Referee Report
"Exchange rate expectations and chaotic dynamics: A replication study"
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The author is interested in issues related to deterministic chaos in exchange rate expectations following the earlier work by Resende and Zeidan (*Economics Letters*, 2008). Specifically, Resende and Zeidan estimate Lyapunov exponents and implement the tests of Fernandez-Rodriguez, Sosvilla-Rivero, and Andrada-Felix (FSA hereafter, 2005, *Journal of Applied Econometrics*). The test is based on the property that the Lyapunov exponents have been observed to stabilize under chaos, but increase with the sample size for stochastic processes given the properties of noise.

In the current manuscript, the author replicates the analysis of Resende and Zeidan, who provided a very brief discussion in their now decade-old *Economics Letters* piece. The earlier piece is subject to a couple of mild expositional concerns, including typographical errors. It is additionally, as to be expected, short on detail, so it may be of interest to reconsider their analysis.

The small sample in Resende and Zeidan does present some concerns. As emphasized by FSA on page 925 of their article, for example, "looking for the empirical evidence of chaos in macroeconomic data is an elusive task because of the reduced sample sets available to the researchers." This likely presents some challenges in the current context given a sample of only 168 observations. Additionally, the analysis is applied to four currencies, including the Deutsche mark, which of course has been replaced in Germany with the euro.

Some brief comments that may be useful to the author follows.

1). In addition to considering the tests of FSA, the authors consider the alternative tests of Shintani and Linton (2004) and Gattwald and Melbourne (2004). Some discussions of the differences between these tests and the relative merits and demerits seems important if the author wants to include these results, especially, since the "0-1" test does yield some evidence of chaotic dynamics.

2). If the author wishes to extend the earlier paper, as evidenced by the interest in alternative testing procedures, it may have been of interest to consider an alternative measure of exchange rate expectations, with perhaps both a longer sample size and using more current data.

3). It is conjectured that one possible difference between the p-values tabulated in Resende and Zeidan (2008) and here lies in the failure to adjust for the sample-size relative to FSA. In particular, associated p-values based on various types of chaos have been simulated for sample sizes of 380 and 2000 in FSA, yet Resende and Zeidan (2008) use only 168 observations. Some additional discussion seems merited relative to the

results in Table 1. For example, although not universal, the p-values calculated in the current study are typically smaller than those in Resende and Zeidan, indicating a marginally stronger rejection of chaotic dynamics. Can the author provide any intuition for this discrepancy? The author uses the same embedding dimensions and sample. Presumably the Newey-West HAC estimator uses the same bandwidth as in the earlier paper, although this could be explored. As the reconstruction delay also appears to have been set to one, one finally might ask how were subsamples constructed? In Resende and Zeidan, for example T_1 is set 88, T_2=93, etc. Is the same choice made here?

4). In this reviewer's opinion, footnote number 4 is somewhat harsh toward Resende and Zeidan (2008). At the author's discretion, this comment could be omitted.