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Quantitative Comparisons on the Intrinsic Features of the daily USD-GBP Exchange Rates: the 1920s vs. the 2010s

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ABSTRACT

This paper quantitatively compares the intrinsic features of the daily USD-GBP exchange rates in two different periods, the 1920s and the 2010s, under the same flexible exchange rate system. Even though the foreign exchange markets in the 1920s seem to be much less organized and developed than in the 2010s, both the long memory property and the structural break appear to be the key intrigue features of the exchange rates and the long memory volatility property is commonly found to be upward biased and overstated due to the structural breaks in the two periods. In particular, this paper finds that the long memory volatility property in the 1920s is much greater than in the 2010s, which is closely related to the structural breaks in the exchange markets by using the standard FIGARCH model. Then this paper applies the AdaptiveFIGARCH model to consider the long memory property and the structural breaks jointly. The main finding is that the structural breaks in the exchange markets affect the long memory volatility property significantly in the both periods but the degree of the long memory volatility property in the 1920s is reduced more remarkably than in the 2010s after the structural breaks are accounted for implying that the structural breaks in the foreign exchange markets in the 1920s seem to be more significant.

KEYWORDS the 1920s; daily USD-GBP exchange rates; long memory volatility property; structural breaks; FIGARCH model; Adaptive FIGARCH model

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