Loss/Default Subcommittee Call May 1

The Loss/Default Subcommittee is part of the PQ Working Group. The meetings objectives were to finalize formulas and thresholds for the loss/default indicators and what other indicators and tools are needed to round out the understanding of a PAYGo company's loss/default characteristics and portfolio quality in general.

1. Receivables at Risk

Changing name PAR to RAR

There is near consensus to change name from PAR to RAR (Receivables at Risk) – most of the survey respondents (4/5). It should be noted that only one PAYGo Company was represented in the survey.

Reasoning behind the name change is that there is no real default in the PAYGo space; consumers pay when they can and want to. A notion of default and nonpayment over a consecutive day's signals something very different in the PAYGo space than in the MFI space. RAR is therefore a more appropriate metric to indicate what is at risk.

PAYGo company noted that they are currently using PAR for a lot of targets and incentivize the agents. It would thus require an internal change to shift to RAR.

Conclusion: RAR is adopted

PAR-based versus Collection Rate-based approach

Based upon the survey results, both the PAR-based and Collection-based approach should be collected. There is ambiguity in the call why to use both.

1. PAYGo company expressed concern about the consecutive days approach as customers in the PAYGo space typically make incidental payments. The company is, therefore, in favor of the collection rate approach as a cumulative-based metric will be more stable/meaningful.
2. Another PAYGo company currently uses PAR30, with a slight modification to only include customers who purchased their product for more than 130 days ago. The reasoning behind this modification is that it appears that PAR decreases with an increase in sales. This is also considered in the current PAR-based and Collection Rate-based metrics. However, pairing the metrics with a measure of growth could make sense.
3. Reason to use both metrics is because it would allow you to both measure customers who haven't made any payment and customers that are making very small payments.
4. The "at-risk" group should include (1) customers that haven't made any payment for 30 days, and (2) customers that make very small payments every 30 days to be in the "active" group.
5. The cost of collecting and report on both might be too high as there might be potential confusion and reluctance to report on both metrics.
6. Companies in the call might try to adopt the collection rate in parallel to their own indicators (e.g. # days without payment) to test the metric and to identify an appropriate threshold. Point of discussion in next call should be whether some more PAYGo companies can do the same.

Conclusion: we should track both in the pilot to conclude which one is a greater predictor of outcomes and is more consistent across companies. The final metric should be relatively stable and applicable across companies and cohorts.

Threshold

1. From a recent study, it appears that reminder calls have little to no effect to collect late payments. Reasoning is that the customer will pay if the customer has the money. As a customer, it takes a long time to get out of the at-risk group.
2. Inception is not a good threshold to use if the outcome will be heavily dependent on the past and it might not be a good indicator to predict the future. On the other hand, you also want to limit volatility and have a consistent indicator over time.
3. General agreement: between 3-6-month period. Reasoning is that PAYGo companies typically don't expect the customer to do catch-up payments. To compare to RAR, a 90-day threshold might make sense.
4. Outstanding question which time period threshold should be used to measure the expected receivables that will not be collected in the future. This should be measured against data.
5. Based upon the survey results, below 70-80% is at-risk. A PAYGo company found this surprising and would expect this to be a low lower. Again, an outstanding question is how it correlates to non-payment. Measuring against data will help us define a threshold for a x% cutoff on collection efficiency and how long the period of assessment should be.
6. Companies in the call might try to test the metric to identify an appropriate threshold. Much of this will depend on how the data is parsed (e.g. are we looking at a collection-rate based PAR using threshold of <60% over the last 120 days to be a leading indicator of write-offs? How far leading? Etc. What other periodicities make sense beyond the headline reported numbers for internal analysis, like looking at shorter terms as an earlier indicator of risk.
7. Point of discussion in next call should be whether some more PAYGo companies can do the same.

Conclusion: it should be tested against data which thresholds should be used. Ideally a few PAYG companies can look at correlation between metric and outcomes (point of discussion May 14):

- PAR method at 30,60, or 90?
- Collection-rate method for 30,60, and 90 and levels (e.g. 25%, higher).

Other option is to answer this question during pilots and select one method for reporting.

2. Write-off ratio

Definition formula

1. It wasn't clear in the call what is meant by total installed units.
   Total active units (as per in persistent paper) = assets in circulation that have been sold including assets which have been repossessed or returned but excluding assets that have been written off.
   Total installed units = #assets currently provided to customer. Thus, assets that are not fully repaid.

