

Bloomberg Short-Term Bank Yield Index

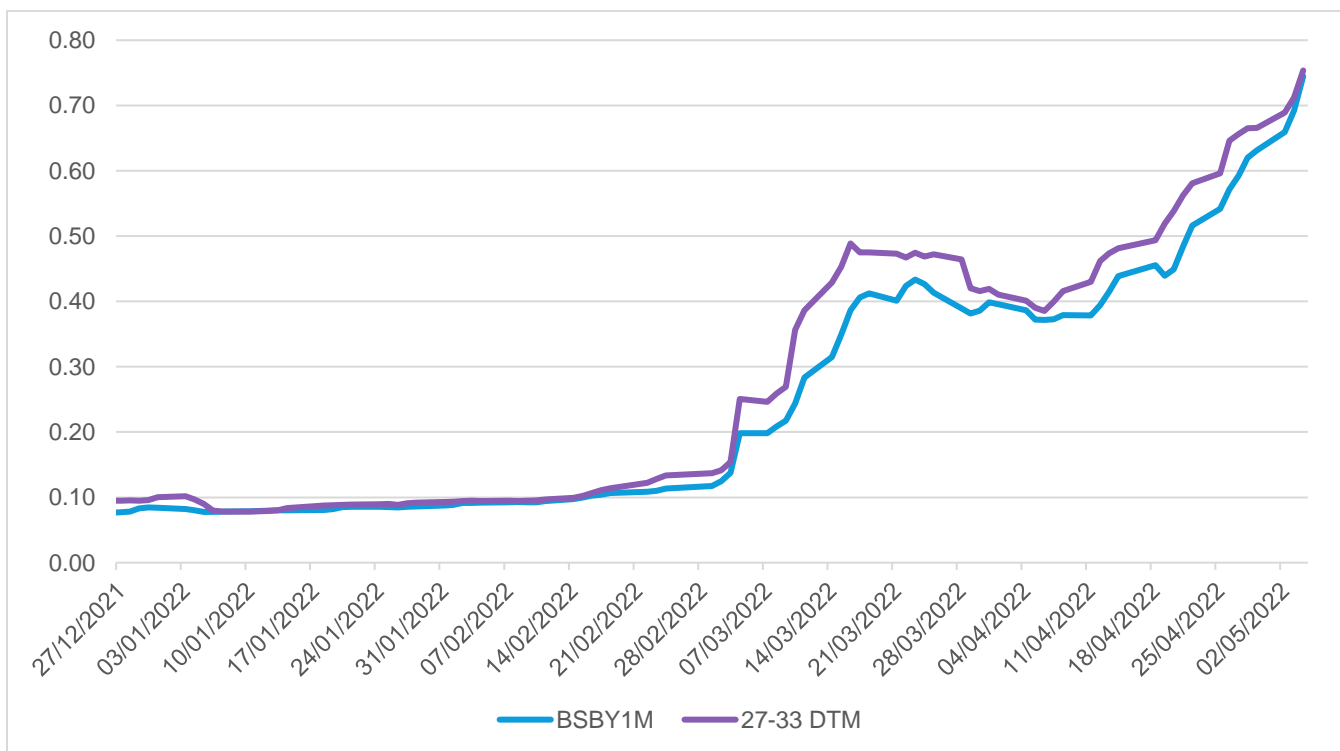
Consultation on Methodology Update

June 15, 2022

Background

As interest rates have risen steadily over the course of this year, the BSBY index team observed that the BSBY 1M tenor, which is calculated using input data with a 'Days to Maturity' (DTM) range of 6 to 45 days, tracked more closely to the significant trading activity at the front-end of the curve as compared to the input data closer to and around the 30 day tenor point, especially during periods that are within 30 days of Federal Reserve interest rate increases. See Figure 1 which compares the current formulation of the BSBY 1M versus a version (created for comparative analysis) with a DTM of 27-33 days.

Figure 1 - BSBY 1M v. DTM of 27-33



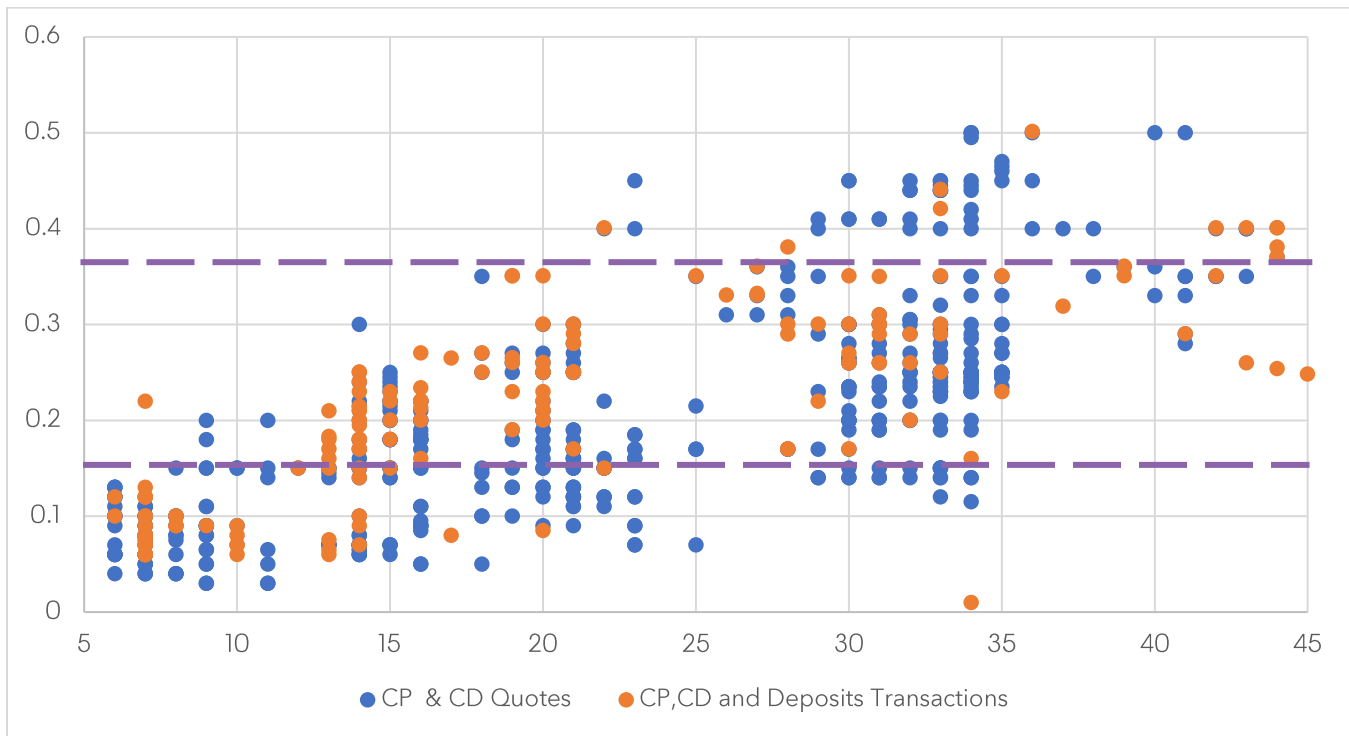
Accordingly, the BSBY index team performed several internal studies to determine the various factors that contributed to this observation. Several potential changes were analyzed to determine what would improve BSBY's representativeness in a changing rate environment.

Following this analysis, it was determined that changing the outlier trimming methodology of the BSBY 1M tenor better accommodates a slope within its corridor in various rate environments without compromising on the robustness. The BSBY index team proposes to subdivide the DTM corridors for each tenor (other than the overnight tenor) into three buckets when performing the outlier elimination, as further detailed below.

