## Review Form 1.7

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| Journal Name: | Asian Journal of Probability and Statistics |
| Manuscript Number: | **Ms_AJPAS_106264** |
| Title of the Manuscript: | **PORTFOLIO OPTIMIZATION USING 0-1 KNAPSACK QUADRATIC PROGRAMMING MODEL: A CASE STUDY.** |
| Type of the Article | **Original Research Article** |

## Review Form 1.7

**PART 1:** **Review Comments**

| | **Reviewer's comment** | **Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
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| **Compulsory** REVISION comments<br><br>**1. Is the manuscript important for scientific community?**<br>(Please write few sentences on this manuscript)<br><br>**2. Is the title of the article suitable?**<br>(If not please suggest an alternative title)<br><br>**3. Is the abstract of the article comprehensive?**<br><br>**4. Are subsections and structure of the manuscript appropriate?**<br><br>**5. Do you think the manuscript is scientifically correct?**<br><br>**6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.**<br><br>**(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)** | **General Comments**<br><br>From my point of view, it is a very interesting topic and simultaneously it seems that to the best of my knowledge is an important research using the 0-1 Knapsack quadratic model together with the mean-variance approach, this study sought to determine the optimal asset mix for TCF Microfinance bank. Five asset types were evaluated at a 70% target return. After three iterations, an optimal portfolio mix constituting of three out of the five assets was achieved, which exceeded the predetermined benchmark by 49.3% and at a risk value of less than 5%.<br>The paper consists of the sections: Introduction, Materials, Methodology, Results and Discussion and Conclusion.<br><br>**However, I find some recommendations:**<br><br>1. The abstract must contains the main purpose of the paper, the research method used in the research and the main contributions.<br>2. It would be very useful to add in the "Introduction" section the purpose, objectives and hypothesis of the research.<br>3. The Literature Review section cannot be missing from the paper.<br>4. I consider an econometric model will increase the quality of the paper.<br>5. The research is well based on science and the results are in agreement with the theoretical part. From my point of view, the paper is original and the topic addressed brings added value to the specialized literature regarding regional sector. The paper is well written and easy to read.<br>6. The research is well based on science and the results are in agreement with the theoretical part. The model applied to the analyzed data is correctly used in the analysis undertaken, it is a strength point of this paper.<br>7. It is very important for the authors to analyze the **descriptive analysis** (with Kurtosis test, Jarque Berra test and interpretation, Skewness and Kurtosis interpretation). In the same time the **correlation analysis** and the **VIF test** are very important in this research.<br>8. Obviously, the application of a model must take into account the tests of heteroskedasticity, endogeneity, the Hausman test, etc. These aspects do not emerge from the method and results. In the same time at the Materials and Method section the authors have to apply an econometric method like regression or panel with fixed effect estimation or the random effect estimation (see for instance, Baltagi (2008), Hsiao (2014) and Andre B et al. (2015)). Besides, the corresponding tests to determine which is the best method of estimation is needed (see the Hausman test, the Breusch and Pagan (1980)´s Lagrange multiplier, the F test for fixed effects to test whether all unobservable individual effects are zero).<br>9. The authors talk about the relationship between these variables, however they do not support the empirical evidence providing panel cointegration tests that are crucial (see for instance Kao (1999) panel data cointegration test, the Pedroni (1999, 2004) panel data cointegration test or the Westerlund (2005) panel data cointegration test, among others). | |

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| | We recommend the authors to number the paragraphs: 1. Introduction; 2.Literature review; 3. Methods and Results, Discussions and Conclusions.<br>In conclusion, the article should be thoroughly rebuilt (changes in structure recommended above). It should also be enhanced with a review of the literature adequate to the subject and a broader interpretation and commentary of the research results. | |
| **Minor** REVISION comments<br><br>**1. Is language/English quality of the article suitable for scholarly communications?** | Yes | |
| **Optional/General** comments | The Manuscript needs careful English proofreading because there are some shortcomings. For instance, the article "the" is sometimes missing in front of nouns, the message in some paragraphs is not clear enough. | |

**PART 2:**

| | **Reviewer's comment** | **Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
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| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in details)* | |

**Reviewer Details:**

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