

ABSTRACT

DEPOSIT ADEQUACY ANALYSIS: A CASE STUDY OF BILLER AT PT. SARANA PACTINDO

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The penetration of the internet and mobile phones has resulted in a transformation and consumer preferences are increasingly accustomed to interacting through digital media to share information through social media, transactions, and online shopping. This is also supported by the entry of Covid-19 into Indonesia which requires doing everything at home, as well as affecting the socio-economic, financial, and supply chain. This makes cashless payments via smartphones and other devices increasingly popular in developing countries such as Thailand, Vietnam, and Indonesia. In this case PT. Sarana Pactindo provides solutions to banks to overcome this, especially in biller transactions.

However, due to a large number of transactions and transaction anomalies, the balance held by the bank can run out suddenly and cause the bank to be unable to carry out transactions and create losses between the two parties.

Therefore, it is necessary to formulate a strategy, especially in the operational strategy to streamline bank balances at PT. Pactindo Facilities. This study uses the big data method to predict bank balances within 30 days by comparing the ARIMA, Prophet, and Artificial Neural Network methods, by testing the performance value of the model using Mean Absolute Percentage Error, Mean Absolute Error, and Root Mean Square Error.

From the comparison results, the Artificial Neural Network has the smallest or best performance test value to predict data that has anomaly and uncertain data fluctuations, but the formation of the Artificial Neural Network model has a higher cost than other methods. For data that has almost no fluctuations or data anomalies, you can use the Prophet method which is easy to use and configure, or

ARIMA which has the advantage of predicting the short term. Although the predicted data is short-term, this strategy can be repeated.

The results of this study can be used as a reference and policies that can be applied by PT. Sarana Pactindo to banks to fulfill their biller transactions within a certain time.

Keywords: *non-cash transactions, time series, operations, big data, ARIMA, ANN, Prophet.*