MULTI-STEP HYBRID PREDICTION MODEL OF BALTIC SUPERMAX INDEX BASED ON SUPPORT VECTOR MACHINE

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Abstract: Accurate prediction of the Baltic index makes great difference to the strategic decision and risk avoidance of the enterprise. For the multi-step Baltic Supermax Index prediction, direct prediction and iterative prediction has its own advantages. Therefore, in this paper, in combination with direct and iterative prediction, based on Support Vector Machine (SVM), a hybrid multistep prediction model is put forward. In hybrid model, the output from the iterative model is a rough prediction and it need also be adjusted based on the output from the direct model. And weekly BSI data from January 2011 to November 2014 are used to test the model. The results show that the hybrid multistep prediction model based on SVM has high accuracy, and is feasible in the BSI prediction.

Key words: *BSI prediction, Support Vector Machine (SVM), multi-step, hybrid*

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1. Introduction

Nowadays, more than 90% of international trade is done through shipping. As an important component of international shipping market, the dry bulk shipping market occupies the big half of the total global seaborne, and plays an important role in the shipping market. Due to the influence of many factors such as political, economic and natural conditions, the international dry bulk market fluctuates dramatic, which is called as one of the transportation markets that have the largest risk. The dry bulk freight indexes represent the freight rate levels of dry bulk shipping market. It not only reflects the volatility of dry bulk shipping market, but also can reflect the development status of the global economy and the trend of international trade. So it is called as the "barometer" of dry bulk shipping market. It is because of this characteristic, many insiders and experts have tried to estimate

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