

Revision Report

Title: Date-stamping US housing market explosivity

Journal: Economics

Ref: No. 2017-44 | July 13, 2017 | <http://www.economics-ejournal.org/economics/discussionpapers/2017-44>

We thank the referees for the highly insightful and useful comments raised concerning our paper. We have worked in the suggestions and revised the paper accordingly. We believe our paper has been significantly improved as a result, but any remaining issue belong to the authors.

Below follows a discussion of particular points raised by the referees, and how we amended our paper in response:

Referee Report 1

Referee's report on "Date-Stamping US Housing Market Explosivity"

Comment 1

This paper applies two methods to identify the periods in which the housing prices exhibited bubbles in the US between 1830-2013. The presumption is that house price determinants follow a similar path to the general price level in the economy, and if house prices deviate from the general level this indicates a bubble. Then it is a matter of defining what constitutes a deviation and this paper makes some choices based on some methods from the literature. This approach has the advantage of economizing on data, all it requires is a housing (real) price index. One of the methods identifies three periods of deviations from stationarity (overlooking a few shorter-lived explosivity periods that fit the definition given in the text). The other method identifies another (and more crowded) set of explosivity periods. A brief discussion matches both sets of results to historical events that are likely to have interactions with the abnormal movements in housing prices.

Response 1

We thank the referee for explanatory note. This requires no revision in the paper.

Comment 2

This is a question that would draw interest of readers from diverse backgrounds. The paper itself, in the introduction, does a good job of motivating the reader on the general importance of housing price movements. The text, however, is not very accessible to a non-specialist like myself. Possibly related to my ignorance of the methods, regarding the many

specific choices made in estimation, it is nearly impossible to speculate on the implications of alternative choices. This becomes especially confusing when the two methods give different results. Alternative choices could result in even more different results. I am not sure what the benchmark is in this situation to compare different sets of results. Why are these two results presented and why are they better than those would be obtained under many alternative specifications? I think the paper overlooks the necessity and significance of such a discussion.

Response 2

We have now included an extensive discussion why differences arise, how these can be resolved, and what benchmarks can be used. See pages 19-22 in the text (lines 446-571).

Comment 3

The paper makes it clear that its goal is not to give policy suggestions against bubbles, etc, and just wants to identify the periods. How about using these approaches for prediction? One cannot help but wonder the predictive use of these methods, and if there's some ground for this, it could make the paper much more interesting.

Response 3

In the revised manuscript, we have now discussed the prediction powers of bubble models and explained their failures and successes. We also showed what are the benefits of bubble detection. The bubble models also have partial success in predicting the end of explosive price behavior and hence may signal forthcoming market crashes. In Table 2 and Table 5, we report first period where a slowdown in the exponential price growth is detected or whether prices actually started to decline. These price change reversals might be used as a signal of forthcoming crashes. For instance, the fractional integration model signals a crash two years before the price collapse for the end 1850s boom-and-boost cycle and panic of 1857 and five years before the Panic of 1873. See pages 22-23 (lines 572-606 in the text).

Comment 4

A minor thing: colors of lines in figure 2 do not match the discussion in the text.

Response 4

We thank the referee for pointing out to the typos. We have corrected the reference to the lines in Figure 2.