MPOP Programme C: MPS Review Priority Changes

September 2019

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1. Purpose of this paper and summary

Background

A paper was presented by MOSL at the July 2019 Market Performance Committee (MPC) meeting regarding the prioritisation of changes to certain Market Performance Standards (MPS). The original paper covered: MPS 15, MPS 17, MPS 18 and MPS 19. The following was agreed in the meeting with MPC:

- MPS 15: reduce the charge-level to zero; and
- MPS 17: extend the SLA to 10 business days (BDs).

The following two actions were also agreed:

- MOSL to raise a code change proposal for MPS 15 (A28_14); and
- MOSL to further develop the changes to MPS 18 proposed in the July MPC (A28_15).

The code change for MPS 15 was submitted to Panel for their consideration in August and subsequently approved.

In the August 2019 MPC meeting MOSL presented recommendations for changing MPS 18 based on a scenario analysis that incorporated the changes to MPS 15 and MPS 17. The scenario analysis considered the effect on total MPS charges of varying the MPS 18 SLA with a single point of failure. In the same meeting, issues around the cap were introduced and there was a discussion about how to bring more Trading Parties under the cap into the “incentive region”. MPC asked MOSL to extend the analysis to include the following scenarios:

- A variable charge level for MPS 18: £10, £15 and £20; and
- A variable level of the cap: 0.15%, 0.20% and 0.30%.

The purpose of this paper is to summarise the analysis done so far and to outline the resulting recommendations.

Recommendation

Based on the results of the scenario analysis, and the application of other criteria, the MPC is asked to ***agree*** the following changes:

- Extend Time Parameter 1 for MPS 18 to 200 business days with a £15 charge and remove Time Parameter 2 (i.e. a single point of failure at 200 business days with a £15 charge); and
- Increase the cap initially to 0.25% with a view to increasing it to 0.30% no later than October 2020.

The proposed changes would initially bring the 60% of SPIDs into the incentive region by April-2020, then 80% by October-2020.

MOSL also recommends the following:

- That the Performance Resolution Process be used to bring the level of charges within the incentive region and/or below the cap with reference to a new "cap ratio" Additional Performance Indicator (API); and
- The individual cap ratio for each Trading Party (i.e. the ratio between the cap and MPS charges) be made an API and published on MOSL's website as a reputational incentive and to facilitate performance resolution.

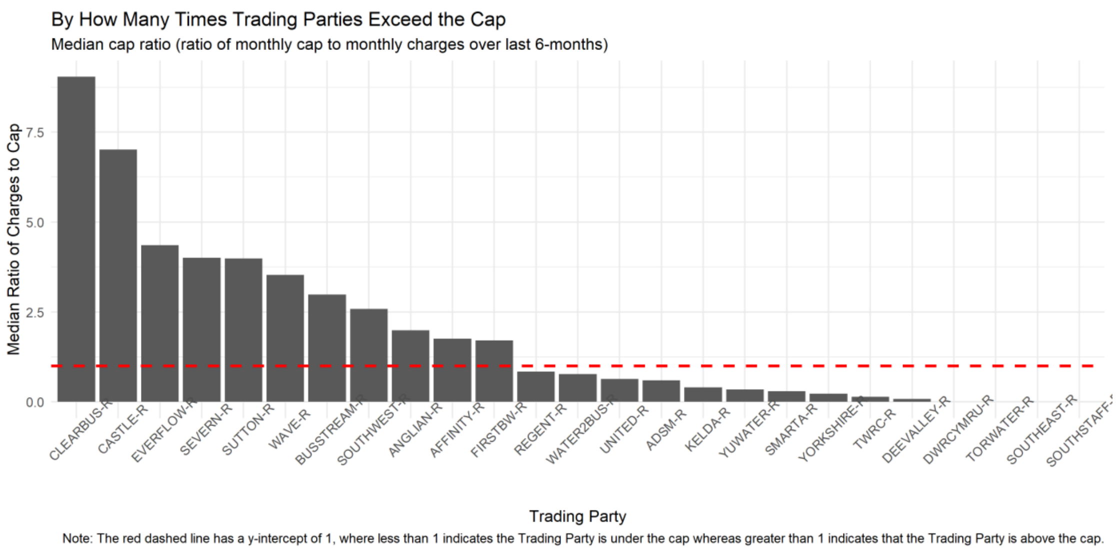
Publishing the cap ratio will have two benefits: first it can be used to initiate Initial Performance Rectification Plans (IPRPs); and secondly, it will create a reputational incentive for those Trading Parties significantly over the cap.

2. Introduction

The problem with the cap

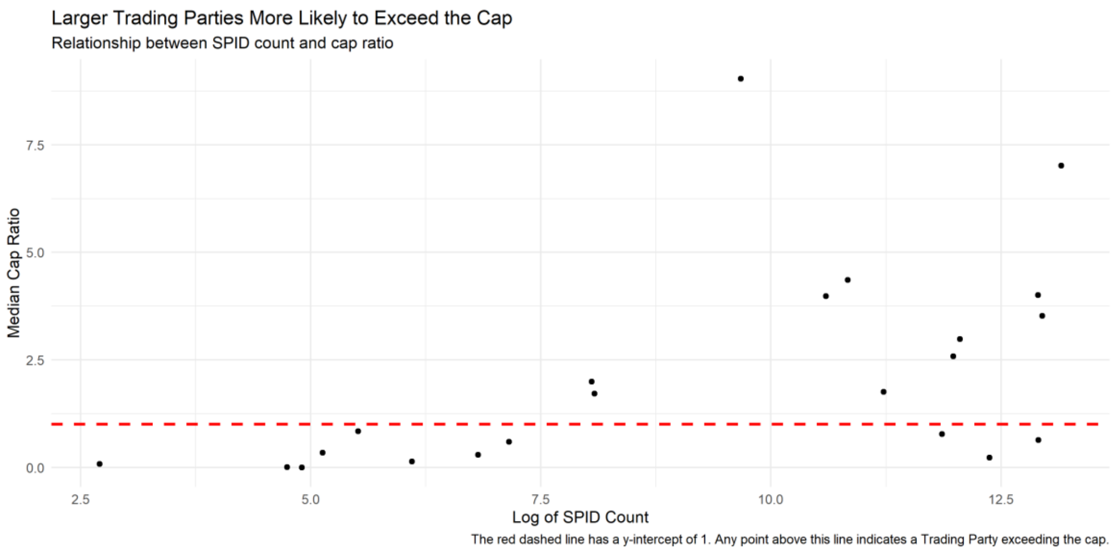
Most Trading Parties exceed the cap by a multiple. The graph below shows that 11 out of 21 (52%) Trading Parties exceed the cap.

Figure 1



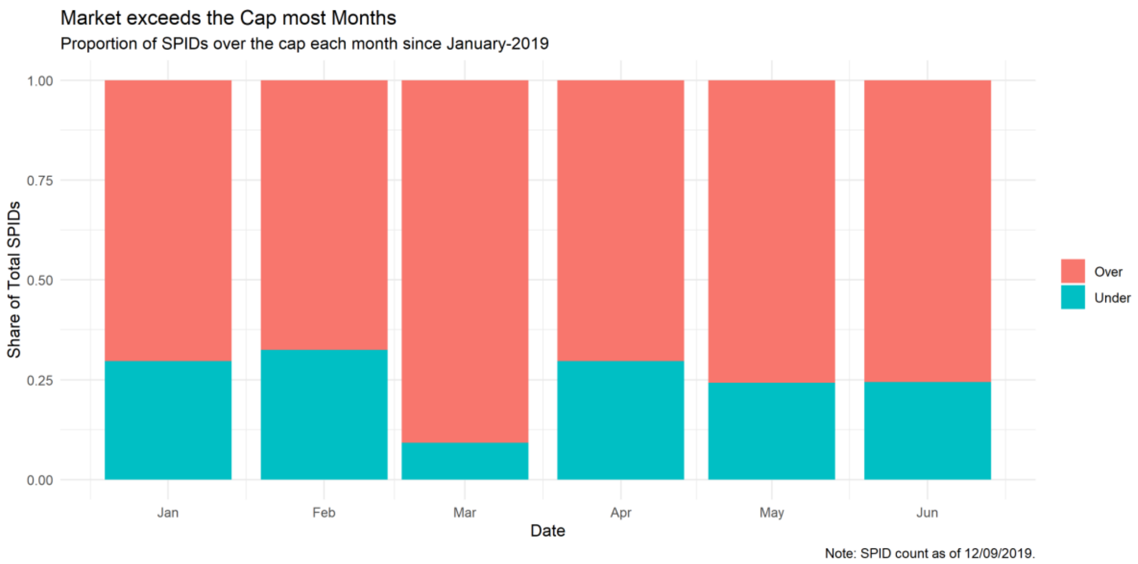
Larger Trading Parties are more likely to exceed the cap, although there is considerable variation.

