

PAYGo PERFORM

Portfolio Quality Working Group Subcommittee: Collection Efficiency Session #2

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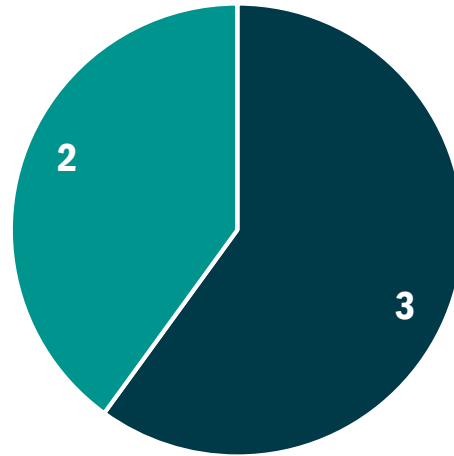
May 1, 2019



Collection Efficiency Indicators: Collection Rate

Do you agree with the definition of Collection Rate (Utilization Rate) proposed by the Collection Efficiency subcommittee?

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



■ Yes ■ Yes, but ... ■ No

YES		YES, BUT ...	
Development Organization	1	Investor	1
PAYGo Company	1	Other	1
Consultancy	1		

If you chose 'Yes, but...' or 'No', please elaborate. If you have an alternative formula, please share here as well.

Respondents reported that:

- The basic formula for collection rate should include the phrase 'net of deposits'
- The word 'payable' in the formula could be replaced with 'due'
- It remains important to analyze collection rate on a cohort basis

For Collection Rate (or the alternative you proposed), what time periods (other than since inception) should be considered? Other adjustments to be made to pass sniff tests or account for other issues? Relevant cohorts?

Respondents suggested:

- Using **standardized product cohorts**
 - ✓ 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
- Using **customer and time cohorts**
- Analyzing **monthly sales by customer cohorts and monthly collection rates**
- **90 days, 30 days, and 15 days**, each broken out by cohort origination month

What are your thoughts on using Collection Rate as an indicator for "at risk" receivables stream (as an alternative to PAR?) Could this measure of cumulative missed payments be more stable / relevant than using consecutive days missed (PAR)? What are relevant thresholds to signify "at risk" payment streams?

Respondents broadly agreed that this was a useful metric once the threshold had been defined and customers had made their second payment (i.e. down payment + bonus).

But, they also highlighted concerns:

- Operational feasibility for PAYGo companies to gather required information beyond the customer basis
- Need clarity on whether to analyze lifetime Collection Rate or only over the past X months?
- Its relevance in agricultural communities that have seasonal incomes
- From an investor perspective, it may be as subjective as (and no more useful than) PAR

Are there other ancillary or informational metrics we should consider in the Collection Efficiency group?

Respondents recommended:

- **Average finishing time**, expressed as a percentage of the nominal finishing time (e.g. customer who pays off 365 energy days on day 455, is at 125% of nominal tenor)
- **Variance from full payment** (are customers consistently falling short of full payment? Are they overpaying or paying too little?)

For consideration:

- **Weighted average life of receivables (WALR)**, measuring the **value-weighted average time** of a receivables streams' (or portfolios) [nominal/actual] payments
- **Average Actual Credit Period & Average Nominal Credit Period** – essentially breaking the ratio referenced in “**Average finishing time**” above into two (which can also be used to make the ratio
- Others? - e.g., **growth, value-based actual v. nominal credit periods** instead of time-based

A Closer Look

Weighted average life of receivables

WALR nominal vs. actual – based on whether one looks at payments as per outlined in the contract with no missed periods vs. what actual payments are, one will receive different answers as shown below where the nominal contract is for 4 payments of 100 over 4 periods:

Period	1	2	3	4	5	6	7	8	9	10	WALR
Nominal	100	100	100	100							2.5
Actual*	100		100			100				100	5.0

*Actual WALR can only be evaluated for fully paid-off receivables streams

WALR = $\sum_{t=1}^n \frac{(t \times FV_t)}{FV_t}$; where t = time period, FV = cash flow face value, and n = total periods

n.b. this is on an individual receivable stream basis, but can easily be applied to a portfolio

Question is: which should be considered – Nominal? Actual? Both? Neither?

A Closer Look

Average Credit Period

Does it make sense to break out **average nominal credit period** and **average actual credit period** or is it sufficient to have just a “actual credit period ratio” (average finishing time)?

Period	1	2	3	4	5	6	7	8	9	10	Weight	Nominal	Actual
Stream 1	0	10	0	10	0	10	0	10	0	10	36%	5	10
Stream 2	5	5	5	5	5	5	0	0	0	0	21%	6	6
Stream 3	15	0	0	0	0	15	15	15	0	0	43%	4	8

- In the portfolio depicted in the table above, the average nominal credit period is 4.8, the average actual period is 8.3, and the “actual credit period ratio” is 1.7.
- The averages are weighted by: (the sum of a stream’s cash flows) / (sum of the total portfolio’s cash flows)
- These indicators would also only be evaluated for fully paid-off receivables streams
- Other considerations – is it helpful to look the percentage of the total receivables paid after the end of the nominal credit period?
 - This would give one a sense of just how much of the payables are received out of the nominal period, i.e. one errant payment can make it make an otherwise on-track stream end up with a very high actual credit period.

Working Group Timeline

Weeks 1 & 2

- Agree on list of KPIs and basic definitions

Week 3

- Determine relevant cohorts, thresholds, time series
- Assign formulas

Week 4

- Identify missing ancillary / informational indicators to pass sniff tests
- Present recommendations to working group

Next Steps / Considerations

- Select relevant cohorts and ancillary metrics
- Identify other missing metrics/indicators/analytical tools needed for PQ (i.e. what should we work on next?)
- Feasibility review – i.e. are there any operational or practical roadblocks for companies reporting these consistently?

We will share the Collection Efficiency Subcommittee's KPI recommendations with the full WG on May 14th - 4PM EAT/1PM GMT/9AM EDT