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Information, learning, and the stability of fiat money ☆

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Abstract

We analyze the stability of monetary regimes in an economy where fiat money is endogenously created by the government, information about its value is imperfect, and learning is decentralized. We show that monetary stability depends crucially on the speed of information transmission in the economy. Our model generates a dynamic on the acceptability of fiat money that resembles historical accounts of the rise and eventual collapse of overissued paper money. It also provides an explanation of the fact that, despite its obvious advantages, the widespread use of fiat money is only a recent development.

JEL classification: D82; D83; E00

Keywords: Monetary stability; Endogenous money; Decentralized trade; Learning

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> All of the governments in China between 1100 and 1500 succumbed to this temptation, and their monetary histories have a strong family resemblance. In each there was a period of inflation, usually quite a long one. Except in the case of the Southern Sung dynasty, which was conquered by the Mongols before the evolution was completed, the use of paper money was, in each case, eventually abandoned. This abandonment of the use of paper money in China is the most interesting feature of the history of paper money in China. (Gordon Tullock, 1957)

1. Introduction

In recent years, a large body of work has been devoted to the study of economies where the value of money arises endogenously. Following Kiyotaki and Wright (1989, 1993), most of the literature takes as a starting point the assumption that the amount of money in circulation is exogenously given. Less attention has been given to the questions that arise when the quantity of money is endogenously determined; i.e., when some of the agents inside the economy are responsible for money creation. Of particular importance is the emergence and stability of fiat money regimes. One of the few contributions in this front is Ritter (1995), where the transition from a barter to a fiat money economy is analyzed.[1] He considers an economy where a coalition of agents, which he identifies as the government, is allowed to issue money, and shows that the size and patience of this coalition must be large for the transition to take place. The government must care about the future if money is to have value, so patience is important. Size plays a role as it allows the government to internalize the costs of overissue.

While providing a framework where the emergence of fiat money occurs endogenously, Ritter does not address the concomitant issue of its stability; i.e., whether money remains in circulation in the long-run or not. In his framework, fiat money always stays in the economy once it is introduced. There is, however, varied evidence that in the past paper money issued by governments was subject to much instability. Tullock (1957) and Yang (1952) describe a succession of failures in the transition to paper money in China due to overissue. A similar pattern of overissue followed by abandonment of paper money also took place in the United States. For an example, see Galbraith's (1975) account of the monetary experience in the Massachusetts Bay Colony in 1690 and in various American colonies during the mid-18th century. The rise and collapse of paper money seems to be such a common phenomenon throughout history that, according to Friedman and Schwartz (1986), a continuous and widespread use of fiat money can be considered only a 20th-century development.

In what follows, we build a model where monetary stability depends on both exogenous and endogenous factors. We take a simplified version of Kiyotaki and Wright (1989) as our starting point. The main difference is that the amount m of money in circulation is determined by a self-interested agent, the government, and is not known in advance by the other agents in the economy. We refer to the value of m as the monetary regime. These agents can react against the government by not accepting money if they think its value is low. Information about m is obtained from the trade meetings they participate; i.e., from their private experience. Hence, the same technology that governs trade and makes money

[1] See also Sik-Kim (2001) and Norwood (2003).