Figure 2



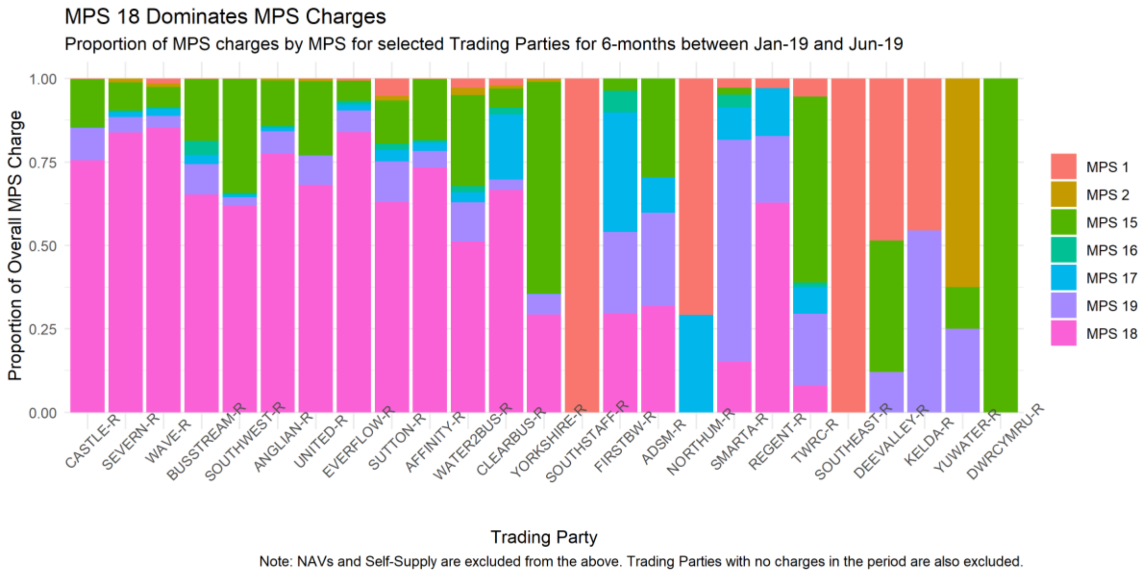
This point is further emphasised by the fact that most of the market (by SPID count) exceed the cap in most months.

Figure 3



MPS 18 is the dominant driver of MPS charges for most Trading Parties, particularly the larger Trading Parties.

Figure 4



Defining an incentive region

We define the "incentive region" as the area under the cap plus an area above but "close" to the cap. The area above the cap should be close enough that there is a reasonable incentive for the Trading Party to reduce their charges to bring themselves below the cap. The incentive region can be increased either by amending the standards or increasing the cap. These options are considered in this paper using scenario analysis.

Scenario analysis

This paper shows the results of scenario analysis that was conducted to compare potential changes to MPS 18 and the cap. It incorporated the effects of changes that had already been agreed to MPS 15 (zero charge for task failures) and MPS 17 (extended SLA to 10 business days).

The parameters of a possible change to MPS 18 include the following:

- Threshold (currently 95%)
- Time parameters / SLA (two time parameter failures, TP1: 140 BD; and TP2: 170 BD)
- Charge-level (£20)

The threshold of 95% has been deemed appropriate by MOSL and MPC and is not currently being considered for change. The changes to MPS 18 that were considered included: (i) an extended SLA, with a single point of failure, at 140, 170, 200 and 250 business days; and (ii) different charge levels for task failure at £10, £15 and £20.

To account for changes to the SLA, the MPS 18 MPS charge was adjusted initially according to each Trading Party's meter read profile (i.e. how many meters were read within 170 BD, 200 BD and 250 BD) compared to current. The resulting charge level was subsequently adjusted depending on the level of expected failed tasks.

An additional layer of scenarios was added to consider the impact of changing the level of the cap. The level of the cap was varied from its current level of 0.15% to 0.30% at intervals of 0.05%, i.e. 0.15%, 0.20%, 0.25% and 0.30% were considered in conjunction with the changes to the MPS 18 SLA and charge level. In total, 48 scenarios were considered.

Each scenario was evaluated according to its impact on the proportion of SPIDs expected to be brought into the incentive region in relation to the scale of change required. For example, an increase to the MPS 18 SLA to 200 business days from 140 business days is preferable to an increase to 250 business days if it has the same impact. Additional criteria were defined to avoid extreme changes and to refine the list of "candidate" scenarios.

Decision criteria

In terms of bringing more Trading Parties into the incentive region, the changes are all additive. That is: increasing the MPS 18 SLA from 160 through to 250 business days; reducing the MPS 18 charge from £20 through to £10; and, finally, increasing the cap from 0.15% through to 0.30%. All the changes increase the incentive region.

Without additional criteria, and if increasing the incentive region is the only concern, then the solution is the extreme point of: an SLA of 250 business days with a charge of £10 and a cap-level of 0.30%.

To avoid extreme outcomes, we use additional criteria to determine the optimum combination of changes for each of: (i) MPS 18 SLA; (ii) MPS 18 charge-level; and (iii) level of the cap.

MPS 18 SLA

The MPS 18 SLA should be as close as possible to the bi-annual meter read requirement. Any increase in the SLA should be justified by a more than proportional increase to the incentive region. In effect, the increase in time between reads should lead to a greater increase in the expected number of reads for that period. There are additional merits for not choosing a more extreme SLA, such as 250 business days, as a shorter SLA is likely to be more politically acceptable to Wholesalers.

MPS 18 charge-level

To determine the MPS 18 charge-level, we consider the proportion of SPIDs brought into the incentive region in conjunction with the proportion of meters for which a meter read would be expected to be incentivised. Specifically, if less than 60% of meters cost, on average, more than a specified charge level to be read, then that charge-level would not provide an appropriate incentive, regardless of the effect on the incentive region.

Level of the cap

Finally, to determine an appropriate increase to the cap, we consider the impact of increasing the cap on charges. This is done at both an aggregated market level and at an individual Trading Party level. In the first case, we prioritise combinations of changes that have less impact on the overall level of charges collected; and in the second case, we prioritise changes that would not unreasonably increase the charges of individual Trading Parties.

