BICM RESEARCH SEMINAR SERIES

BICM Research Seminar 61

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Paper details	
Title	**Technical Analysis and Capital Market Predictability: An Econometric–Machine Learning Investigation**
Authors	**Mr. Gourav Roy** Lecturer Bangladesh Institute of Capital Market
	Mr. Debashish Nath MBA Graduate, Management Information Systems University of Dhaka
	Mr. Md. Arifur Rahman Principal Officer AIBL Capital Market Services Ltd.
Presentation details	
Presenter researcher	**Mr. Gourav Roy**
Date	26 November 2026 (Thursday)
Time	03.00 – 04.00 PM
Venue	BICM Multipurpose Hall
Expected Participants	Selected Officials of BICM & Invited Guests
Discussants	**Mr. Md. Nayem Dewan** Deputy Director Bangladesh Bank
	Mr. Md. Fazlul Hoque Senior Executive Officer ICB Capital Management Ltd.

About the Presenter

Mr. Gourav Roy is a Lecturer at the Bangladesh Institute of Capital Market (BICM), under the Ministry of Finance, Government of Bangladesh. He holds a BBA and an MBA in Finance from the University of Dhaka and is pursuing another master's degree in Economics, specialising in Environmental Economics. His research interests include sustainable finance, financial markets, corporate finance, financial econometrics, and the application of machine learning in finance. His research examines topics such as market predictability, corporate financial risk, environmental sustainability, and monetary transmission. At BICM, he teaches investment banking, sustainable finance, and corporate finance. He also serves as Coordinator of the Investors' Education Program and contributes to research, investor education, and the development of Bangladesh's capital market. His research has been published in reputed journals by publishers including Emerald, Springer, and Elsevier. He has also served as a reviewer for academic journals in finance, economics, accounting, and business.

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The paper abstract is given below. If you have any questions regarding the seminar or you wish to present a paper or invite a guest researcher, please do not hesitate to contact Md. Adnan Ahmed, Lecturer, BICM at adnan@bicm.gov.bd

Technical Analysis and Capital Market Predictability: An Econometric–Machine Learning Investigation

Gourav Roy [1], Debashish Nath [2] & Md. Arifur Rahman[3]

Abstract

This study examines whether technical indicators can help predict stock market returns in Bangladesh. It uses 1,173 daily observations from the Dhaka Stock Exchange (DSE) covering January 2020 to December 2024. The analysis combines econometric methods with machine learning models, while data from 2024 are reserved to evaluate forecasting performance.

The results show that several technical indicators, including MACD, Bollinger Bands and the Stochastic Oscillator, have statistically significant relationships with market returns. However, their practical forecasting value depends on how performance is measured. In the 2024 test period, a simple forecast based on the historical average produced smaller forecasting errors than the machine learning models. Nevertheless, the machine learning models correctly predicted the direction of market movements in 77.05% of cases.

The study also finds that a trading strategy based on predicted market direction becomes unprofitable after accounting for transaction costs. These findings suggest that predicting the direction of the market does not necessarily translate into profitable trading opportunities. The study highlights the importance of considering forecasting accuracy and transaction costs when evaluating technical analysis.

Keywords: Dhaka Stock Exchange, Technical Analysis, Return Predictability, Machine Learning, Forecast Evaluation, Market Efficiency.

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