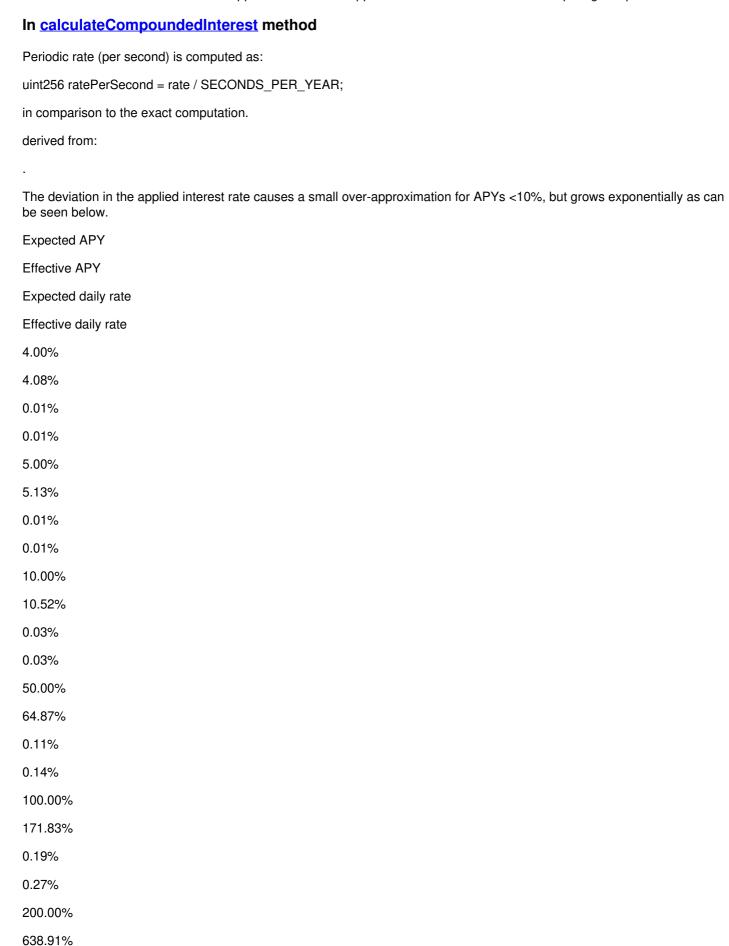
Following <u>AIP-26</u> it was noticed that the interest accrued for the AMPL market above 75% utilization is higher than expected. After investigation the reason for the discrepancy was identified to be the following:

In AAVEs MathUtils there is an over-approximation in the application of the interest rate for computing compounded interest.



0.31%

0.55%
1000.00%
2202543.09%
0.68%
2.78%
10000.00%
2.69E+43%
1.30%
31.52%

This difference is especially noticeable in the AMPL market, where the configured interest rate can go up to 10,002% at max utilization.

The AAVE Genesis team has been made aware and they will publish more guidance on the discrepancy.

## **ARC Rationale**

As mentioned in <u>AIP-26</u>, a nonlinear interest curve is more suited for AMPL's market and potentially other assets on AAVE's platform. It turns out that this over-approximation produces just such a curve.

The over-approximation mentioned above results in an exponentially growing curve which allows for defining a more suitable interest curve for AMPL. We propose the following parameters for <u>AAVE's default interest rate strategy</u>, which produce the curve below:

- Optimal utilization = 80%
- Base rate = 1%
- Slope1 = 2%
- Slope2 = 750%

## APY table above 80% Utilization:

Utilization
APY
80.00%
3.05%
81.00%
49.93%
82.00%
118.15%
83.00%
217.40%
84.00%
361.82%
85.00%

571.94%

86.00%

877.67%

87.00%		
1322.50%		
88.00%		
1969.72%		
89.00%		
2911.43%		
90.00%		
4281.60%		
91.00%		
6275.19%		
92.00%		
9175.85%		
93.00%		
13396.29%		
94.00%		
19536.98%		
95.00%		
28471.63%		
96.00%		
41471.48%		
97.00%		
60386.14%		
98.00%		
87906.81%		
99.00%		
127949.14%		
100.00%		
186210.38%		
The part of the curve under 80% Utilization:		
Rationale:		

- 1. Accounting for the over-approximation of the existing Slope2=10,000% interest curve requires reducing the slope2 parameter.
- 2. Taking advantage of the exponential curve allows for:
- a. Setting a higher optimal utilization rate.
- b. Setting a higher maximum APY.

without creating a too steep of an interest rate increase right above the optimal utilization rate.