

Referee report on: An Early Warning System to Predict the Speculative House Price Bubbles

General comments

The interesting and relevant paper examines the house prices of 12 OECD countries to determine boom phases. The authors argue that the burst of house price booms may hurt an economy. Therefore, it is important to predict the house price development. Besides to explain the house prices the authors decide to predict boom phases. They test three different early warning systems and conclude that the signaling approach isn't successful as the other two approaches. The difference between the logit and probit approaches are small. Both are important tools to predict house price booms with big success.

Special comments

Page 6, first paragraph: It would be helpful for the reader to start the paragraph giving a definition of a bubble. Having a definition it is clear why it is necessary to look at the fundamental developments. What are the approaches in the literature to determine bubbles? Is there a difference between boom and bubble? What the advantages to use the approaches applied?

Page 6, equation 1: This equation is a dynamic equation because it includes the lagged-endogenous variable. It is possible to its implicit long-run relationship. However, the long-run relationship is determined by a cointegrating relationship as long as the variables are nonstationary.

Page 7, equation 2: The fundamental real house price depends on the lagged-endogenous variable. In efficient markets the best predictor for the next period is the last observation. Smoothing the deviations by using a spline function is not convincing.

Page 7, equation 3: The standard deviation of the cyclical component is not time depending. Therefore, it includes information over the whole sample. Information which is not available at real times.

Page 7, third paragraph: The factor 0.5 is very small. Other studies use greater values. What are the arguments in favour of such a small value? Please give a list of the

considered countries. Please give a hint that an unbalanced panel is used. How are the house price indexes normalized?

Page 8, line 5: Please mention the survey of early warning systems given by Yucel (2011). Different approaches are mentioned by Detken, Gerdesmeier and Roffia (2010).

Page 8, line 17: Please mention the smoothing parameter of the Hodrick-Prescott approach.

Page 9, equation (4): Please give a reference for this accuracy definition. The minimum of this measure is 0. The maximum of this measure is 2. This is the case if C and B are zero and A and D are nonzero.

Page 9, equation (5): Please explain R_{it} .

Page 10, line 7: Please mention the starting point of your selection routine. Some variables include lags, however, not all. How are the standard errors determined?

Page 11, line 11: Please mention Diebold, F.X. and G. Rudebusch (1989) for the QPS.

Pages 12-14, References The reference list includes a lot of discussion papers. Meanwhile some are published. Moreover, Palmer is missing.

Page 18, Table 4: Please swap columns. The new ordering should be: country, estimation sample, number of bubbles, average duration of a bubble.

References

Diebold, F.X. and G. Rudebusch (1989) Scoring the leading indicators, *Journal of Business*, Vol. 62, No. 3, pp. 369-391.

Detken, C., D. Gerdesmeier and B. Roffia (2010) Interlinks between money, credit and asset prices and their implications for consumer price inflation: Recent empirical work, in: Lucas D. Papademos and Jürgen Stark (eds.) *Enhancing Monetary Analysis*, European Central Bank, Frankfurt am Main, pp. 307–327.

Yucel, E. (2011) A review and bibliography of early warning models, discussion paper, Central Bank of the Republic of Turkey.