

Dr. Bharat Barot and Dr. Alfred Kanis
bharat.barot@konj.se and ak@ne.su.se
National Institute of Economic Research
P.O. Box 3116, SE-10362 Stockholm, Sweden and
Department of Economics, Stockholm, Sweden

Theoretical and Empirical Model for Private Homes in Sweden for the period 1970q1—2005q4

Abstract

The main objective of this paper is to present a theoretical structural short-run forecasting model for housing prices and housing investment to be used at the National Institute of Economic Research Sweden at every forecasting round. It must be pointed out that it can also be used for medium term forecasting by calibrating the estimated coefficients of the model. The model has also some interesting policy implications. We refrain from all these aspects and concentrate and focus on using the stock-flow models as a forecasting model on the short-run (2 - 3) years. On the demand side the real house prices are expressed as a function of income, the stock of dwellings, real wealth stock which is limited to financial assets, the real user cost of capital (reflected in the nominal and real interest rates) and the household debt variable. The demographic variable is the cohort of 30-34, and the total population of Sweden. The supply side is based on the famous q-theory of Tobin (1969). The framework of analysis is conducted using the Error Correction Model (ECM). The projections on house prices and housing investment outlined below are conditional on assumptions for the future course of explanatory variables whose development is not explained within the model: disposable income, the consumption deflator, interest rates, and the marginal tax rate etc. The forecast on the exogenous variables is taken from NIER, december forecasts 2003. An ad-hoc model for household debt gives the following forecasts for the stock of household debt, 2003: 5.6%, 2004: 6.5% and finally 3.7% for the year 2005. The simultaneous model solution allowing for interaction between the supply and demand sides gives the following forecasts for real house prices, 2003: 5.0%, 2004: 4.5% and 2005: 1.8%. The forecasts for housing investment are as follows: 2003: 5.8%, 2004: 5.4% and 2005: 1.6%. The results indicate that as the growth rate in household debt declines successively for the period 2003-2005 tends to pull down real house prices which in turn pulls down housing investment.

Key words: Theory, empirics, Error correction model, integration, co-integration, Tobin's q, short - term forecasts