

## Review Form 1.6

Journal Name:	<a href="#">Asian Journal of Probability and Statistics</a>
Manuscript Number:	Ms_AJPAS_88569
Title of the Manuscript:	Stochastic Modeling for the Analysis and Forecasting of Stock Market Trend Using Hidden Markov Model
Type of the Article	Original Research Article

### General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<https://www.journalajpas.com/index.php/AJPAS/editorial-policy> )

### 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)
<b>Compulsory</b> REVISION comments		
<b>Minor</b> REVISION comments	The summary of the findings of the study should show in the abstract.	
<b>Optional/General</b> comments	<p>Introduction: This paper dealt with the development of HMM for a proper understanding of finance variables in the stock market. Relationships between and within both the changing share values of Housing Development Finance Corporation Bank Limited (HDFC Bank Ltd) as visible/observed states influenced by the indicators of S&amp;P Bombay Stock Exchange Sensitive Index (Sensex) as invisible/influencing states were formulated. Stochastic modeling with hidden Markov models is carried out for exploring various parameters of the model. Deducing mathematical formulation of initial probability vector, transition and observed probability matrices were carried out with the empirical data sets. Furthermore, an attempt was made to estimate the long-run steady-state behavior of both the SENSEX and HDFC Bank share prices.</p> <p>Mathematical derivations for all the required statistical measures are obtained using the method of moments and the method of moment generating function (MGF), probability generating function (PGF) and the characteristic function (CF) for the proposed probability distribution. The empirical analysis, findings and conclusions were consistent.</p> <p>Strength: The paper is well written. The mathematical derivations are logic and thorough. The analysis and the findings were consistent.</p> <p>Weakness: The summary of the findings were not shown in the abstract.</p>	

### 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)
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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