CHAPTER V

CONCLUSION AND RECOMMENDATION

V.I Conclusion

The purpose of this research is to address whether GA-NN is better than Multiple Linear Regression in predicting dividend payout of manufacturing companies listed in Indonesia Stock Exchange or vice versa. By using data collected from Datastream, the results show that both methods can be used to forecast dividend value, since the regression of both methods are similar and high (0,88).

MLR results show that EARN, FCF, GrOp and LIQ significantly affect company dividend payout decision. The model used to assess those factors significance toward company divident payout decision is significant (p-value of F is 0.0000 and model reliability is 0.88). Therefore, MLR could be used by investor to assess the posibility of generating return over investment made on particular company.

GA-NN results show that the target data has a significant relationship with the output data (this is shown through the R^2value of 0.88) and that GA can be used as a training algorithm for ANN (this is shown by the mse value of 0.0016) that GA achieved). Using the sample data collected from datastream GA-NN model can be used to forecast the dividend payout of Indonesian manufacturing companies.

By comparing the result of mse from both methods, we can conclude that MLR produces better model compares to GA-NN because MLR produces lower mse value than GA-NN, therefore MLR forecast values are closer to the actual values. This result indicates that MLR generates better fit and forecast than GA-NN model.

V.II Research Limitation and Recommendation

Several limitation of this research are firstly, GA optimization has some drawbacks such as it is slow and in need of algorithm parameter tuning. Secondly, the MLR have to fulfill certain assumptions, such as autocorrelation, multicolinearity, and heteroskedasticity. Thirdly, the comparison of performance of both models are only based on mse and regression.

Having considered the limitations, some considerations could be considered by future research. This considerations include using other training algorithms that runs faster. If the data have a small ratio of input to target, then according to Blomstrom (2012) it is probably best to use resilient backpropagation algorithm. Generalized Leased Square(GLS) may be used as the statistical method to do forecsting, since GLS is not restricted by assumptions used by MLR. In comparing the statistical method and computational intelligence performance in forecasting dividend payout, other evaluation may be used.