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Credit Frictions and Optimal Monetary Policy☆

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Abstract

The basic (representative-household) New Keynesian model of the monetary transmission mechanism is extended to allow for a spread between the interest rate available to savers and borrowers, and investigate the consequences of a variable credit spread for the effects of a variety of shocks, and for optimal policy responses to those shocks. A simple target criterion continues to provide a good approximation to optimal policy. Such a "flexible inflation target" can be implemented by a central-bank reaction function that is similar to a forward-looking Taylor rule, but adjusted for changes in current and expected future credit spreads.

Keywords: credit spreads, policy rules, target criterion, flexible inflation targeting, quadratic loss function
JEL Classification: E44, E52

1. Introduction

It is common for theoretical evaluations of alternative monetary policies — most notably, the literature that provides theoretical foundations for inflation targeting — to be conducted using models of the monetary transmission mechanism that abstract altogether from financial frictions.[1] There is generally assumed to be a single interest rate — "*the* interest rate" — that is at once the policy rate that constitutes the operating target for the central bank, the rate of return that all households and firms receive on savings, and the rate at which anyone can borrow against future income. It is also common to assume a representative household, and firms that maximize the value of their earnings streams to that household, so that there is no need for credit flows in equilibrium in any event; such models imply that a breakdown of credit markets would have no allocative significance. Many of the quantitative DSGE models developed in central banks and other policy institutions before the recent financial crisis shared these features,[2] and they remain standard in textbook expositions of "New Keynesian" models.

Such models abstract from important complications of actual economies, and this prevents them from addressing at all certain issues in monetary policy — such as the appropriate response to a financial shock that increases credit spreads — while raising doubts about the accuracy of the conclusions reached for more standard questions as well.[3] This paper seeks to address this limitation by presenting a simple extension of the basic New Keynesian model (as developed, for example, in Woodford, 2003) in which a credit friction is introduced, allowing for a time-varying wedge between the interest rate available to households on their savings and the interest rate at which it is possible to borrow. Financial intermediation matters for the allocation of resources due to the introduction of heterogeneity in the spending opportunities currently available to different households.

While the model remains highly stylized, it has the advantage of nesting the basic New Keynesian model (extensively used in normative monetary policy analysis) as a special case, and of introducing only a small number of additional

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[1] See, for example, Clarida et al. (1999) or Woodford (2003), among many other references.

[2] The models of Smets and Wouters (2003, 2007) provide an especially influential example.

[3] The pre-crisis generation of DSGE models has been criticized on this ground by Issing (2006) and Goodhart (2007), among others.