

Anexo I. Registro del Título del Trabajo Fin de Grado (TFG)

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PROGRAMA: E2 + BA

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Apellidos

Alejandro

Nombre

Título provisional del TFG: “How the war affects the market efficiency of defense industry through the application of Multi-Fractal Detrended Fluctuation Analysis (MFDFA).”

ADJUNTAR PROPUESTA (máximo 2 páginas: objetivo, bibliografía, metodología e índice preliminares)

- **Objetivo:**

The objective of this work is to analyze the efficiency of the defense industry regarding specific market events and evaluate whether it exhibits efficient or inefficient behavior, using the Multi-Fractal Detrended Fluctuation Analysis (MFDFA) to see how investors can benefit from investing in these companies and or if there are any arbitrage opportunities

- **Metodología**

1. Data Collection and Rationale:
 - a. Collect the data from public defense companies from USA and EU as well as a defense Index from each market
2. Define the keys events I will be using to compare the securities pre- and post- event
 - a. Event Study
3. Data Analysis:
 - a. Returns and volatility analysis before and after the events
 - b. MFDFA application to examine the data multifractality and evaluate the market efficiency
 - c. Pre- and post-event comparison
4. Tools:
 - a. Python for the analysis and econometrics
5. Data and interpretation and results

- **Índice provisional:**

1. Introduction

1.1 Work Rationale

1.2 Data and Methodology

2. Defense Industry as a business

2.1 The Big Picture

2.2 Drivers of the industry

3. Main Current War Conflicts

3.1 Ukraine & Russia

3.2 Israel

3.3 How they affect the markets

4. Market Efficiency and the MFDFA theory

4.1 MFDFA theory

5. Data Analysis

4.1 Companies / Index chosen

4.2 MFDFA application

6. Results

7. Conclusion

8. Bibliography

9. Anex

- **Bibliografía**

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