Proposed Adjustments to Outlier Trimming

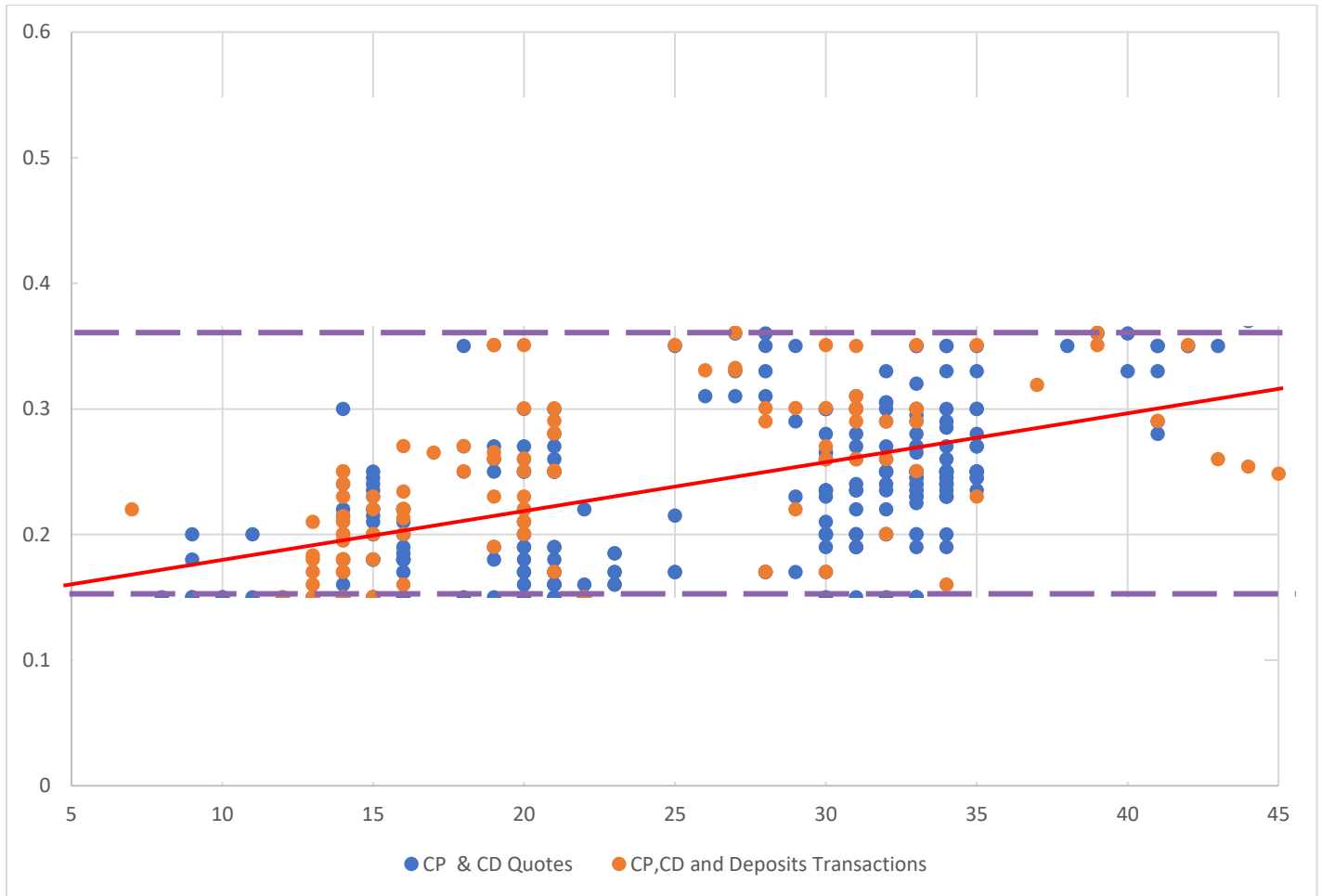
As a reminder, BSBY is calculated using three-days' worth of input data. The current methodology eliminates the top and bottom 25% of input data. Figure 2 depicts this process below.

Figure 2 - Outlier Elimination for BSBY 1M



Once the outliers are eliminated, a linear regression is performed on the remaining input data, as depicted in Figure 3 below.

Figure 3 - Linear regression



As can be observed from the above, if interest rates are rising (or falling), the outlier elimination does not account for changes to the term structure - an upward curve in a rising-rates environment and a downward curve in a falling-rates environment.

Accordingly, the BSBY index team proposes dividing the DTM corridors of **all tenors**, other than the overnight tenor, into three sub-corridors and eliminating the top and bottom 25% at the sub-corridor level, as depicted by way of example for the 1M tenor in Figure 4 below.