3. Results

Incentive region by scenario

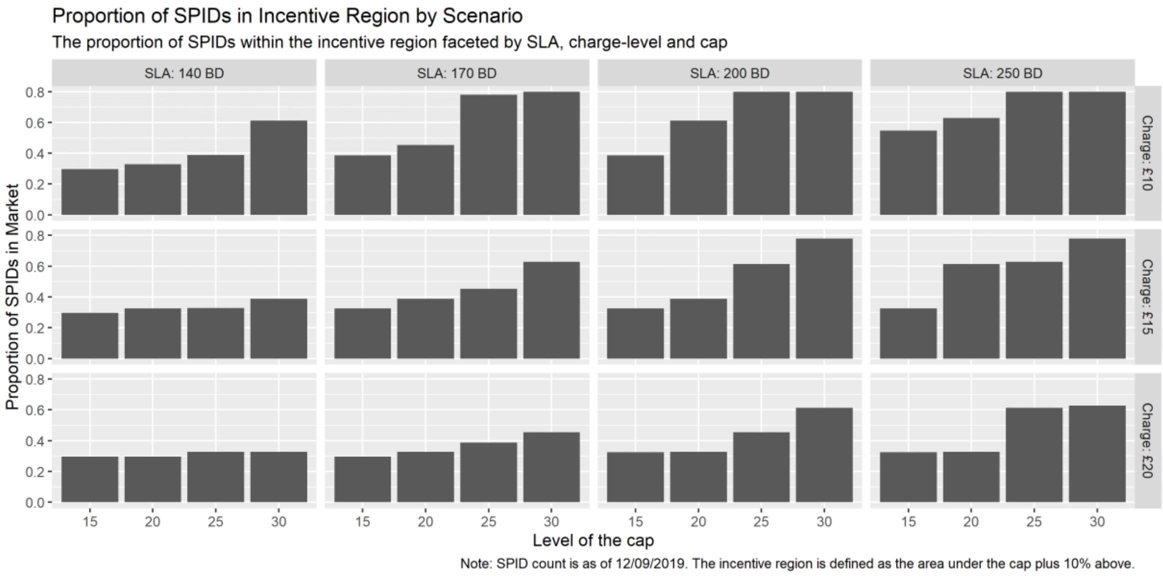
Figure 5 below shows a comprehensive summary of the expected impact on the proportion of SPIDs that are in the incentive region by the changes to each of the MPS 18 SLA, MPS 18 charge and the cap. The "current" position is represented by the bottom-left panel with 140 business days, a charge of £20 and a cap level of 0.15% (or 15bps).

As can be seen, approximately 30% of the market by SPIDs is within the incentive region under the "current" scenario. The panel in the top-right (SLA of 250 business days, a charge of £10 and a cap of 0.30%) indicates the most "extreme" scenario of combined changes. It shows that approximately 80% of the market can be brought into the incentive region with these changes; however, similar levels are also attainable in other scenarios that do not require such extensive changes.

The two scenarios "furthest away" from the extreme (i.e. requiring the least change) that achieve similar results are:

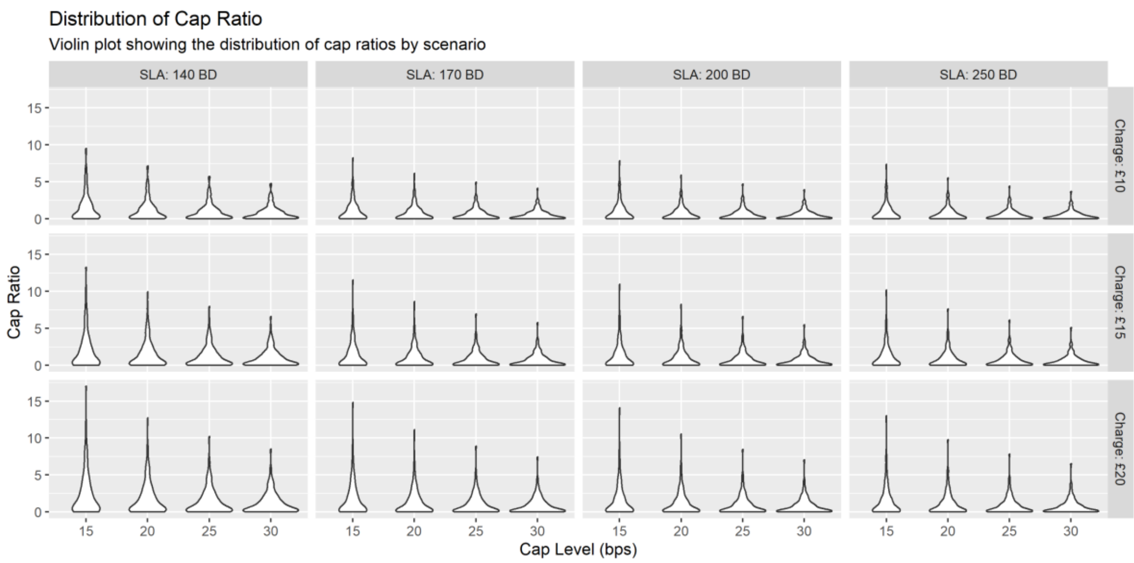
- SLA of 170, charge of £10 and cap of 0.25%; and
- SLA of 200, charge of £15 and cap of 0.30%

Figure 5



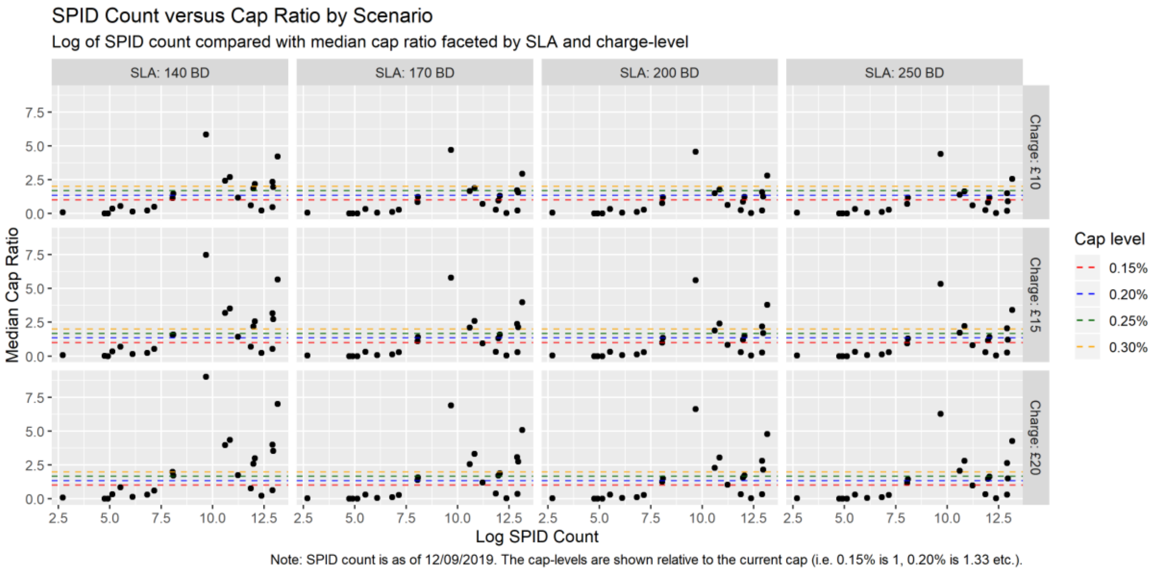
The impact on the distribution of cap ratios can be seen in Figure 6, where, again, the current is shown in the bottom-left panel and the extreme is in the top-right. It shows that a combination of changes can have a significant impact on the number of Trading Parties multiples over the cap. In the current position, there is at least one Trading Party that is, on average, more than 15 times over the cap. In the most extreme scenario (top-right), no Trading Party is more than 5 times over the cap. Similar results are achieved in the aforementioned scenarios.

Figure 6



The number of Trading Parties over the cap (as opposed to proportion of SPIDs) is shown in Figure 7. This shows that 11 out of 21 Trading Parties are currently over the cap (bottom-left) compared with only 2 in the extreme case (top-right). Figure 7 emphasizes that certain Trading Parties cannot be brought under the cap with this range of changes. It also means that *any* increase to the cap will result in a direct increase to their overall MPS charges: that is, a doubling of the cap from 0.15% to 0.30% would double their MPS charges.

