Available online at www.sciencedirect.com
SCIENCE DIRECT
ELSEVIER
Journal of Monetary Economics 50 (2003) 1603–1622
Journal of MONETARY ECONOMICS
www.elsevier.com/locate/econbase

The predictive power of the yield curve: a theoretical assessment ☆

Christel Rendu de Lint[a,*], David Stolin[b]

[a] Pictet, PAM Fixed Income, 8 bd de la Tour, 1205 Geneva, Switzerland
[b] Toulouse Business School, 20 Boulevard Lascrosses, 31000 Toulouse, France

Accepted 7 August 2003

Abstract

Although the empirical evidence about the leading indicator property of the term spread (LIPTS) is powerful, this property lacks a rigorous theoretical foundation. This paper investigates whether dynamic equilibrium asset pricing models are able to provide a theoretical underpinning for the LIPTS. We study an endowment and a production economy. The endowment economy is unable to account for the LIPTS. On the other hand, a model with endogenous production provides a reasonable theoretical justification for the LIPTS.

JEL classification: C68; E32; E43; E44

Keywords: General equilibrium; Leading indicators; Term structure of interest rates; Yield curve

1. Introduction

The yield curve has long been monitored for the information it contains about future economic activity. Looking at Fig. 1, it is striking how closely the current term

☆The views expressed in this paper are those of the authors and do not necessarily represent those of Pictet & Cie. This paper is based on a chapter of Christel Rendu de Lint's dissertation at the London Business School. She is indebted to her supervisor Albert Marcet for invaluable comments and support. The paper also benefited from helpful comments by Jean-Pascal Benassy, Fabio Canova, Alexei Jiltsov, Brian Henry, Morten Ravn, Andrew Scott, Oren Sussman, participants at the 1999 SED meeting in Alghero and at the economics seminar at the Bank of Italy. Lastly we thank an anonymous referee. Remaining errors are ours.

*Corresponding author. Pictet, PAM Fixed Income, 8 bd de la Tour, 1205 Geneva, Switzerland.
E-mail address: crendudelint@pictet.com (C. Rendu de Lint).

0304-3932/$ - see front matter
doi:10.1016/j.jmoneco.2003.08.007

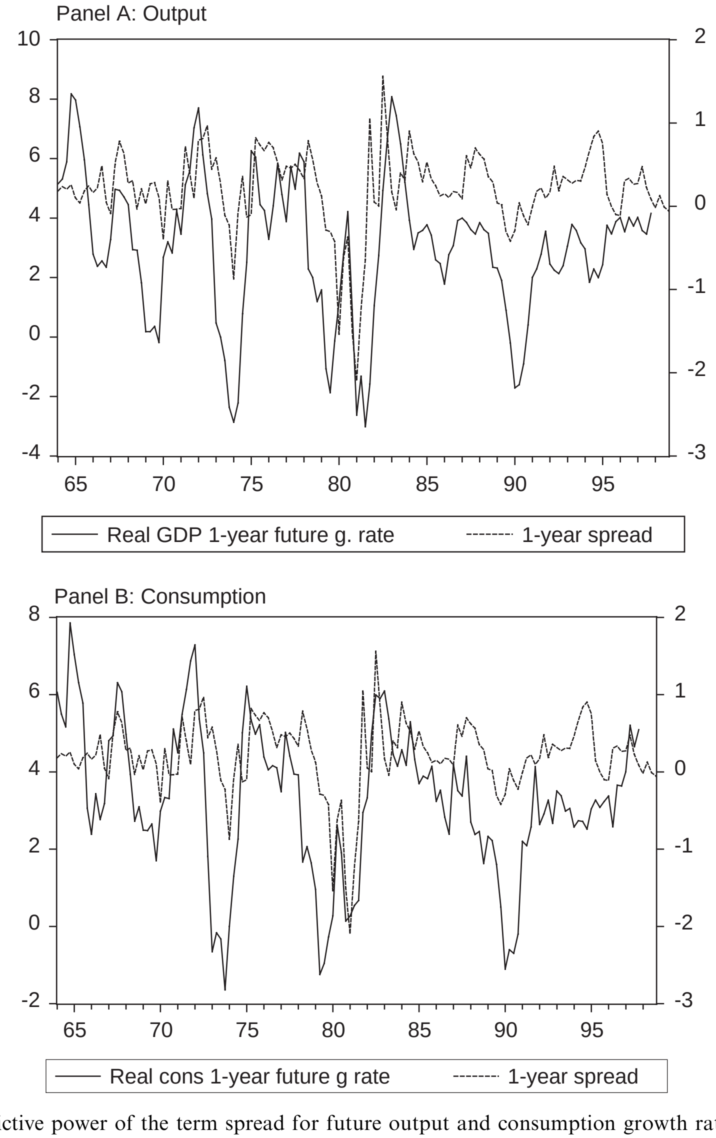

Fig. 1. Predictive power of the term spread for future output and consumption growth rates. GDP and consumption growth rates are shown on the left scale, the term spread is on the right scale. All values are annualized and shown in %. The 1 year spread is defined as $spread_t^4 = r_t^4 - r_t^1$, and 1 year consumption and output growth rates as $c_t^4 = \ln(c_{t+4}/c_t/4) \times 400$ and $y_t^4 = \ln(y_{t+4}/y_t/4) \times 400$, respectively.

spread (the difference between the long and short interest rates, i.e. a measure of the slope of the yield curve) tracks movements in the future output and consumption growth rates. Since in both graphs at each point in time t, the spread is known but future growth rates are not, the term spread appears to contain predictive information about future economic activity. Based on this observation, numerous