Figure 4 - Adjusting the Trimming Methodology

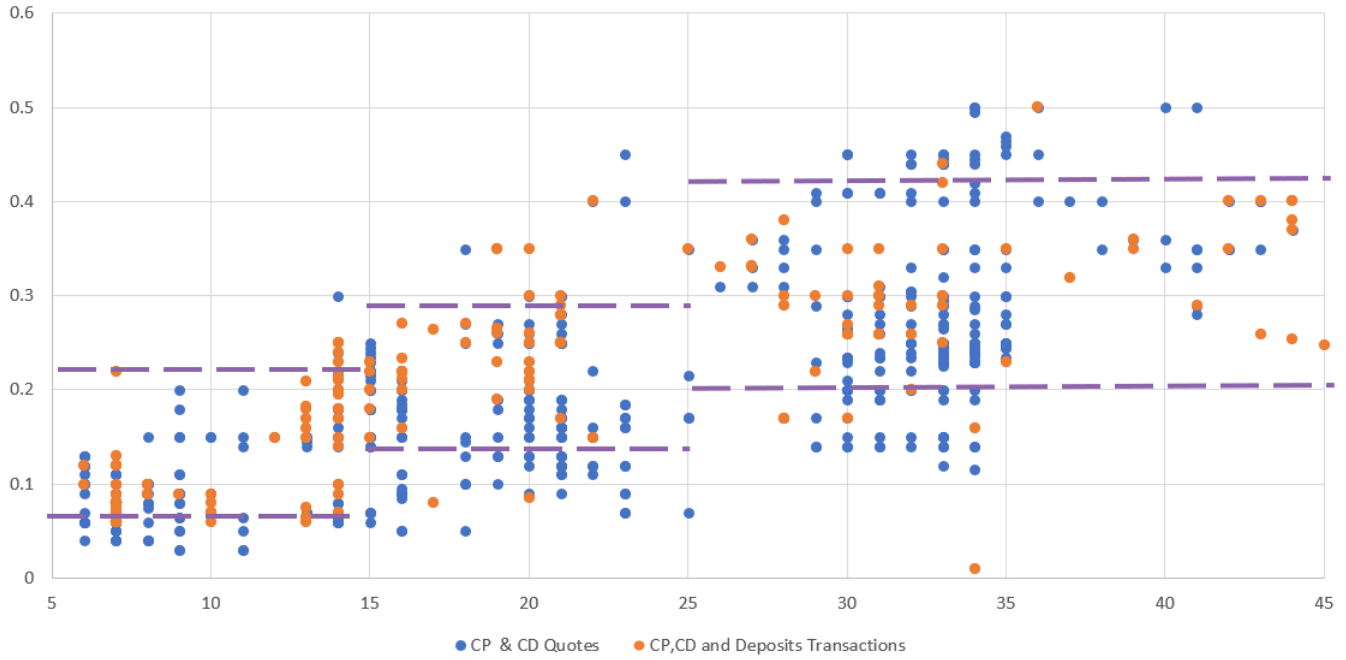


Figure 5 - Outliers