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The predictive power of the term structure of interest rates in Europe and the United States: Implications for the European Central Bank

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Abstract

This paper examines the relationship of the term structure of interest rates to monetary policy instruments and to subsequent real activity and inflation in both Europe and the United States. The results show that monetary policy is an important determinant of the term structure spread, but is unlikely to be the only determinant. In addition, there is significant predictive power for both real activity and inflation. The yield curve is thus a simple and accurate measure that should be viewed as one piece of useful information which, along with other information, can be used to help guide European monetary policy. © 1997 Elsevier Science B.V.

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1. Introduction

The term structure of interest rates is mentioned frequently in the context of monetary policy, particularly as an indicator of market expectations or of the stance of policy. Although it is rarely – if at all – viewed as a policy target, it is generally conceded to contain some information that may be of use to both market participants and to the monetary authority.

Already a relatively extensive literature has examined the informational and predictive content of the term structure with regard to the conventional final targets of monetary policy, namely inflation and real activity. This paper builds on that literature by examining those relationships in a cross-country framework, and considers the issue of degree of influence that the central bank exercises on movements in the term structure.

Our aim is to consider whether information contained in the term structure of interest rates is potentially useful for the European Central Bank. Hence, we focus primarily on a sample of major European economies (France, Germany, Italy and the United Kingdom). The conclusions we draw about individual countries do not necessarily carry over to the European Central Bank, but without consistent results for the individual countries, the potential usefulness of the term structure for the Bank would be suspect. Results for the United States are also presented for reference purposes, especially since much of the previous empirical literature has concentrated on U.S. data. [1]

The analysis begins by looking at the relationship between the immediate instruments of monetary policy and the spread between long- and short-term government interest rates. In the countries considered, a very short-term interest rate (a 'central bank rate') is reasonably characterized as the primary policy instrument. In most cases, there is in fact a credit market that is frequently used by the central bank to intervene domestically and over which the bank exerts considerable influence. The use of a short-term rate as the primary policy instrument is by no means a universal principle of monetary policy, either cross-sectionally or even in one country over time. Nevertheless, the characterization is not far from reality in most cases, especially at the current time.

Can the central bank control the yield curve spread through this short-term instrument? It can certainly affect the short end of the yield curve to a significant degree. The long end, however, will be determined by many other considerations, including long-term expectations of inflation and real activity. It is therefore much more difficult to find a close empirical relationship between this long rate and the

[1] Estrella and Hardouvelis (1990) looked at various issues covered in the present paper in the US context. Bernanke and Mishkin (1992) contains cross-country analysis of some of the same issues, focusing on shorter-term horizons than in the present paper and using monthly data.