Figure 7



We next use "scree plots" to break down the individual "effects" of the changes to the SLA, charge and cap by further summarizing the scenario results. Two things are useful to consider in the following: (i) the distance between each line; and (ii) the steepness in change from one point to another for each line. The first shows effect of an increase/decrease to that particular component when all else is kept equal, whereas the second shows the relative impact or value of increasing/decreasing that component. The points that represent a "better" change will have a large distance to points directly below and will show little or no change compared to any point above.

MPS 18 SLA

The effect on the proportion of SPIDs in the incentive region of varying the MPS 18 SLA is shown in Figure 8. The "current" is indicated by the red line in the top-left panel at a £20 charge; whereas the most extreme change is indicated by the purple line in the bottom-right at a £10 charge. The top-left panel shows that changing the SLA on its own no meaningful effect except where the charge is also reduced to £10, which increases the proportion of SPIDs in the incentive region to approximately 55% from 30%. Increasing the cap by 5bps has no meaningful effect unless it is also accompanied by a reduction in the charge to £15, which increases the proportion of SPIDs in the incentive region to approximately 60%.

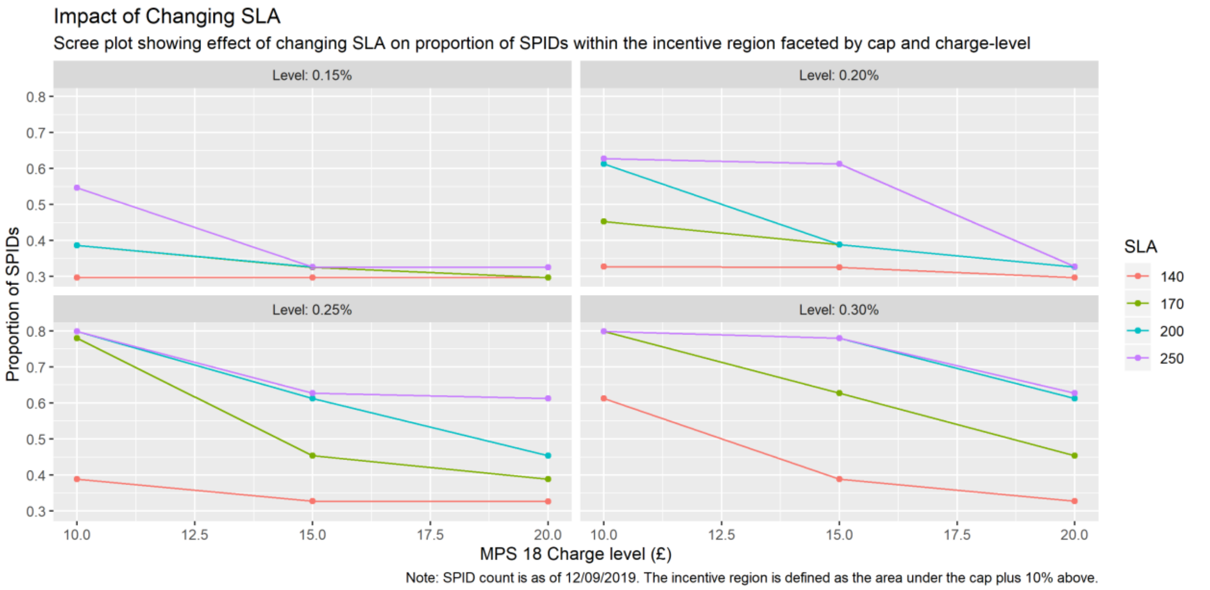
The implication from Figure 8 is that, to achieve a reasonable improvement to the active incentive region, any change to the SLA must be accompanied by either:

- a large reduction in the charge (£15);
- a medium reduction in the charge (£15) and a small increase to the cap (0.20%); or
- a medium increase in the cap (0.20%)

There are two other important implications from Figure 8. Firstly, a small increase in the SLA to 170 business days has a significant impact on all scenarios where the cap is increased. Secondly, in most cases, an increase in the SLA to 200 business days is roughly equivalent to 250 business days where the cap is increased to 0.25% and above; however, at 0.20% the 250 business days SLA outperforms significantly.

An SLA of 140 business days achieves a maximum of 60% of SPIDs in the incentive region based on a £10 charge and cap of 30bps. All other variations can achieve up to 80% of SPIDs in the incentive region with a corresponding increase of the cap and reduction of the charge.

Figure 8



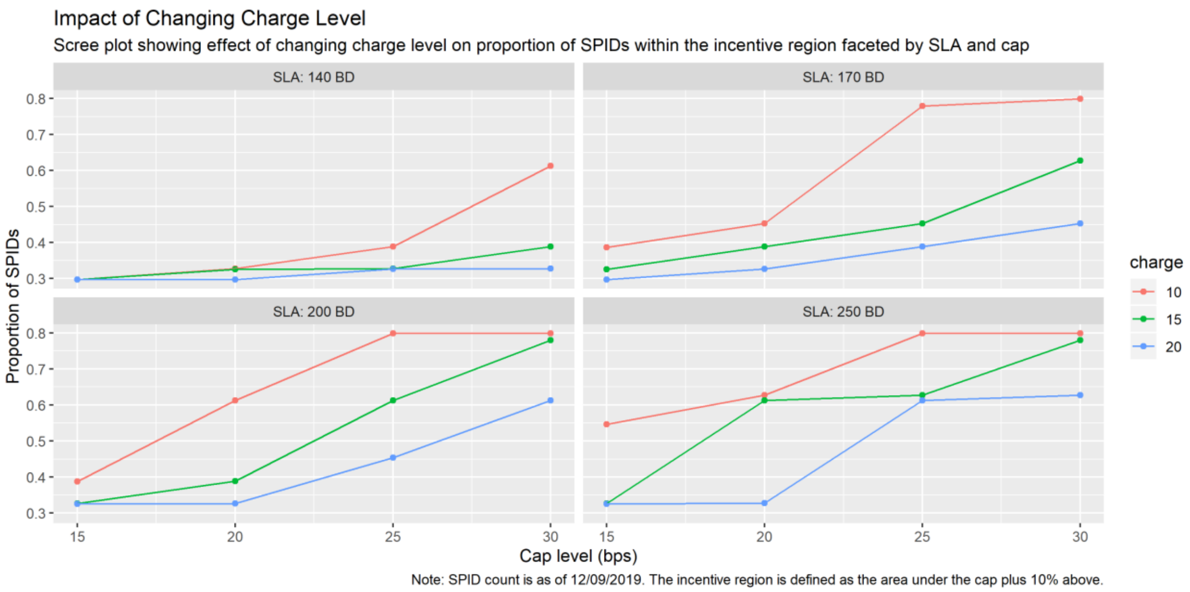
MPS 18 charge level

The impact on SPID proportion in the incentive region is shown in Figure 9. Again, it can be seen (from the top-left panel) that reducing the charge level alone is not expected to have a meaningful impact on the proportion of SPIDs in the incentive region without a corresponding increase to the SLA and/or cap level. Decreasing the charge to £10 has a significant impact in conjunction with increases to the SLA and the cap and is only matched by a £15 charge in three places:

- SLA of 200, cap of 30bps (60% of SPIDs in incentive region);
- SLA of 250, cap 20bps (60%); and
- SLA of 250 and cap 30bps (80%).

A charge level of £20 only achieves 60% of SPIDs in the incentive region in any scenario.

