

THE QUALITATIVE BEHAVIOR OF THE DISCRETE RATE OF RETURN-AMOUNT OF CIRCULATING FUND MODEL

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Abstract. In this paper, we build the discrete rate model of return-amount of circulating fund. Some sufficient conditions for the stability and asymptotic behavior of solutions of the model are given. We also give the reasonable economic explanations on the obtained results.

Keywords. Rate of return, amount of circulating fund, difference equations, stability, financial network.

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1 Introduction

In modern economics, the rate of return often means the mature rate of return. It can also be viewed as the general name of the mature rate of return for various credit tools. It is one of the most important subject in financial field. For investors, it is crucial how to invest capital to the most profitable entity. Therefore, the law of changes of the rate of return of each section in a financial network seems to be the main concerns for investors and decision-makers. Consequently, many researches on this subject have been done. For example, prediction of the exchange rate, analysis of the price of futures and prediction of the index of stock market, to some extent, are all involved in the discussion on the relationship between the investing capital and getting profit (see e.g., [1, 2, 5, 7]). Many economists think that the problem of the rate of return is one of the most important problems in financial market, and almost every financial phenomenon is more or less related to the rate of return (see [11]). Moreover, the level of the rate of return is often regarded as an important economic index, which can be used to evaluate the economics and credit situations. The understanding of the change law of rate of return may help us to know the role well taken by the rate of return in financial market. Furthermore, it provides us a theoretical basis for decision-making of investment and macroscopical control.

In [6], Lei studied systematically the model, introduced in [8-10], by using the theory of differential equations, and gave some more reasonable expla-