Eliminated Per Sub-Corridor

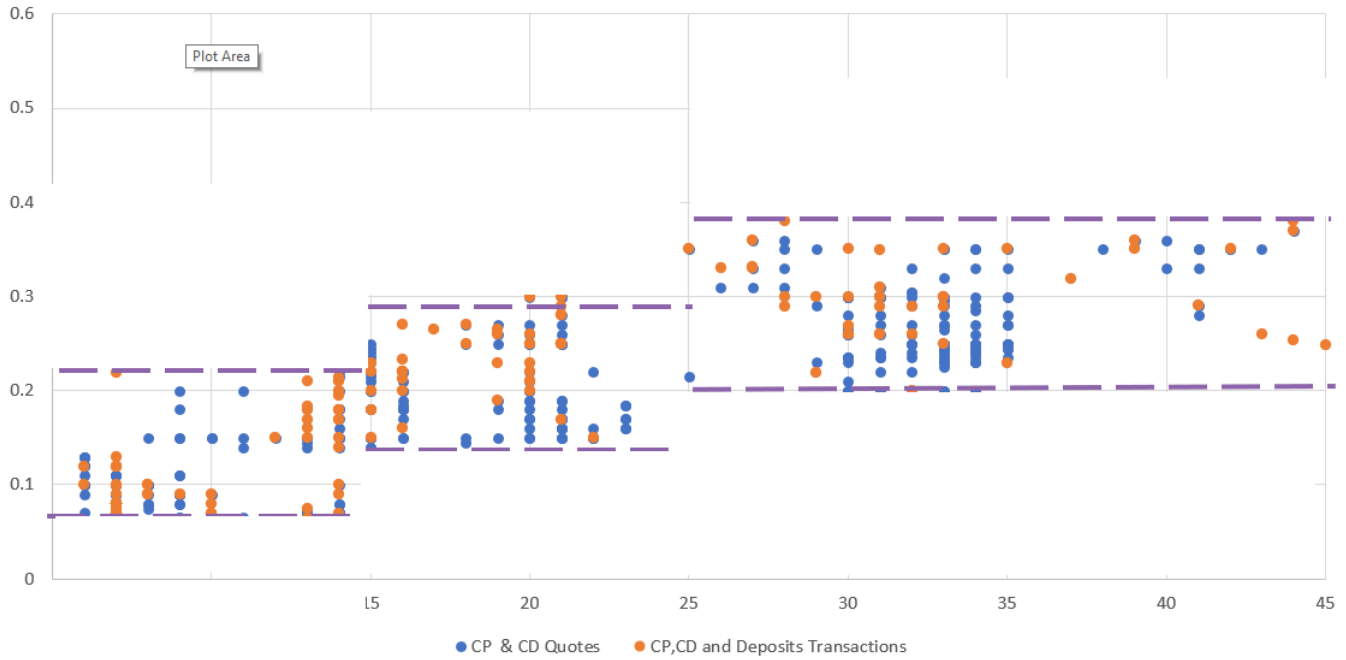
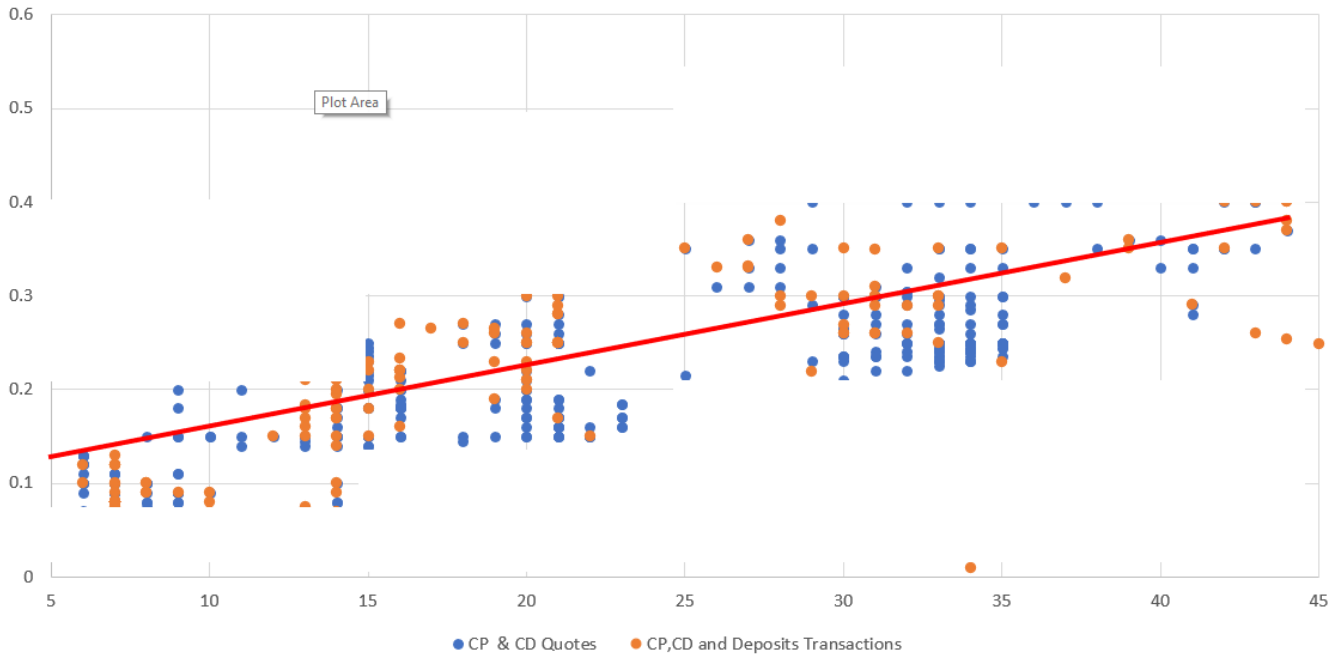


