Application of the IS-MP-IA Model and the Taylor Rule to Croatia: Policy Implications for Economic Integration

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Abstract

Applying the IS-MP-IA model and the Taylor rule, this study finds that a lower expected inflation rate, real appreciation, a lower federal funds rate, and more world output would help increase the Croatian output. The insignificance of government deficit spending suggests that the Ricardian-equivalence hypothesis may be applicable to Croatia. The conventional wisdom to pursue currency devaluation to stimulate the economy may not work for Croatia.

- JEL classifications: E52, E62, F41
- Key words: IS-MP-IA, Taylor rule, deficit spending, devaluation, world interest rates

I. Introduction

Like most other countries in the region, Croatia has experienced great challenges and made progress in its transition to a market economy. The central government has attempted to pursue fiscal discipline as evidenced by the primary budget deficit/GDP ratio of 2.9 per cent in 2002 and 4.2 per cent in 2003 and the general government debt/GDP ratio of 41.5 per cent in 2003. The money market rate declined to 3.31 per cent in 2003 compared with the U.S. federal funds rate of 1.13 per cent and Euro rate of 1.22 per cent. It may suggest that the Croatian National Bank (CNB) followed world interest rates in determining the domestic interest rate.
policy in order to continue attracting foreign investors and make the cost of
borrowing affordable. The annual inflation rate reached the worst level of 1,502.17
per cent in 1993 and then declined considerably to 1.70 per cent in 2002 and 0.12
per cent in 2003, indicating that monetary policy in maintaining price stability has
been effective in recent years as evidenced by the decline in the growth rate for
monetary base from 994.15 per cent to 23.95 per cent during 1993-2003. The
exchange rate defined as kunas per U.S. dollar rose from 0.80 in 1992 to 6.56 in
1993, reached a high of 8.36 in 2001, and then declined to 6.12 in 2003. These
statistics suggest that the currency had appreciated since 2001 and may affect net
exports and capital flows. The growth rates of 5.22 per cent in 2002 and 4.26 per
cent in 2003 show that its macroeconomy performed reasonably well.

The International Monetary Fund (2004) assessed the Croatian economy and
made some comments. It is appropriate to pursue a stable exchange rate policy and
allow its fluctuations within 4.5 per cent of the average since 1999. The relatively
weak transmission mechanism from the policy rates, the discount rate or the money
market rate that the Croatian National Bank can control, to the lending rate and
advanced currency substitution need to be considered in the study of monetary
policy. To introduce open market operations would enhance the capital market. The
government is expected to maintain fiscal transparency, improve the welfare
program, broaden the tax base and reduce tax burdens on labor and capital, reduce
subsidies, increase the proportion of domestic sources of financing government
deficit to 1/3 of the total to reduce the risk of depreciation, and reduce government
deficit by 0.5 percentage points per year. Stringent labor laws need to be amended
to create more job opportunities. Furthermore, the government needs to keep the
pension system sustainable, pursue reforms in public enterprises, and speed up
privatization in the railways, utilities, telecommunications, and insurance sectors.

Several recent studies of Croatia and some of countries in the region examined
monetary policy (Dragic, 1999; Bozina, Matulich, and Skare, 2003; Craft, 2003),
inflation dynamics (Payne, 2002), determinants of economic growth (Bujas, 2001),
exchange rate pass-through, movements, or overvaluation or devaluation (Halpern
and Wyplosz, 1995; Billmeier and Bonato, 2004), possible adoption of the euro
(Watson, 2004), development of EMU and Croatia (Nikolic and Pecaric, 1997),
legal system, financial environment and institution (Glogovsek, 1997), among
others.

In light of the application for an EU member, the expectation to follow the EU
criteria, and the pursuit for a stable and growing economy, it is significant to examine