

## **ABSTRACT**

*ARIMA is suitable for short-term forecasting, while RNN's vanishing gradient problem is overcome by LSTM. Quantum yields different results in data science, accuracy, and forecasting time range. Additionally, determinants for mitigating forward rate risk to cash flow have not convincingly compared against hedging forward contracts for exchange rate exposure. The purpose of the study is to determine forecasting by classical and quantum methods and analyze the effect of hedging forward contracts on cash flow.*

*The analysis method is multiple regressions, and the research sample is 100 companies of Index Small-Mid Cap (IDX SMC) Composite from 2010 to 2023. The LSTM algorithm is more complex than ARIMA, and the Quantum algorithm is more complex than LSTM. In LSTM and Quantum, the data must be well-patterned with a sufficient amount of data to produce good performance, which is inversely proportional to ARIMA, which can be used for data with a limited range.*

*In addition, hedging forward contracts shows a high impact on cash flows, where the hedging strategy can moderate the causal relationship between forward rate and cash flows. The implication of this study provides an overview for companies in pricing forward rate to mitigate cash flow risks, which impact the success of cost efficiency and increase the profitability of the company.*

**Keyword :** *Auto Regressive Integrated Moving Average, forward rate, Gross Domestic Product Deflator, hedging forward contract, Long Short Term Memory, spot rate, Quantum.*