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| Book Name: | [**New Advances in Business, Management and Economics**](https://www.bookpi.org/bookstore/product/new-advances-in-business-management-and-economics-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_5643** |
| Title of the Manuscript: | **Data-Driven Financial Risk Mitigation in Energy Investments: Optimizing Capital Allocation and Portfolio Performance** |
| Type of the Article | **Book Chapter** |

**Special note:**

**A research paper already published in a journal can be published as a Book Chapter in an expanded form with proper copyright approval.**

**Source Article:**

**This chapter is an extended version of the article published by the same author(s) in the following journal.**

**Asian Journal of Economics, Business and Accounting, 25(4): 523-531, 2025.**

**DOI: 10.9734/ajeba/2025/v25i41769**

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | This manuscript holds considerable importance for the scientific community as it bridges the knowledge gap between emerging AI technologies and their application in the high-risk domain of energy finance. By synthesizing recent advancements in predictive analytics, credit risk modeling, and portfolio optimization, it provides researchers and practitioners with a comprehensive understanding of how data-driven tools can mitigate financial risks in energy investments. The study's systematic approach ensures methodological rigor and offers a foundation for future empirical research in both finance and energy sectors. Furthermore, it contributes to policy development and strategic decision-making by highlighting scalable, AI-based solutions for enhancing investment resilience in volatile and uncertain environments. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | Yes, the current title — **"Data-Driven Financial Risk Mitigation in Energy Investments: Optimizing Capital Allocation and Portfolio Performance"** — is suitable and effectively reflects the core themes of the manuscript, including the focus on financial risk, data-driven techniques, and the context of energy investments.  However, if you're seeking a more concise or slightly refined alternative, you might consider:  **Alternative Title Suggestion:** *“AI-Driven Financial Risk Mitigation in Energy Investments: Enhancing Capital Allocation and Portfolio Optimization”* |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | Yes, the abstract of the article is generally comprehensive and well-structured. It effectively outlines the aim, study design, methodology, key results, and conclusions. It also identifies the practical relevance of the findings, which is important for both academic and industry audiences.  Suggestions for Improvement:   1. Clarify the scope of literature: The abstract mentions a focus on literature from 2019 to 2024, but it could be helpful to briefly justify this timeframe (e.g., due to recent advances in AI and big data in finance). 2. Mention the number of studies reviewed earlier: The abstract references "12 significant studies" in the results, but this figure appears somewhat abruptly. You might consider briefly noting in the methodology that 12 empirical studies were selected for qualitative analysis. 3. Add a sentence on limitations: Including a brief mention of limitations (e.g., data availability, scalability concerns) would make the abstract more balanced and transparent. 4. Remove redundancy: The conclusion section in the abstract repeats "maximize" twice in close succession. You could rephrase to maintain conciseness and avoid repetition. |  |
| **Is the manuscript scientifically, correct? Please write here.** | Yes, the manuscript is scientifically correct. It demonstrates a sound understanding of the intersection between artificial intelligence, financial risk management, and energy investment. The systematic literature review follows accepted academic standards, using reputable databases and clearly defined inclusion/exclusion criteria. The discussions around AI-driven credit risk modeling, predictive analytics, and portfolio optimization are grounded in current research and supported by appropriate references.  The manuscript also accurately presents the benefits and challenges of applying AI in financial risk mitigation, showing a balanced and critical perspective. While the study is based on secondary data, it correctly interprets and synthesizes the findings of the reviewed literature. Overall, the scientific reasoning, terminology, and methodology are appropriate, making the manuscript both valid and credible within its field. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | Yes, the references in the manuscript are both **sufficient and recent**. The majority are from **2019 to 2024**, aligning well with the stated focus period of the review. The sources are drawn from reputable journals and conferences in the domains of finance, energy, artificial intelligence, and risk management, including IEEE, Elsevier, Springer, and peer-reviewed journals in sustainable finance and energy economics. |  |
| Is the language/English quality of the article suitable for scholarly communications? | Yes, the language and English quality of the article are generally suitable for scholarly communication. The manuscript demonstrates a strong academic tone, appropriate technical vocabulary, and clear sentence structure throughout. The arguments are logically presented, and the transitions between sections are smooth, supporting reader comprehension.  **Minor Suggestions for Improvement:**   * **Redundancy Reduction**: Some sentences, especially in the abstract and introduction, can be made more concise to avoid repetitive phrasing (e.g., “maximize investment accuracy” and “maximize portfolio diversification” could be varied). * **Grammar and Flow**: A few minor grammatical refinements and transitions (e.g., rephrasing long compound sentences) would enhance overall readability. * **Consistency**: Ensure consistent use of terms like "AI-based," "AI-driven," and "data-driven" to avoid confusion.   Overall, the manuscript is well-written and communicates its ideas effectively. A light professional proofreading would make it publication-ready. |  |
| Optional/General comments |  |  |

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| **PART 2:** | | |
|  | Reviewer’s comment | Author’s comment *(if agreed with the reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in detail): No* |  |

**Reviewer details:**

**Naga Ramesh Palakurti, USA**