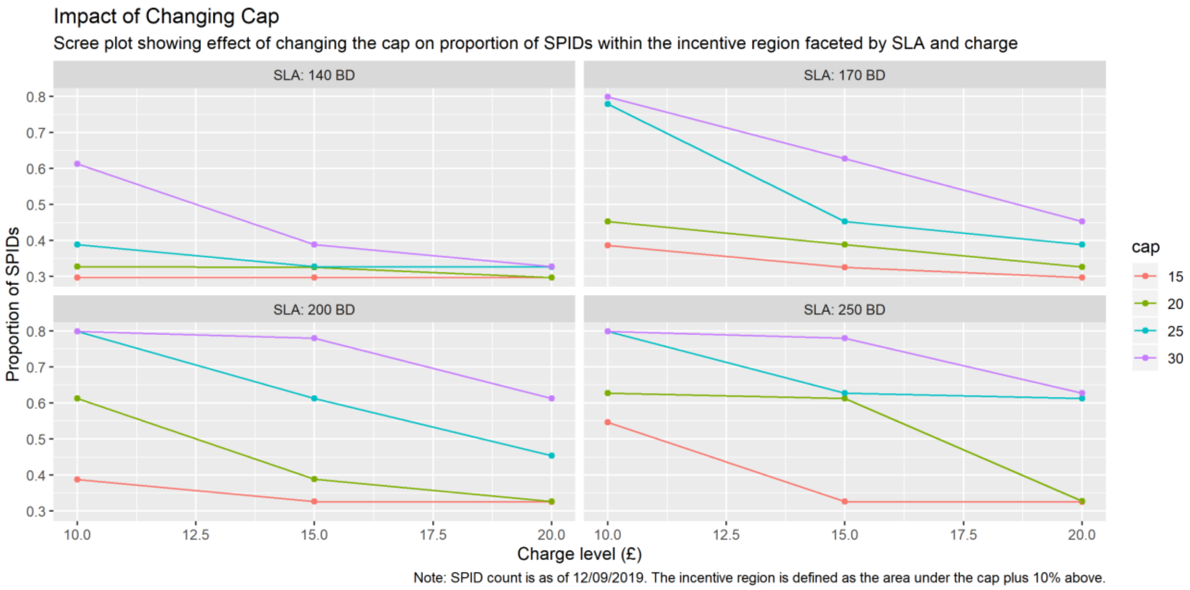
Figure 9



Cap level

Figure 10 shows the impact of increasing the cap. A small improvement can be achieved compared to current (top-left panel); however, as with the other changes, on its own it does not lead to a meaningful increase in the expected proportion of SPIDs in the incentive region. Accompanied by changes to the SLA and charge leads to significant variation in the impact of varying the cap. A maximum level of 80% of SPIDs can be achieved by a 0.25% and 0.30% cap, whereas a cap of 0.20% can achieve only a maximum of 60%.

Figure 10



MPS 18 SLA

Further considerations of the MPS 18 SLA are summarized in Table 2 below.

Table 1

SLA	Pros	Cons
170 BD	Some impact. Close to current Time Parameters	Does not do enough to bring Trading Parties close to incentive zone
200 BD	Reasonable impact. Only 60 BDs beyond current Time Parameter 1. Increases chance of Retailers inputting reads. Acceptable to Wholesalers	Significant number of Trading Parties still over the cap
250 BD	Greatest possible chance of Retailers inputting reads on-time	Difficult to justify politically for Wholesalers Minimal increase in impact for an additional 50 BDs

In summary, aside from the impact on the incentive region, the most appropriate increase to the MPS 18 SLA is to 200 business days.

MPS 18 charge level and meter reading costs

The cost of reading a meter can vary depending on the type of the read and whether the read is provided by a Wholesaler Meter Reading Service (WMRS) or a National Meter Reading Service (NMRS). Preliminary analysis suggest that meter reads from WRMS cost less than NRMS for certain meters, but it is not clear whether this can be generalized for all meters.

Types of meter reads include (order by cost, least to most):

- cyclic monthly
- cyclic bi-annual
- non-cyclic within 10 days
- non-cyclic later than 10 days
- transfer reads
- specified time

Other fees include setup fees, admin fees and special requirements (e.g. 2-man lift).

The preliminary analysis by MOSL suggests that the cost of a meter read ranges from as low as £2 to as high as £20, and that the average cost of a meter reads is between £10-15. The analysis suggests that a charge level of £10 is not viable change, as there would not be an incentive to read a potentially significant number of meters. A charge of £15 could be viable, however further analysis is needed to accurately determine the proportion of meters that would be incentivised by a particular MPS 18 charge-level.

Impact on MPS charges

Figure 11 summarizes the impact of each scenario on the net increase / decrease to the overall MPS charges to current MPS charges. The resulting impact is a trade-off between the reduction in charges due to the increased SLA and reduced charges versus an increase in the cap. In most cases, an increase of the cap to 0.20%, coupled with an increase in the SLA, leads to only a small increase in overall charges. If a reduction in the charge to £15 is included, then the resulting impact on net MPS charges is relatively small. An increase to *only* the cap leads to significant increase in charges.

Figure 11

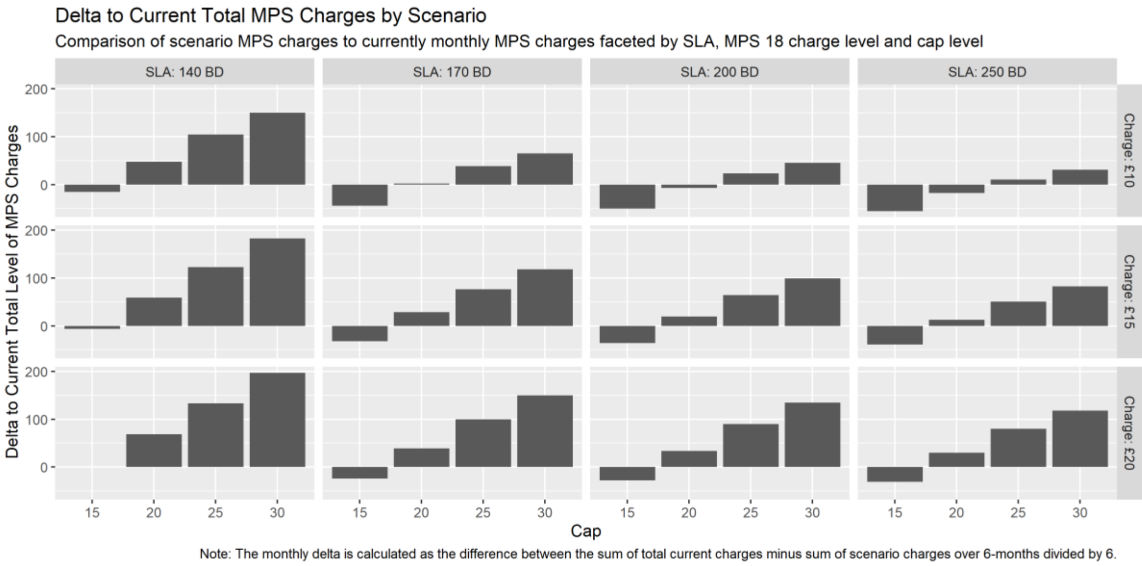
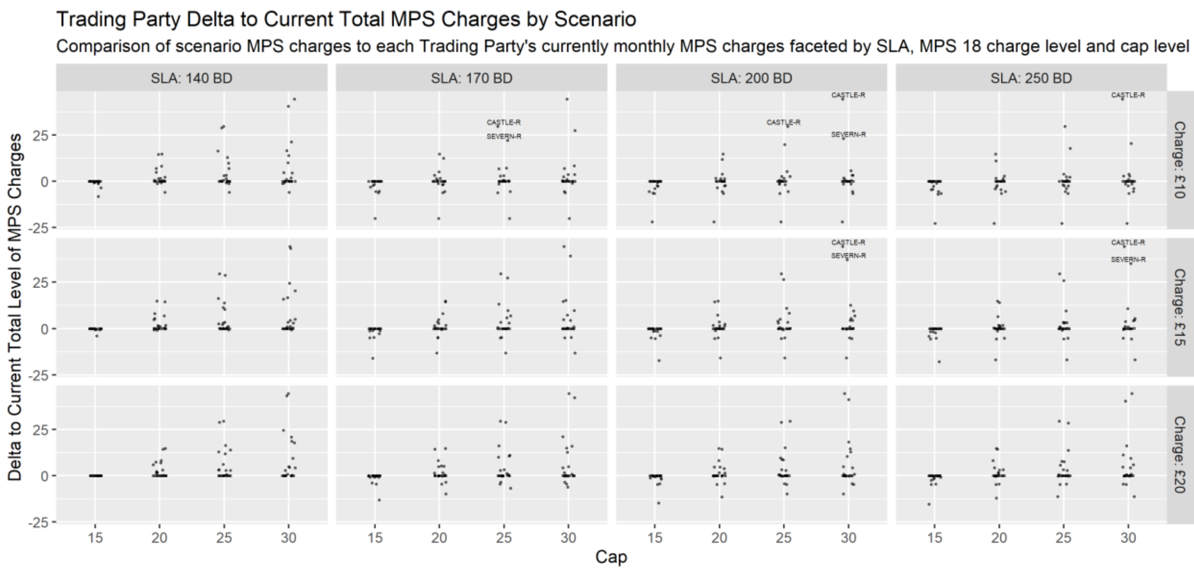


