

Manuscript ID : 00000-04429

International Journal of Mechanical Engineering and Technology

Volume 10, Issue 1, January 2019, Pages 1772-1792, Page Count - 21



Source ID : 00000002

## ANALYSIS OF DAILY STOCK TREND PREDICTION USING ARIMA MODEL

Mohankumari C <sup>(1)</sup> Vishukumar M <sup>(2)</sup> Nagaraja Rao Chillale <sup>(3)</sup>

<sup>(1)</sup> Department of Statistics, REVA University, India.

<sup>(2)</sup> Department of Mathematics, REVA University, India.

<sup>(3)</sup> Department of Statistics, Bangalore University, Bangalore, India.

### Abstract

*In literature of time series prediction the autoregressive integrated moving average (ARIMA) models have been explained clearly. This paper using the ARIMA model, elaborates the process of building stock trend predictive model. Published data of stock price obtained from National Stock Exchange (NSE) during the period from Jan-2007 to Dec-2011. The results obtained revealed that for short-term prediction the ARIMA model which has a strong prospects and for stock price prediction even it can be positively compete with existing techniques.*

### Author Keywords

ARIMA , Stock rate, Short-term prediction, Forecast.

**ISSN Print:** 0976-6340

**Source Type:** Journals

**Publication Language:** English

**Abbreviated Journal Title:** IJMET

**Publisher Name:** IAEME Publication

**Major Subject:** Social Sciences and Humanities

**Subject area:** Marketing Management

**ISSN Online:** 0976-6359

**Document Type:** Journal Article

**DOI:** 10.34218/IJMET.10.1.2019.176

**Access Type:** Open Access

**Resource Licence:** CC BY-NC

**Subject Area classification:** Business, Management and Accounting

**Source:** SCOPEDATABASE

### References (22)

1. Ayodele Adebisi, A.; Aderemi Adewumi, O.; and Charles Ayo, K  
Stock price prediction using the ARIMA Model

*(2014) 16th International conference on computer modelling and simulation, Page No 105-111,*

2. Uma Devi, B.; Sundar, D., and Dr. Ali, P  
An Effective Time Series Analysis for Stock Trend Prediction Using ARIMaA Model for Nifty Midcap-50

*International Journal of Data Management Process, Volume 3, Issue 1,*

3. Pai, P., and Lin, C  
A hybrid ARIMA and support vector machines model in stock price prediction

*(2005) Omega, Volume 33, Page No 497-505,*

- 
4. Wang, J.J.; Wang, J.Z.; Zhang, Z.G., and Guo, S.P  
Stock index forecasting based on a hybrid model  
*(2012) Omega, Volume 40, Page No 758-766,*

---

  5. Wei, L.Y  
A hybrid model based on ANFIS and adaptive expectation genetic algorithm to forecast TAIEX  
*(2013) Economic Modelling, Volume 33, Page No 893-899,*

---

  6. Atsalakis, G.S.; Dimitrakakis, E.M., and Zopounidis, C.D  
Elliot Wave Theory and neuro-fuzzy systems, stock market prediction: The WASP system  
*(2011) Expert Systems with Applications, Volume 38, Page No 9196–9206,*

---

  7. Mitra, S.K  
Optimal Combination of Trading Rules Using Neural Networks  
*(2009) International Business Research, Volume 2, Issue 1, Page No 86-99,*

---

  8. Atsalakis, G.S., and Kimon, P.V  
Forecasting stock market short-term trends using a neuro-fuzzy methodology  
*(2009) Expert Systems with Applications, Volume 36, Issue 7, Page No 10696– 10707,*

---

  9. Mohamed, M.M  
Forecasting stock exchange movements using neural networks: empirical evidence from Kuwait  
*(2010) Expert Systems with Applications, Volume 27, Issue 9, Page No 6302– 6309,*

---

  10. Kyungjoo, L.C.; Sehwan, Y., and John, J  
Neural Network Model vs.SARIMA Model In Forecasting Korean Stock Price Index (KOSPI)  
*(2007) Issues in Information System, Volume 8, Issue 2, Page No 372-378,*

---

  11. Merh, N.; Saxena, V.P., and Pardasani, K.R  
A Comparison Between Hybrid Approaches of ANN and ARIMA For Indian Stock Trend Forecasting  
*(2010) Journal of Business Intelligence, Volume 3, Issue 2, Page No 23-43,*

---

  12. Sterba, J., and Hilovska  
The Implementation of Hybrid ARIMA Neural Network Prediction Model for Aggregate Water Consumption Prediction  
*(2010) Aplimat- Journal of Applied Mathematics, Volume 3, Issue 3, Page No 123-131,*

---

  13. Javier, C., Rosario, E.; Francisco, J.N., and Antonio, J.C  
ARIMA Models to Predict Next Electricity Price  
*(2003) IEEE Transactions on Power Systems, Volume 18, Issue 3, Page No 1014- 1020,*

---

  14. Rangan, N., and Titida, N  
ARIMA Model for Forecasting Oil Palm Price  
*(2006) Proceedings of the 2nd IMT-GT Regional Conference on Mathematics, Statistics and Applications,*

---

  15. Khasel, M.; Bijari, M., and Ardali, G.A.R  
Improvement of Auto-Regressive Integrated Moving Average models using Fuzzy logic

(2009)Page No 956-967,

---

16. Lee, C.; Ho, C

Short-term load forecasting using lifting scheme and ARIMA model

(2011) *Expert System with Applications*, Volume 38, Issue 5, Page No 5902-5911,

---

17. Khashei, M.; Bijari, M., and Ardal, G. A. R

Hybridization of autoregressive integrated moving average (ARIMA) with probabilistic neural networks

(2012) *Computers and Industrial Engineering*, Volume 63, Issue 1, Page No 37-45,

---

18. Wang, C

A comparison study of between fuzzy time series model and ARIMA model for forecasting Taiwan Export

(2011) *Expert System with Applications*, Volume 38, Issue 8, Page No 9296-9304,

---

19. Meyler, A.; Kenny, G., and Quinn, T

Forecasting Irish Inflation using ARIMA Models

(1998)

---

20. Tabachnick, B.G., and Fidell, L.S

Using multivariate statistics

(2001)

---

21. Adisak Nowneow and Vichai Rungreunganun

POLY VINYL CHLORIDE PELLET PRICE FORECASTING USING ARIMA MODEL

(2018) *International Journal of Mechanical Engineering and Technology*, Volume 9, Issue 13, Page No 224–232,

---

22. Prabodh Pradhan, Dr. Bhagirathi Nayak and Dr. Sunil Kumar Dhal

TIME SERIES DATA PREDICTION OF NATURAL GAS CONSUMPTION USING ARIMA MODEL

(2016) *International Journal of Information Technology and Management Information Systems*, Volume 7, Issue 3, Page No 1–7,

---

---

## About Scope Database

[What is Scope Database](#)

[Content Coverage Guide](#)

[Scope Database Blog](#)

[Content Coverage API](#)

[Scope Database App](#)

© Copyright 2021 Scope Database, All rights reserved.

## Customer Service

[Help](#)

[Scope Database Key Persons](#)

[Contact us](#)