Figure 6 depicts the linear regression incorporating the updated trimming methodology below.

Figure 6 - Weighted Linear Regression



As can be seen below, revising the outlier elimination as proposed better reflects a curve structure that may exist within a given DTM corridor when rates are rapidly rising (or falling) and helps bring the BSBY 1M tenor (as an example) much closer to the level of a hypothetical version constructed just using a DTM of 27-33. This enhances representativeness while maintaining the robustness of the underlying volumes. Figure 7 depicts the BSBY 1M versus a version constructed using just input data with a DTM of 27-33. Figures 8, 9 and 10 show similar results for the 3M, 6M and 12M respectively.

Figure 7 - Comparison of the proposed BSBY1M rate Vs. the existing BSBY rate and 27-33 DTM rate

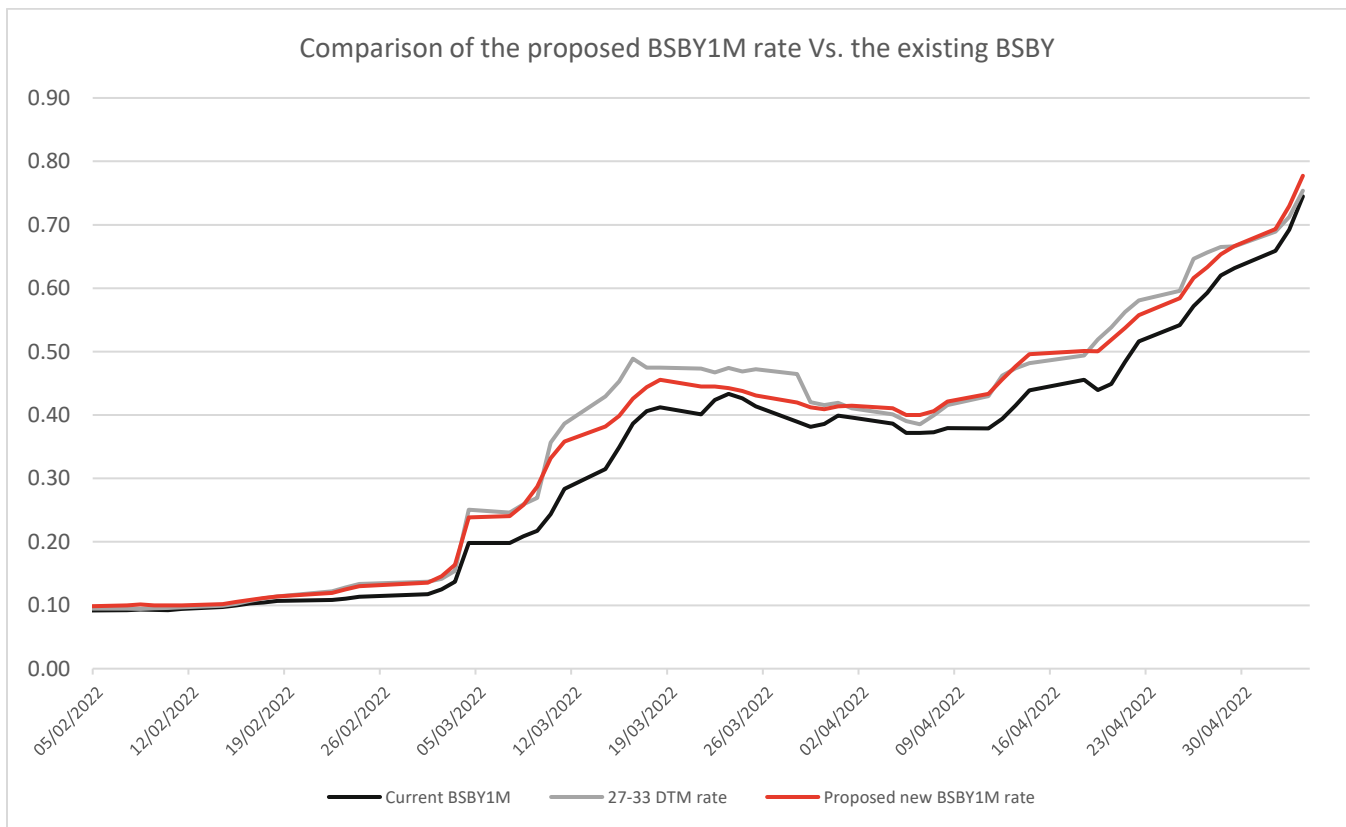


Figure 8 - Comparison of the proposed BSBY3M rate Vs. the existing BSBY rate and 80-100 DTM rate

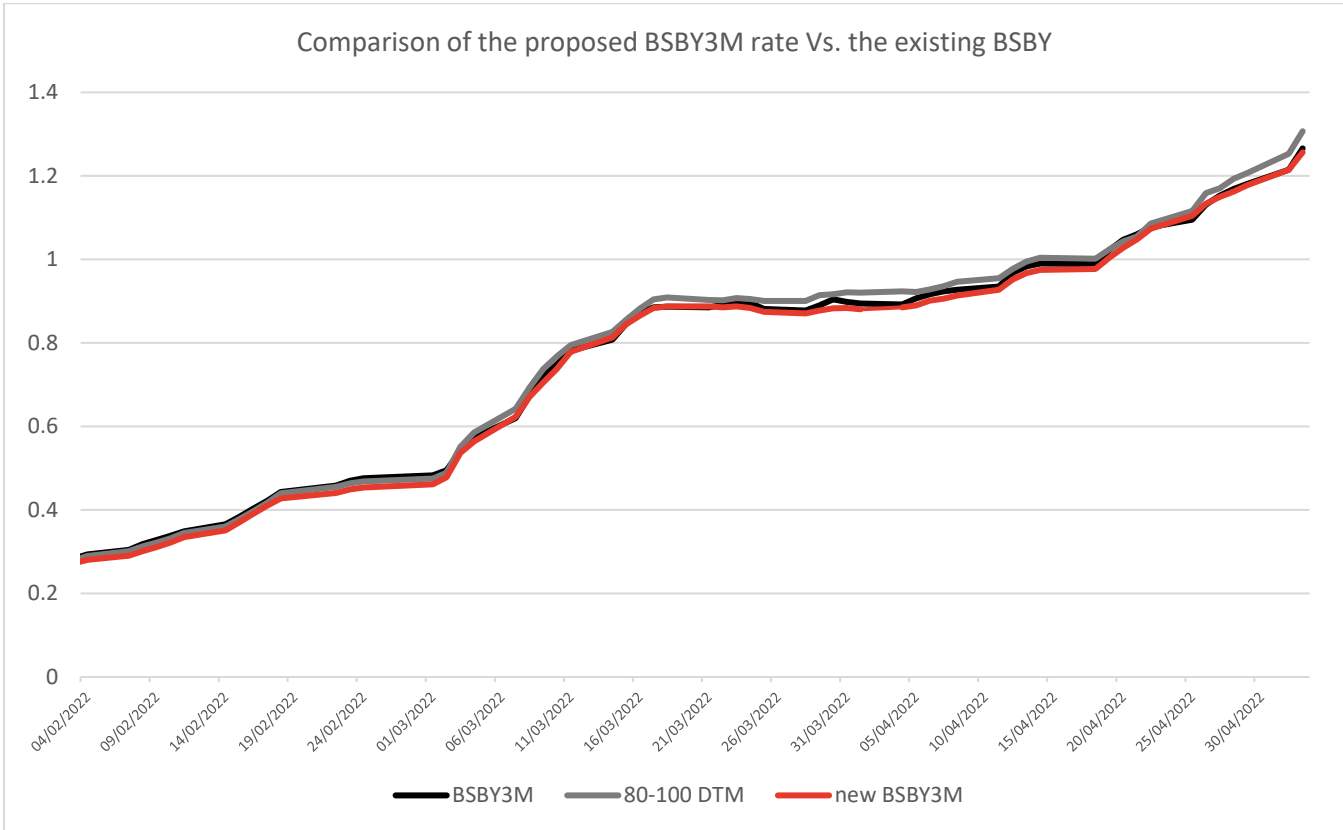


Figure 9 - Comparison of the proposed BSBY6M rate Vs. the existing BSBY rate and 170-190 DTM rate