2. Comment on 'The denominator term should also be adjusted to reflect threshold for cut off (e.g. units installed in the last [120] days)': This is different than persistent paper, longer term would potentially bring more noise. Up for discussion.
3. It would be an additional RAR term and would measure the effective write-off.
4. *Average portfolio value in a measurement period* = what is outstanding in terms of PV of the payment streams. It gives you the ratio of what will never be recollected. That would be quite useful If you measure in units. The difference in product price would otherwise not be reflected.

Value based versus unit based

Unit-based:

$$\frac{\text{Units written off, lost or not paid in last [120]days}}{\text{Total installed units}}$$

Value based:

$$\frac{\text{Receivables payments oustanding under contracts being written off}}{\text{Average value of total receivables oustanding during measurement period}}$$

1. If a churn figure (write offs lost + repossessed) would be reconstructed, it may be important to also include unit-based. Such needs were unclear on the call.
2. Value based is more useful as it speaks to the financial efficiency where repossession rate would be more of an operational metric and it is also more useful for the UE WG.
3. You would be able to compare write-off ratio and repossession ratio if you aggregate the value lost by repossession (estimation 60%) and write off.
4. Outstanding question whether there should be a trigger for write-off (possibly 120 days).
5. Outstanding question whether we rename the metric to avoid confusion with accounting write-offs. The definition is a 'unit-based write-off', not client-based. Accounting:
    a. **Write-off:** you do not expect to sell the unit again and therefore not expect to collect any payment for that unit, and you must account for the loss.
    b. **Repossess:** the unit is repossessed and still has a value. You therefore expect to collect some payments for this unit. When you repossess the unit, you write off the receivables of the default customer. You estimate to recover around e.g. 40%.

Conclusion: Value based write-off ratio is more useful. Through a survey or WG, it still must be determined what write-off means and what the trigger should be.

3.Repossession rate

It should only include units that were repossessed and redeployed and there should not be any overlap with written-off units. For PAYGo Companies, the whole unit is not always redeployed but rather some parts. Therefore, you should be able to calculate how many parts (value-based) can be redeployed.

Proposed adjustment for the formula (value-based):

$$\frac{\text{Units repossessed with aim of redeploying}}{\text{Total installed units}}$$

Useful

1. From a portfolio quality perspective, it would be more valuable to look at the value of units/repossessed and write- offs.
2. From an operational perspective, it might be more valuable to look at the number of units/repossessed, and write-offs. It is practical to know how your repossession rate is in comparison to your write-off ratio if your churn is stable. If you combine this with a collection rate, you can get a sense how a company is operating.
3. Both value-based and unit-based are useful to define the interest rate/premium per payment plan.
4. Repossession ratio more of an ancillary operational indicator at this point as the RAR and write-off ratio (and collection rate) capture the portfolio quality aspects.
5. It depends on the philosophy of the investor and the company whether they would prefer the unit based or the value-based view.

<u>Conclusions:</u>

Agreement to have a repossessing ratio

$$\frac{\text{Repossessed for redeploy \#units}}{\text{\# units}}$$

It seems like there are two perspectives to capture:

(1) What percentage of loan value can be recovered for client PAYG contracts originated?

You should estimate how many units (or parts of unites) can be redeployed when the units are repossessed. Value of repossessed should be a client view

$$\frac{\text{Clients long term defaulted (reach a certain threshold of consecutive days of nonpayment} + \text{ repossessed hardware}}{\text{Average portfolio value}}$$

(2) What percentage of units can deliver ROI (vs being written off or being repossessed)?

1. $\frac{\text{\#units that are long term disables}}{\text{Total installed units}}$

2. $\frac{\text{\#repossessed for redeployment (units)}}{\text{Total installed units}}$

4.Other

If we have a value-based view for write-off and repossession, then there is no reason to also have the expected cumulative loss.

5.Next steps

1. Identify missing ancillary/informational indicators to pass sniff tests.
2. Present recommendations to working group.

Discussion points for the working group:

1. RAR
    a. PAR-based or collection-based or both.
    b. Assess whether PAYGo companies in the working group are willing to look at their data whether PAR or collection based makes sense and which threshold makes sense (3-6 months? 50%/70%/80%?)
2. Write-off ratio
    a. Recommendation value-based write-off ratio
    b. Definition of write-off should be clarified
    c. Discussion whether to change the name to avoid confusion with the accounting definition.
3. Repossession rate
    a. Unit redeploy repossession ratio
    b. Discussion whether we want to have it value-based.
    c. Financial basis versus unit basis
4. Other
    a. Any other tools that should be incorporated to measure Portfolio Quality
    b. Discussion around whether we want to explore KPIs outside of Collection Efficiency and Loss/default to measure the Portfolio Quality.
5. Data
    a. Feasibility and practicality of the data that must be collected for these KPIs and question whether companies want to share this information on a headline basis.