On the explosive nature of hyper-inflation data
Bent Nielsen

Reply to Referee 1
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Many thanks for your comments to the paper. They were very helpful for the revision of the paper.

1. *Section 2.2 on the I(2) approach*

It should now be reflected more clearly in the paper that older models, like that of Sargent and Wallace (1973) and Sargent (1977) did not allow cointegration. It is important to note though that these papers were written before the idea of cointegration came along. Cointegration came into the literature with Taylor (1991) and Engsted (1993). This type of work requires that p_t and m_t is $I(2)$. The point of this paper is, however, that p_t and m_t are not $I(2)$ but may rather have a common $I(1)$-unit root and a common explosive root. This becomes very clear when looking at the Yugoslavian data. This can also be seen from Taylor's table of unit root tests for the classical episodes as pointed out in the paper. For this reason I don't think it is productive to go further into a discussion of the $I(2)$ setup than I do.

2. *What is $\widehat{u}_t$ in (2.11)?*

It should have been stated that these is the standardised residuals.

3. *VAR analysis.*

It is now pointed out that an analysis of the bivariate system m_t, p_t is already used as illustration in the paper Nielsen (2005b) where the econometric theory of the co-explosive techniques are derived. The conclusions are as here: linking $m_t - p_t$ with $\Delta_1 p_t$ will not give a balanced regression. Given that conclusion I am not sure it is productive to go into a detailed discussion at this point of the past papers that make that link, not even when they analyse the Yugoslavian data. Having said that, a brief comparison with the results of Petrović and Mladenović (2000) is added in §5. Your observation about the unstability of $m_t - p_t$ is one of the reasons that $m_t - s_t$ is used in the second analysis, see last paragraph of §4.

It is now pointed out that the lag length is chosen so as to ensure the model passes mis-specification tests. In the context of co-explosive analysis three lags allows capturing the three different stochastic components (random walk, explosive, stationary) in a nice way.

The linear trend helps improving the fit of the model. There does not appear to be any strong economic interpretation for the linear trend, although it does match the assumption that M_t rises at a constant rate in Cagan's seignorage considerations.

The interesting question in relation to explosive root estimate is of course whether it is significantly different from a unit root. This can be tested by imposing additional unit roots through an $\mathsf{I}(2)$ analysis and then see if the explosive root goes away. Such an $\mathsf{I}(2)$ analysis is now added.

Signed likelihood statistics added to the estimate of $\hat{\beta}_1$ under $\mathsf{H}_1, \mathsf{H}_\rho$.

Typo in definition of $\Delta_\rho X_t$ corrected.

3. Section 4.

Topo in c^e_{t+1} corrected.

4. Section 5.

In the trivariate model both c_t and d_t are significant in the cointegrating relation (typos in exclusion restriction statistics corrected). Thus, on statistical grounds, modelling a bivariate system of $m_t - s_t, d_t$, say, is not going to give clear results. It turns out to be a marginal decision to reject the hypothesis of no cointegration. On economic grounds, the trivariate system perhaps also seems more plausible than the bivariate system, in that many agents were active both in the foreign exchange market and the goods market.

The new Table 8 and 10 show characteristic roots. These tables demonstrate that the explosive root in the unrestricted model is not significantly different from unity.

The new Table 11 shows tests for stationarity. No variable is stationary on its own, not even $c_t - d_t$.

5. Discuss rational bubbles as in Diba and Grossman (1988).

A discussion is now included in section 2.2, section 3.3 and an appendix. The data does, however, give evidence against the rational expectations model both with and without bubble.