Figure 12 below shows the impact of the scenario changes on charges paid by individual Trading Parties. There are two organizations that never come under the cap in any scenario (CASTLE-R and SEVERN-R) and so their charges always increase directly in proportion to the cap. For example, if the cap is doubled from 0.15% to 0.30%, then the charges paid by CASTLE-R would double by, on average, £50k to approximately £100k per month. This is a significant increase and should be taken into account when considering any changes.

Given the potential for impact on overall charges for individual Trading Parties, MOSL recommends increasing the cap by stages to give the affected Trading Parties sufficient time to adjust. In particular, increasing the cap initially to 0.25% and then increase the cap to 0.30% within 6 months. This would ultimately achieve the maximum increase to the incentive region possible (80%) and give Trading Parties time to re-adjust. The dates for increasing the cap could be brought forward based on analysis that suggest that Trading Parties have already sufficiently adjusted.

Figure 12



ne monthly delta is calculated as the difference between each Trading Party's sum of total current charges minus the sum of each Trading Party's scenario charges over 6-months divided by 6.

4. Conclusion

Recommendation

Based on the results of the scenario analysis, and the application of other criteria, the MPC is asked to ***agree*** the following changes:

- Extend Time Parameter 1 for MPS 18 to 200 business days with a £15 charge and remove Time Parameter 2 (i.e. a single point of failure at 200 business days with a £15 charge); and
- Increase the cap initially to 0.25% in April-2020 with a view to increasing it to 0.30% no later than October 2020.

The proposed changes would initially bring the 60% of SPIDs into the incentive region by April-2020, then 80% by October-2020.

Other considerations

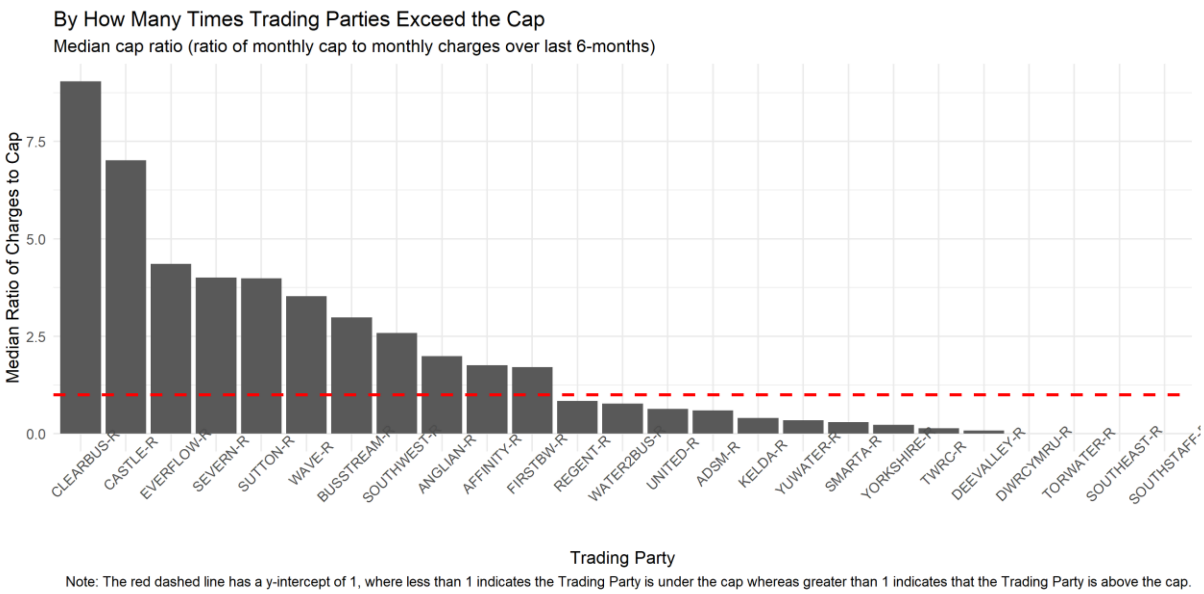
It is intended that most Trading Parties will be brought under the cap by these changes. Where this is still not the case, and certain Trading Parties remain multiples over the cap, MOSL recommends the following:

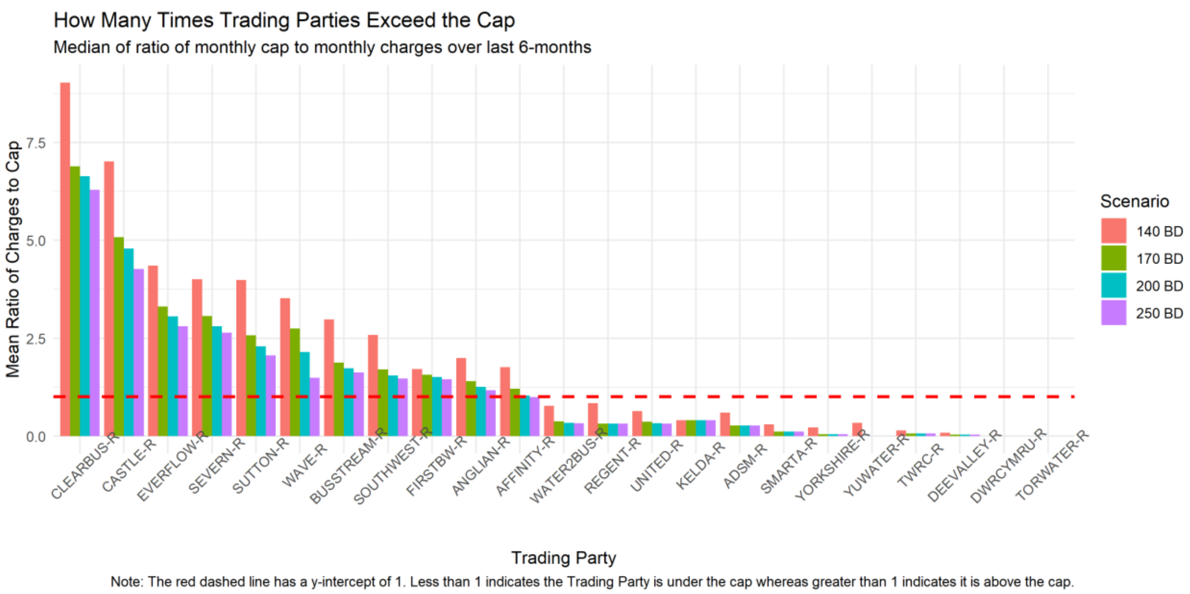
- That the Performance Resolution Process be used to bring the level of charges within the incentive region and/or below the cap; and

