SUMMARY

BAGUS PAHLEVI. Portfolio Formation Using Hybrid Model (Association Rule Mining and Capital Asset Pricing Model) Indonesia Stocks Exchange – Agribusiness Sector. Supervised by KUDANG BORO SEMINAR and ARIEF RAMADHAN.

Before investors do an investment, they look what sectors are playing an important role in the Indonesia economy and one of the important sector today is agribusiness. The main purpose of investing is to get maximum profit with the smallest risk, so it is very important for investor to do investment analysis in advance and they also should be able to select which stocks are worth to invest so it forms the optimal portfolio. The portfolio formation could use Capital Asset Pricing Model (CAPM). CAPM is used to calculate the value of risk and return, but CAPM have a weaknes. That is, if the investor gets the wrong choice of stocks at the beginning of the formation, it could affect the portfolio result and CAPM can not determine the relations between stocks.

In Indonesia, there 502 companies are listed in the Jakarta Stock Exchange (www.idx.co.id) and 44 agribusiness companies are listed. Therefore, to select some stocks manually, it becomes very subjective and slow. The purpose of this research is to help investors in selecting eligible stock objectively, quickly, and precisely with computer-based systems so it produce an optimal portfolio. The computation technique was used in this research was data mining with Association Rule Mining (ARM) method. ARM can be used to determine the relationship between stocks, but ARM has a disadvantage. That is, ARM it can not predict the rate of returns and risk. This research combined ARM with CAPM models to overcome the weaknesses of ARM and CAPM.

In the stock selection process minimum support of 10%, 15%, 20%, 25%, 30% were used and minimum confidence of 50% was used. This research used minimum support of 20% to explain the selection process. The result of CAPM+ARM with minimum support of 20% was CAPM+ARM could select which stocks would give a better prospect. It was proved by comparing the selection result of 1-itemset with Beta value which got from the CAPM calculation and the result was 1-itemset could prune the Beta value below 1. CAPM+ARM was able to determine the relationship between stocks and it could help an investor to make investment decisions.

Keywords: ARM, CAPM, CAPM+ARM, investment, portfolio