North American Journal of Economics and Finance 31 (2015) 292–310

Contents lists available at ScienceDirect

North American Journal of Economics and Finance

International long-term yields and monetary policy in a small open economy: The case of Canada

Ronald H. Lange *

Economics Department, Laurentian University, Sudbury, Ontario, Canada P3E 2C6

ARTICLE INFO

Article history:
Received 23 June 2014
Received in revised form 10 December 2014
Accepted 11 December 2014
Available online 23 December 2014

JEL classification:
E43
E44
E50
E52

Keywords:
Long-term yields
Monetary policy
Small open economy
Structural VAR
Regime-switching

ABSTRACT

The objective of this study is to identify the impact of the recent period of international integration of bond markets on interest rates in a small open economy. The empirical methodology captures a financial globalization regime with a nonlinear, structural vector autoregression (SVAR) and a regime-switching contemporaneous interest-rate block. The responses of longer term interest-rate spreads in Canada to changes in U.S. long-term nominal interest rates are found to have increased by about one-third in the globalization regime since the late 1990s, consistent with recent research on the effects of international long-term yields on those in small open economies. There is also some evidence of a weaker response of the longer term spreads, a measure of the stance of policy in Canada, to the monetary policy rate in the globalization regime. However, the evidence does not support an important decoupling of short- and long-term interest rates that has made the monetary transmission mechanism less effective for controlling economic activity and inflation. In fact, monetary policy appears to have become even more effective in the globalization regime as result explicit inflation targeting.

* Tel.: +1 705 673 8051; fax: +1 705 675 4886.
E-mail address: rlange@laurentian.ca

http://dx.doi.org/10.1016/j.najef.2014.12.004
1062-9408/

1. Introduction

Two observations about the movements of long-term nominal bond yields since the second-half of 1990s have received attention in the recent literature. The first observation is that they have been abnormally low in the United States. The observation received attention following Greenspan's (2005) famous "conundrum" remark after U.S. long-term bond yields remained relatively contained as the federal funds rate was raised from 1% to an eventual level of 51/4% in 2004–2006. Greenspan was concerned that the low level of long-term yields may reflect a decoupling of the short-term monetary policy rate from long-term nominal yields in the U.S. The second observation is that long-term bond yields in a number of small open economies appear to have moved very closely with those in the U.S. The pattern of strong correlations of long-term nominal interest rates of different currencies with those in the U.S. suggests that long-term yields in these economies may have also decoupled from short-term monetary policy rates. In fact, some recent studies indicate that bond yields, both in the U.S. and abroad, fell below levels that were consistent with standard macroeconomic fundamentals, such as inflation, GDP growth, and fiscal balances (Rudebusch, Swanson, & Wu, 2006; Gruber & Kamin, 2009).

The purpose of this study is to examine the effects of the recent period of low long-term nominal interest rates in the U.S. on Canadian interest rates and whether there has been a decoupling of long-term interest rates from the short-term monetary policy rate in Canada. A decoupling of interest rates would indicate that short-term monetary policy decisions in Canada have more limited effects on long-term real interest rates, and therefore, on the macroeconomy. The study employs an empirical methodology that captures interest rate responses within a nonlinear, structural VAR framework and with a regime-switching, interest-rate block. The regime-switching block allows Canadian interest rates to respond to contemporaneous movements in U.S. long-term yields and short-term monetary policy actions in different regimes. The impulse response functions and variance decompositions from the structural VAR allow for the evaluation of the effectiveness of monetary policy and the stance of policy on the macroeconomy in the different regimes.

To preview the conclusions, the empirical results capture a 'financial globalization' regime, where the responses of longer term spreads, an important measure of the stance of monetary policy in Canada, are found to have increased by about one-third to changes in U.S. longer-term yields in the financial globalization regime, consistent with recent research on the effects of international long-term yields on those in small open economies. The effects of the monetary policy rate on the longer term spreads are found to have decreased by about the same amount in the globalization regime. However, impulse response functions and variance decompositions for the regimes do not suggest a decoupling of short- and long-term interest rates that have changed the monetary transmission mechanism and made monetary policy less effective in controlling economic activity and inflation.

The following section briefly reviews some of the recent research that supports various hypotheses about the increased correlation between international long-term interest rates. Section 3 outlines the structural VAR methodology with exogenous U.S. long-term interest rates and presents a regime-switching innovation model for the contemporaneous responses of the interest rate block. Section 4 discusses the construction of the data for the constant-maturity, zero-coupon bond yields for Canada and presents a preliminary analysis that identifies the recent 'financial globalization' regime. The results for the Markov-switching, interest-rate regimes, and impulse response functions and variance decompositions for the regimes are presented in Section 5. The final section presents a brief interpretation of the results.

2. Recent research

The recent international integration of financial markets has led to various hypotheses about the sources of the low level of long-term yields in the U.S., the increased correlation of international long-term interest rates, and the possible decoupling of short- and long-term interest rates. The most intuitive hypothesis is the existence of a 'saving glut' due to excess savings in emerging markets flowing into industrialized countries. Byrne, Fazio, and Fiess (2010), for example, analyze the linkages between the short and long ends of the term spread both domestically and internationally for a sample