



Inflation targeting and nominal-income-growth targeting: When and why are they suboptimal? ☆

Jinill Kim, Dale W. Henderson*

Federal Reserve Board, Washington, DC 20551, USA

Received 18 September 2002; accepted 2 August 2004

Available online 15 November 2005

Abstract

We compare optimal and simple interest-rate rules. Our model features optimizing agents, monopolistic competition in both product and labor markets, and one-period nominal contracts (for wages alone or for both wages and prices) signed before shocks are known. Exact solutions ensure that we obtain correct welfare rankings. Optimal rules maximize the unconditional expected utility of the representative agent with commitment subject to the information set of the policymaker. Even with monopolistic distortions, the optimal full-information rule makes the economy mimic the hypothetical full-flexibility equilibrium. Strict versions of inflation targeting, nominal-income-growth targeting, and other such simple rules are suboptimal under both full and partial information but flexible versions are optimal under certain partial-information assumptions. Nominal-income-growth targeting dominates inflation targeting for plausible parameter values.

© 2005 Elsevier B.V. All rights reserved.

JEL classification: E52; E50; E31

Keywords: Optimal monetary policy; Interest-rate rule; Inflation targeting; Nominal-income-growth targeting; Wage and price contracts

☆The authors would like to acknowledge the help of Corrado Di Maria, Claire Hausman, Kevin Lansing, Kristian Rogers, Morten Spange, and Robert Usarek. We have benefited greatly from the comments of an anonymous referee. Kim's work on this project was supported in part by a Bankard grant from the University of Virginia. The views in this paper are solely the responsibility of the authors and should be interpreted as reflecting the views of the Board of Governors of the Federal Reserve System or any other person associated with the Federal Reserve System.

*Corresponding author. Tel.: +1 202 452 2343; fax: +1 202 452 6424.

E-mail address: dale.henderson@frb.gov (D.W. Henderson).

1. Introduction

We derive optimal monetary stabilization rules and compare them to simple rules under both full and partial information. The optimal rules we consider maximize the unconditional expected utility of the representative agent with commitment subject to the information set of the policymaker. In accordance with the practice of most central banks, we assume throughout that the nominal interest rate, not the money supply, is the instrument of monetary policy. Inflation targeting and nominal-income-growth targeting receive special attention as in other recent studies.¹ Inflation targeting is of particular interest because in several countries the monetary-policy-making process is referred to as inflation targeting.

We use a model of a closed economy with optimizing firms and households, monopolistic competition in both product and labor markets, and one-period nominal contracts. In this setting and within a range, it is profitable for firms or workers to increase their outputs or labor services in response to increases in demands even though they cannot change prices or wages. A stabilization problem exists because there are three i.i.d. shocks that are unknown when contracts are signed. Agents are ‘identical’ because contracts are synchronized, so we can consider the utility of the representative agent. This utility can be written as a function of only employment and shocks since consumption is implied by the production function.

We want to ensure that we obtain correct welfare conclusions. Our way of achieving this objective is to impose enough simplifying assumptions to make it possible to derive exact analytic solutions. The (until recently) standard welfare analysis is based on a quadratic approximation of the utility function of the representative agent and a linear approximation of the equilibrium conditions of the model, both around the non-stochastic steady state.² This approach can yield incorrect welfare conclusions in the presence of distortions.³ It does so in our model because of monopolistic distortions.⁴ Whether the theoretical differences between standard and exact results are important empirically is an open question. Of course, monetary rules for actual economies can be evaluated only in more complicated models for which there are no analytic solutions, exact or approximate.

We consider two cases: (1) wage contracts and flexible prices, and (2) both wage and price contracts. If wages are set in contracts, for some shocks the attractiveness of some simple rules depends crucially on whether prices are also set in contracts. For each case, as a standard of comparison we use the rule that maximizes unconditional expected utility with commitment and full information, that is, knowledge of the current values of all the shocks. As we show in [Henderson and Kim \(1999\)](#), outcomes in a third possible case with

¹For a comprehensive listing of studies of inflation targeting, see [Svensson \(2003\)](#). For a listing of papers on nominal-income targeting written before 1993, see [Henderson and McKibbin \(1993\)](#). For a listing of more recent papers, see [McCallum and Nelson \(1999a\)](#), which is the discussion-paper version of [McCallum and Nelson \(1999b\)](#). For explicit comparisons of these two rules, see [Jensen \(2002\)](#) and [Frisch and Staudinger \(2003\)](#). For a brief discussion of the relationship between our paper and these studies, see footnote 48.

²The standard approach is developed fully in, for example, [Rotemberg and Woodford \(1998\)](#), which is the discussion-paper version of [Rotemberg and Woodford \(1997\)](#).

³The standard approach can yield incorrect welfare rankings for other reasons as well. For example, as shown by [Kim and Kim \(2003\)](#) it implies that autarchy dominates complete markets in a model of international risk sharing even though there are no distortions.

⁴We substantiate this claim in the Appendix by providing an example in which standard welfare analysis yields incorrect conclusions.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات