The Warfare Economics of the Standard Nuclear oliGARCHy

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Abstract

In this paper, I describe the warfare economics of the Standard Nuclear oliGARCHy.

The paper ends with "The End"

Introduction

The Standard Nuclear oliGARCHy has robust resilience to war. In this paper, I describe the warfare economics of the Standard Nuclear oliGARCHy.

Preliminaries

Define the two functions

$$f(i) = \arctan\left(\frac{2}{i^2}\right)$$

$$g(j,k) = \arctan(\tanh(jk))$$

The supply in the nine districts are

$$S = \Sigma \times \{s_1, s_2, s_3, s_4, s_5, s_6, s_7, s_8, s_9\}$$

where

$$s_i = \frac{f(i)}{\sum_{i=1}^{9} f(i)}$$
 for $i \in \{1, 2, \dots, 9\}$

The demand in the nine districts are

$$D = \Delta \times \{d_1(r), d_2(r), d_3(r), d_4(r), d_5(r), d_6(r), d_7(r), d_8(r), d_9(r)\}$$

where

$$d_j(r) = \frac{g(j,r)}{\sum_{j=1}^9 g(j,r)}$$
 for $j \in \{1, 2, \dots, 9\}$

and r is the risk free-rate. Before the attack.

$$\Sigma = \Delta$$

and

$$\left(\sum_{i=1}^{9} s(i)\right) (1+r+p) = \left(\sum_{j=1}^{9} d(j,r)\right) (1+r+q)$$

where

$$p, q, r \approxeq 0$$

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When the attack happens, the warfare economics of the Standard Nuclear oliGARCHy is:

- 1. Estimate the psychological threshold τ
- 2. Estimate the perturbed values of Σ and Δ
- 3. Compute and store the values of P, Q, R, S and T using the following formulae:

(a)

$$P = \Delta^{4} \tau^{4} + 2\Delta^{4} \tau^{2} + \Delta^{4} + 2\Delta^{2} \Sigma^{2} \tau^{4} + 4\Delta^{2} \Sigma^{2} \tau^{2} + 2\Delta^{2} \Sigma^{2} + \Sigma^{4} \tau^{4} + 2\Sigma^{4} \tau^{2} + \Sigma^{4}$$
(1)

(b)

$$Q = 4\Sigma^{4} - 4\Delta^{3}\Sigma\tau^{4} - 8\Delta^{3}\Sigma\tau^{2} - 4\Delta^{3}\Sigma + 4\Delta^{2}\Sigma^{2}\tau^{4} + 8\Delta^{2}\Sigma^{2}\tau^{2} + 4\Delta^{2}\Sigma^{2} - 4\Delta\Sigma^{3}\tau^{4} - 8\Delta\Sigma^{3}\tau^{2} - 4\Delta\Sigma^{3} + 4\Sigma^{4}\tau^{4} + 8\Sigma^{4}\tau^{2}$$
(2)

(c)

$$R = 6\Sigma^{4} - 4\Delta^{4}\tau^{6} - 2\Delta^{4}\tau^{4} + 4\Delta^{4}\tau^{2} + 2\Delta^{4} - 12\Delta^{3}\Sigma\tau^{4} - 16\Delta^{3}\Sigma\tau^{2} - 4\Delta^{3}\Sigma - 4\Delta^{2}\Sigma^{2}\tau^{6} + 12\Delta^{2}\Sigma^{2}\tau^{2} + 8\Delta^{2}\Sigma^{2} - 4\Delta\Sigma^{3}\tau^{4} - 16\Delta\Sigma^{3}\tau^{2} - 12\Delta\Sigma^{3} + 2\Sigma^{4}\tau^{4} + 8\Sigma^{4}\tau^{2}$$
(3)

(d)

$$S = 8\Delta^{3}\Sigma\tau^{6} + 20\Delta^{3}\Sigma\tau^{4} + 8\Delta^{3}\Sigma\tau^{2} - 4\Delta^{3}\Sigma - 8\Delta^{2}\Sigma^{2}\tau^{6} - 28\Delta^{2}\Sigma^{2}\tau^{4}$$

$$-8\Delta^{2}\Sigma^{2}\tau^{2} + 12\Delta^{2}\Sigma^{2} + 12\Delta\Sigma^{3}\tau^{4} - 12\Delta\Sigma^{3} - 4\Sigma^{4}\tau^{4} + 4\Sigma^{4}$$

$$(4)$$

(e)

$$T = 4\Delta^{4}\tau^{8} - 4\Delta^{4}\tau^{6} - 11\Delta^{4}\tau^{4} - 6\Delta^{4}\tau^{2} + \Delta^{4} + 24\Delta^{3}\Sigma\tau^{6} + 28\Delta^{3}\Sigma\tau^{4} + 16\Delta^{3}\Sigma\tau^{2} - 4\Delta^{3}\Sigma - 12\Delta^{2}\Sigma^{2}\tau^{6} - 10\Delta^{2}\Sigma^{2}\tau^{4} - 16\Delta^{2}\Sigma^{2}\tau^{2} + 6\Delta^{2}\Sigma^{2} - 4\Delta\Sigma^{3}\tau^{4} + 8\Delta\Sigma^{3}\tau^{2} - 4\Delta\Sigma^{3} + \Sigma^{4}\tau^{4} - 2\Sigma^{4}\tau^{2} + \Sigma^{4}$$
(5)

4. Compute and store the positive zeroes $p \in [0,1]$ of

$$Px^4 + Qx^3 + Rx^2 + Sx + T = 0$$

5. Compute and store

$$q = \sqrt{2\tau^2 - p^2}$$

6. Compute and store

$$r = \sqrt{1 - \frac{1 - \tau^2}{1 + \tau^2}}$$

- 7. Activate war plan(s) and/or protocol(s).
- 8. Wait until

$$\left(\sum_{i=1}^{9} s_i\right) (1+r+p) = \left(\sum_{j=1}^{9} d_j(r)\right) (1+r+q)$$

References

[1] Ghosh S. (2025). The Complete Treatise on the Standard Nuclear oliGARCHy. Kolkata, India. Available online at https://github.com/TheRealoliGARCH/SNoG

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