## APPENDIX

Suppose the value of the IVI depends solely upon the value of an underlying index $U$, and that $U$ has achieved a relatively steady state at an average level of 100 , but fluctuates between 90 and 110. Every day a rate of return is calculated that reflects the difference between the level of U today and its level yesterday. The level of the IVI is initially 250 , but each day is the product of the previous day's level and the rate of return. The following table illustrates the changing value of the IVI (rounded to the nearest whole number) under those conditions:

| Day | Value of U | Rate of Return | Value of IVI |
| :---: | :---: | :---: | :---: |
| 1 | 100 |  | 250 |
| 2 | 110 | $+10 \%$ | 275 |
| 3 | 100 | $-10 \%$ | 248 |
| 4 | 90 | $-10 \%$ | 223 |
| 5 | 100 | $+10 \%$ | 245 |
| 6 | 110 | $+10 \%$ | 270 |
| 7 | 100 | $-10 \%$ | 243 |

Even though the average value of $U$ holds steady at 100 , the value of the IVI decreases over time. The following chart depicts the same scenario carried out for one year:


