**Weiss Crypto Rating Model: Phase 2 & 2.3**

1. **Purpose**

*The second phase of cycles’ model will provide cycle summary sheet, identify indicators and position/trend of the market.*

1. **Program Language and Tools:** 
   1. R program & R Studio
   2. Excel
2. **Procedure:**
3. **Phase 2**

* + - 1. There are two parts: First is to calculate High VTL and second is to calculate Low VTL.
      2. For calculating High VTL, we consider b1 (First High), b2 (Second High), b3 (Third High) & a2 (Second Low) and a3 (Third Low) .
      3. We will draw High VTL between b1 & b2. And check whether for every point in High VTL is greater than its corresponding Closing Point or not. Note that for a High VTL to be valid the above condition that the VTL should be greater than CP must be satisfied.
      4. If the above condition is satisfied, then we extend the VTL line drawn between b1 & b2 to b3. And thus the final High VTL will be from b2 to b3.
      5. If the condition in point 3 is not satisfied then we will increment the b2 by 1 (now b2`) and again draw a new High VTL to check the condition.
      6. We will continue to increment the b2 by 1 unless we get a valid High VTL and until we reach point a3.
      7. If suppose we don’t get any valid High VTL until this point then we will increment b1 by 1 (now b1`) and repeat the process from point 3.
      8. We will now continue to increment b1 by 1 and repeat the process unless we get a valid High VTL or until we reach b2-1.
      9. For calculating Low VTL, we consider a1 (First Low), a2 (Second Low), a3 (Third Low) & b2 (Second High) and b3 (Third High) .
      10. We will draw High VTL between a1 & a2. And check whether for every point in Low VTL is less than its corresponding Closing Point or not. Note that for a Low VTL to be valid the above condition that the VTL should be less than CP must be satisfied.
      11. If the above condition is satisfied, then we extend the VTL line drawn between a1 & a2 to a3. And thus the final Low VTL will be from a2 to a3.
      12. If the condition in point 3 is not satisfied then we will increment the a2 by 1 (now a2`) and again draw a new Low VTL to check for the condition.
      13. We will continue to increment the a2 by 1 unless we get a valid High VTL or until we reach point b2 .
      14. If suppose we don’t get any valid Low VTL until this point then we will increment a1 by 1 (now a1`) and repeat the process from point 3.
      15. We will now continue to increment a1 by 1 and repeat the process unless we get a valid Low VTL or until we reach a2-1.

**Flowchart for Low VTL:**

Draw a Line between a1 to a2

Define all Lows & Highs

Lows (a1,a2, a3…..) & (Highs: b1,b2,b3….)

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If CP (a1 to b2) < VTL (a1 to b2)

a2=a2+1 a2+2……b2

High VTL between(a1 -b2) will extend to a3

Yes

NO YES

a1=a1+1,

a1= a1+2........a2-1

Loop will iterate for every cycle until we get LOW VTL

**Flowchart for High VTL:**

Draw a Line between b1 to b2

Define all Lows & Highs

Lows (a1,a2, a3…..) & (Highs: b1,b2,b3….)

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If CP (b1 to a3) < VTL (b1 to a3)

b2=b2+1 ,b2+2……a3

High VTL between(b1 -b2) will extend to b3

Yes

NO YES

b1=b1+1,

b1= b1+2........b2-1

Loop will iterate for every cycle until we get HIGH VTL