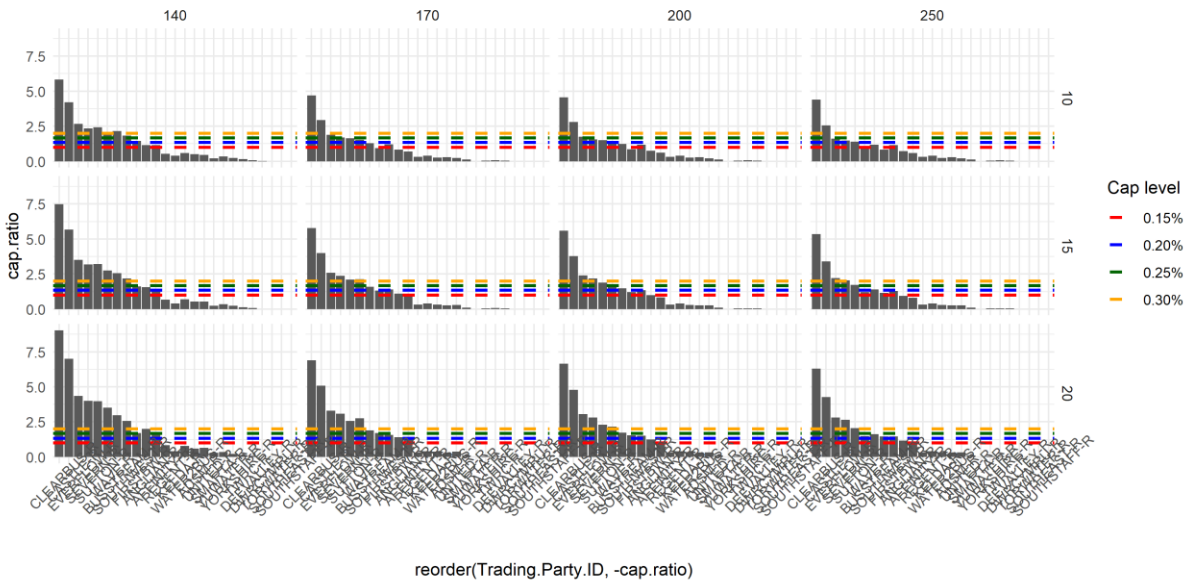
- The individual cap ratio for each Trading Party (i.e. the ratio between the cap and MPS charges) be made an API and published on MOSL's website

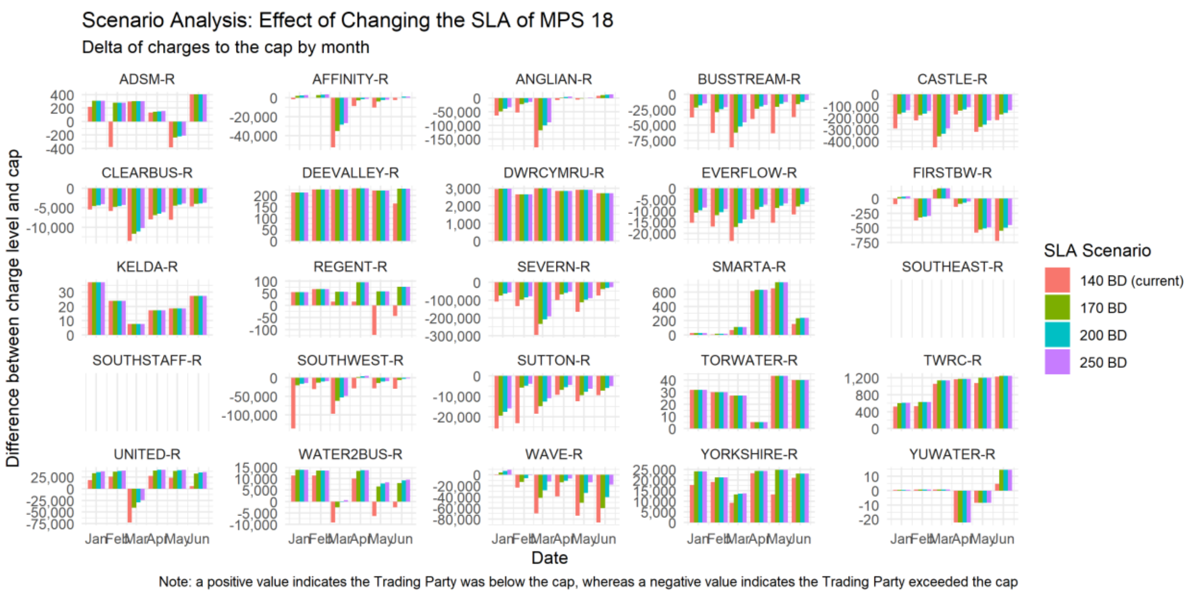
Publishing the cap ratio will have two benefits: first it can be used to initiate Initial Performance Rectification Plans (IPRPs); and secondly, it will have a reputational incentive for those Trading Parties significantly over the cap.

