - ➢ Make sure important indicators don't fall through the cracks
  - ➢ Harmonize KPIs and definitions
- PAYGo PERFORM Workshop: The Last Mile to KPIs 2.0
  - ➢ June 19th in Amsterdam, during GOGLA AGM (Link to Register)
  - ➢ Need WG members to attend and help facilitate discussion
  - ➢ Use as opportunity to work through outstanding issues we have before pilot
  - ➢ Even if you can't attend, critical to have your input on what to workshop for PQs
- Anything else?

Thank you

To learn more, please visit

https://www.findevgateway.org/organization/paygo-perform