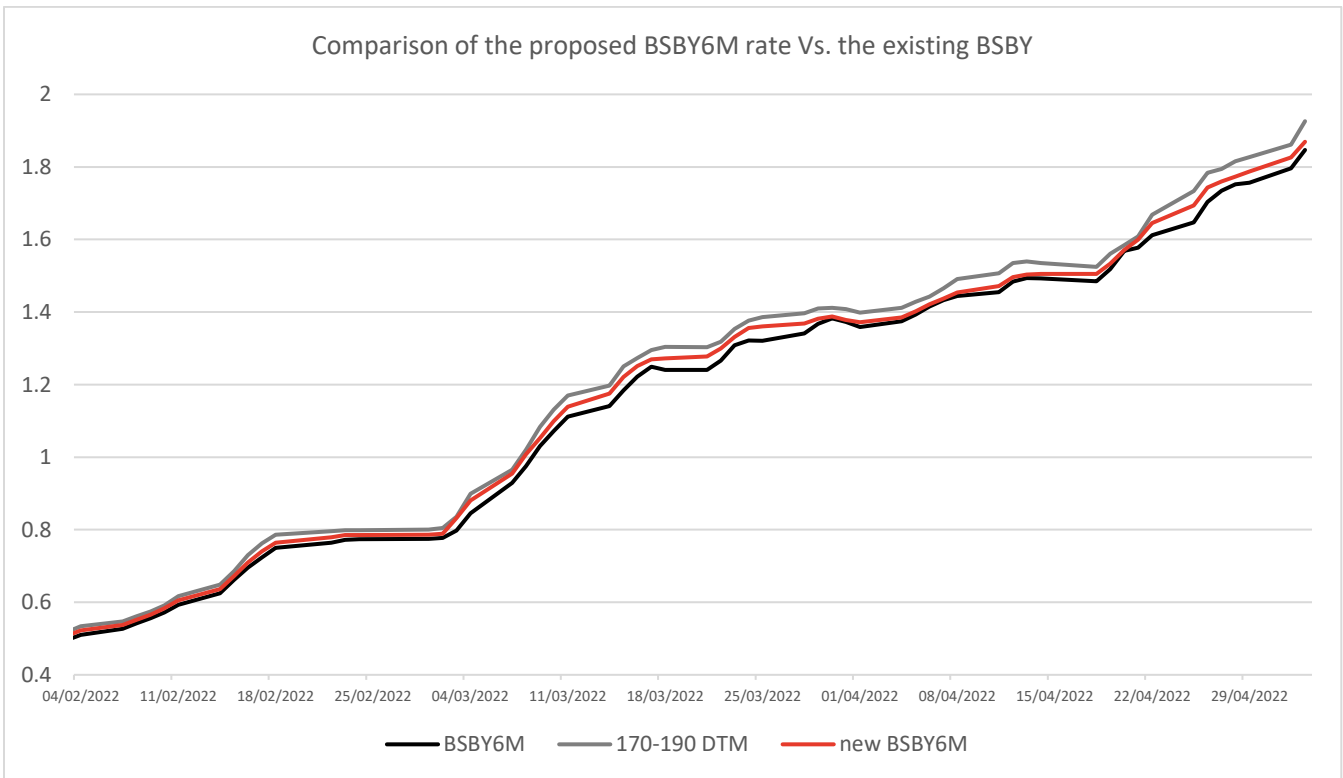
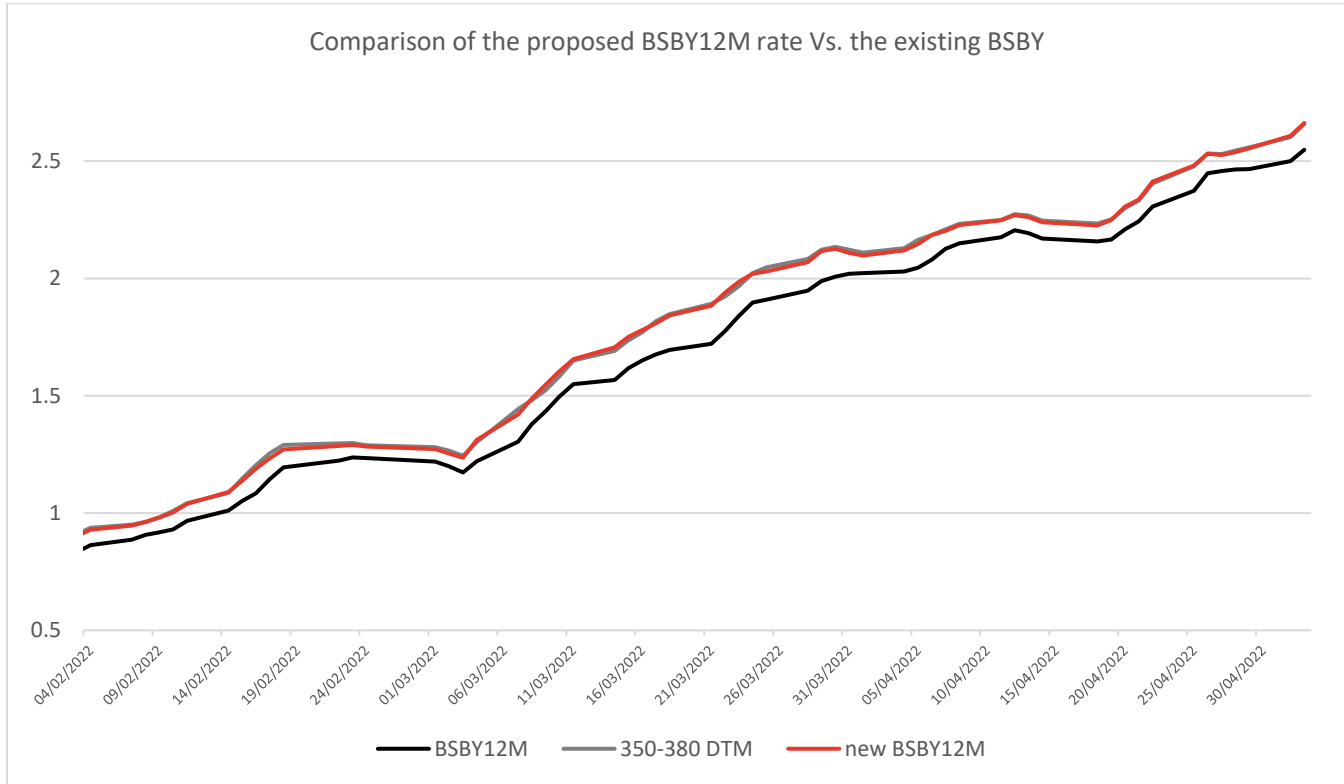


Figure 10 - Comparison of the proposed BSBY12M rate Vs. the existing BSBY rate and 350-380 DTM rate



The trimming methodology change impacted the 1M and 12M rates the most in our back test over the Feb -May 2022 period while the 3M and 6M rates were little changed.

Below is the table showing the sub corridor breakdown per BSBY rate used to adjust the trimming of outliers:

BSBY rate	Corridor	Sub Corridors used for Trimming		
1M	6 to 45 DTM	6 to 15	16 to 25	26 to 45
3M	46 to 125 DTM	46 to 72	73 to 98	99 to 125
6M	126 to 240 DTM	126 to 164	165 to 202	203 to 240
12M	241 to 400 DTM	241 to 294	295 to 347	348 to 400

Process & Timing

The BSBY index team proposes dividing the DTM corridors of **all tenors**, other than the overnight tenor, into three sub-corridors and eliminating the top and bottom 25% at the sub-corridor level.

Bloomberg will decide unilaterally whether, and how, to respond to any feedback, comment, or recommendation that results from the review process. If changes are approved to be made to methodology at the conclusion of the review period, the BSBY index team will make a public announcement detailing the specifics of the change and its implementation date. **Any questions or comments should be directed to info@bloombergindices.com.**

The consultation will be open until July 22, 2022.

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