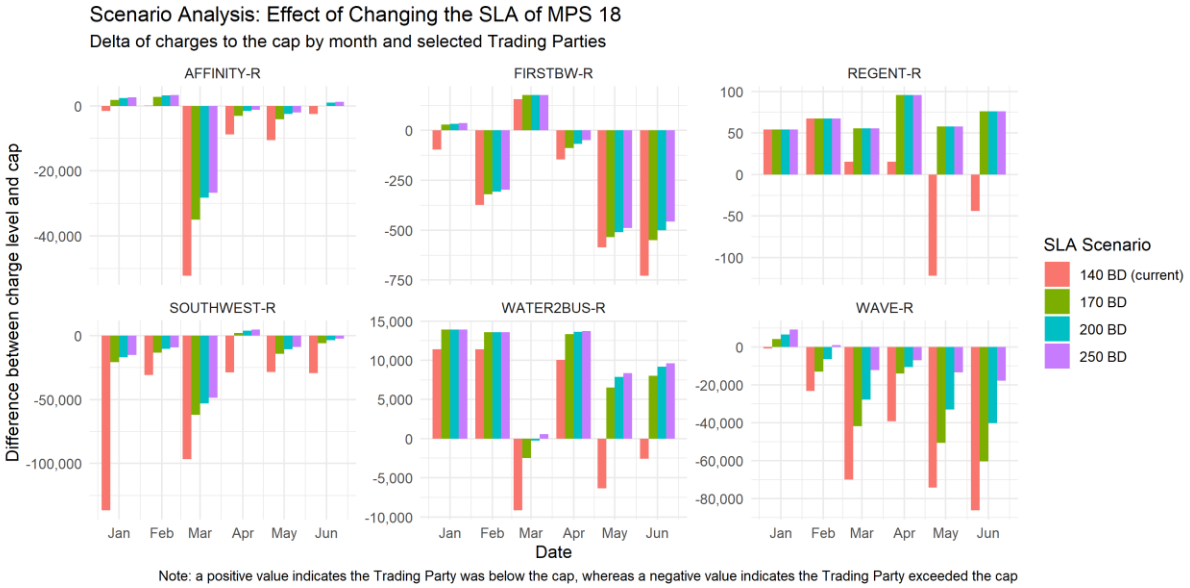
APPENDIX – Other graphs

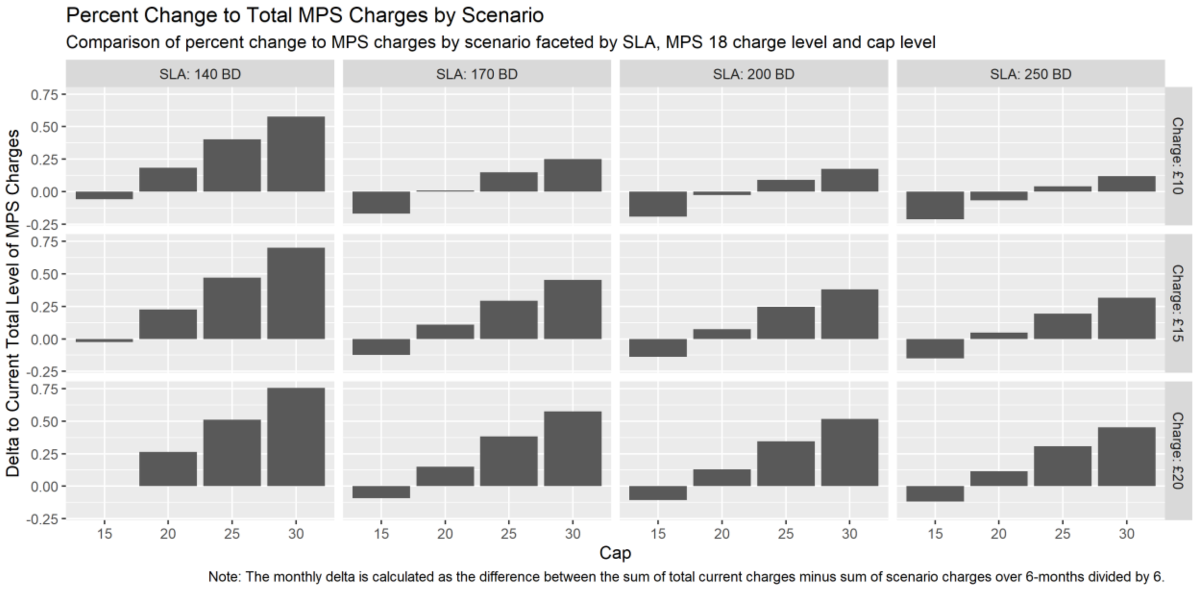





140
170
200
250
cap.ratio
Cap level
0.15%
0.20%
0.25%
0.30%
10
15
20
reorder(Trading.Party.ID, -cap.ratio)

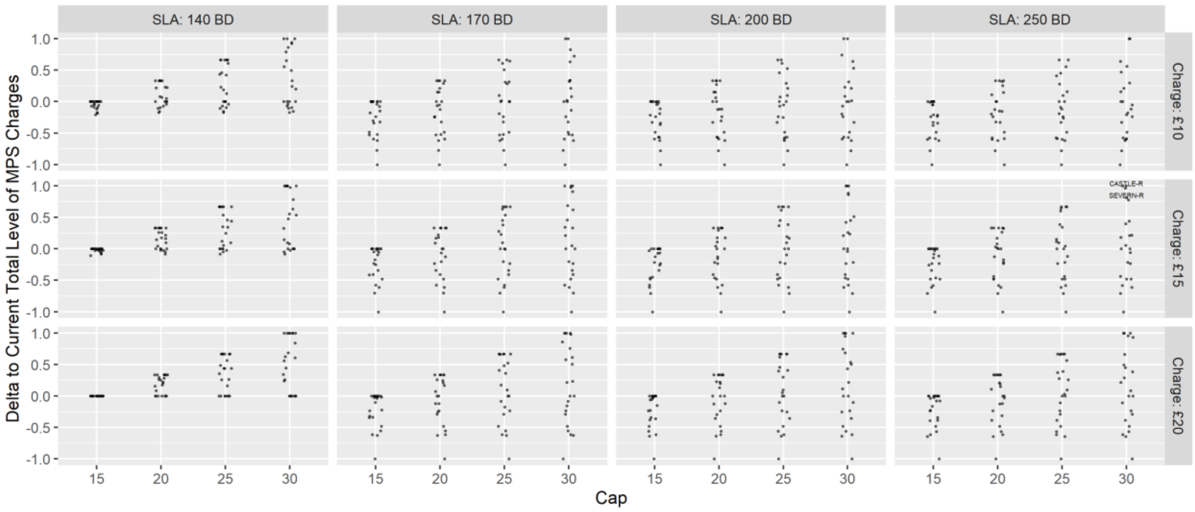

Scenario Analysis: Effect of Changing the SLA of MPS 18
Delta of charges to the cap by month
ADSM-R
AFFINITY-R
ANGLIAN-R
BUSSTREAM-R
CASTLE-R
CLEARBUS-R
DEEVALLEY-R
DWRCYMRU-R
EVERFLOW-R
FIRSTBW-R
KELDA-R
REGENT-R
SEVERN-R
SMARTA-R
SOUTHEAST-R
SOUTHSTAFF-R
SOUTHWEST-R
SUTTON-R
TORWATER-R
TWRC-R
UNITED-R
WATER2BUS-R
WAVE-R
YORKSHIRE-R
YUWATER-R
Difference between charge level and cap
Date
SLA Scenario
140 BD (current)
170 BD
200 BD
250 BD
Note: a positive value indicates the Trading Party was below the cap, whereas a negative value indicates the Trading Party exceeded the cap


Scenario Analysis: Effect of Changing the SLA of MPS 18
Delta of charges to the cap by month and selected Trading Parties
AFFINITY-R
FIRSTBW-R
REGENT-R
SOUTHWEST-R
WATER2BUS-R
WAVE-R
Difference between charge level and cap
Jan Feb Mar Apr May Jun
Date
SLA Scenario
140 BD (current)
170 BD
200 BD
250 BD
Note: a positive value indicates the Trading Party was below the cap, whereas a negative value indicates the Trading Party exceeded the cap


Percent Change to Total MPS Charges by Scenario
Comparison of percent change to MPS charges by scenario faceted by SLA, MPS 18 charge level and cap level
SLA: 140 BD
SLA: 170 BD
SLA: 200 BD
SLA: 250 BD
Charge: £10
Charge: £15
Charge: £20
Delta to Current Total Level of MPS Charges
Cap
Note: The monthly delta is calculated as the difference between the sum of total current charges minus sum of scenario charges over 6-months divided by 6.

Trading Party Percent Change from Current Total MPS Charges by Scenario

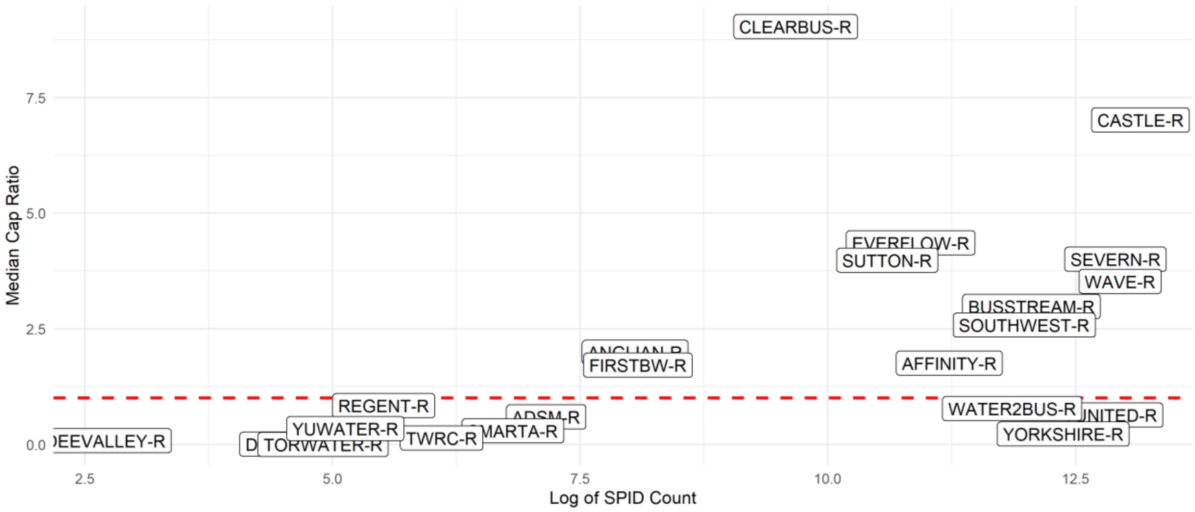
Comparison of pecent change in MPS charges for each Trading Party's currently monthly MPS charges faceted by scenario: SLA, MPS 18 charge l



Note: The percent change is calculated as the sum of each Trading Party's six-months total charges for each scenario divided by its current six-months MPS charges minus 1.

Larger Trading Parties More Likely to Exceed the Cap

Relationship between SPID count and cap ratio



The red dashed line has a y-intercept of 1. Any point above this line indicates a Trading Party exceeding the cap.