**學號： 姓名：**

**Exercise for Market Efficiency by Gregory and Hansen test 2018**

Please use **Gregory and Hansen cointegration** to examine the truth of market efficiency of foreign exchange market, and the results are summarized as table 3, 4, and 5 and equation (2) of the long-run relationship between spot exchange rate and forward exchange rate.

Table 1 Gregory-Hansen cointegration tests

|  |  |  |  |
| --- | --- | --- | --- |
| Test statistic | A | B | C |
| $$ADF\_{}^{\*}$$ |  |  |  |
|  |  |  |
| $$Z\_{a}^{\*}$$ |  |  |  |
|  |  |  |
| $$Z\_{t}^{\*}$$ |  |  |  |
|  |  |  |

Notes: \*, \*\*, and \*\*\* indicate significance at the 10%, 5%, and 1% levels, respectively. A, B, and C are the three models types of Gregory and Hansen (1996), and the critical values are from Table 1 of Gregory and Hansen (1996). The numbers in brackets are the estimated structural break dates.

表3推論：(請說明共積關係是否存在，結構轉變點的時間點為何時?)

以完全修正最小平方法(FMOLS)估計兩匯率間之長期關係式，其結果如表4與式(2) (請填上各係數值)

Model A :

**St+1= + × D1 + × Ft** (2)

虛擬變數**D1的分界點為**

Table 2 FMOLS test results (Model A)

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Coefficient | t-Statistic | Prob. |
| D1 |  |  |  |
| Ft |  |  |  |
| C |  |  |  |

為檢驗外匯市場是否具效率性，針對遠期匯率**Ft**係數檢驗是否等於1，其結果如表5

 Table 3 Wald test for he coefficient of **Ft= 1**

|  |  |
| --- | --- |
| χ2 Statistics | P value |
|  |  |

結論：(請說明外匯市場效率性是否成立)