

利率平價說之實證研究－以澳幣為例

學生：梁瑋倫

指導教授：簡美瑟 博士

國立高雄應用科技大學金融資訊研究所碩士班

摘要

本文擬探討澳洲與美國間匯率及利率之關係是否符合利率平價理論之預期。實證期間為 1990 年 1 月至 2010 年 12 月，而實證方法上採用 Johanson (1998) 的共整合檢定與誤差修正模型、預測誤差變異數分解及衝擊反應等。拋補利率平價理論之實證結果：(1) Johansen (1988) 共整合分析結果顯示，遠期匯率升貼水與利差間，具有共整合關係，即拋補利率平價理論是成立的。(2) 誤差修正模型實證結果發現，顯示遠期匯率升貼水與利差互為因果關係。未拋補利率平價理論實證結果如下：(1) 遠期匯率與未來即期匯率間，具有共整合關係，未拋補的利率平價理論是成立的。(2) 誤差修正模型結果發現，遠期匯率與未來即期匯率兩者互為因果關係。

關鍵字：利率平價理論、單根檢定、共整合分析、誤差修正模型

An Empirical Study of the Interest Rate Parity in Australia

Student : Wei-Lun,Liang

Advisors : Dr. Mei-Se, Chien

Institute of Finance and Information

National Kaohsiung University of Applied Sciences

ABSTRACT

The aim of this paper is to examine whether the interest rate parity is truth or not, applying the Australian data from January 1990 to December 2010. A variety of time-series methodologies, cointegration test, and causality test, error correction models, are applied to investigate the relationship. The empirical results of the covered interest rate parity(CIRP) are summarized as follows: (1) The empirical results of Johansen's cointegration show that the cointegration of forward premium and interest rate differential, which implied the CIRP is truth; (2) According to the results of the error correction model it is bi-directional causality between forward premium and interest rate differential. As to the uncovered interest rate parity (UIRP), the empirical results show as follows: (1) The empirical results of Johansen's cointegration support there is a cointegration between forward exchange rate and expected future exchange rate, which implied the UIRP is truth; (2) According to the results of the error correction model it is bi-directional causality between forward exchange rate and expected future exchange rate.

Keywords : Interest Rate Parity, Unit Root Test, Cointegration, Error Correction Model

目 錄

中文摘要	-----	i
英文摘要	-----	ii
誌謝	-----	iii
目錄	-----	iv
表目錄	-----	vi
圖目錄	-----	vii
一、	緒論-----	1
1.1	研究背景與動機-----	1
1.2	研究目的-----	2
1.3	研究架構-----	3
二、	文獻回顧-----	4
2.1	澳幣匯率之相關文獻回顧-----	4
2.2	利率平價說文獻回顧-----	7
2.2.1	拋補的利率平價條件之相關文獻-----	7
2.2.2	未拋補利率平價條件之相關文獻-----	10
三、	研究方法-----	13
3.1	實證模型-----	13
3.1.1	CIRP 實證模型-----	13
3.1.2	UIRP 之實證模型-----	15
3.2	實證方法-----	16
3.2.1	單根檢定-----	17
3.2.2	共整合檢定-----	19
3.2.3	向量誤差修正模式(VECM)-----	21
3.2.4	預測誤差變異數分解-----	23
3.2.5	衝擊反應函數-----	24
四、	實證結果與分析-----	26
4.1	資料來源與變數說明-----	26
4.1.1	資料來源-----	26
4.1.2	處理方式-----	27
4.1.3	澳幣市場走勢分析-----	27
4.2	拋補之利率平價理論(CIRP)檢定-----	28
4.2.1	單根檢定-----	28

4.2.2	Johansen 共整合檢定-----	29
4.2.3	向量誤差修正模型-----	30
4.2.4	預測誤差變異數分解-----	32
4.2.5	衝擊反應函數-----	34
4.3	未拋補之利率平價理論(UIRP)檢定-----	35
4.3.1	單根檢定-----	35
4.3.2	Johansen 共整合檢定-----	36
4.3.3	向量誤差修正模型-----	36
4.3.4	預測誤差變異數分解-----	39
4.3.5	衝擊反應函數-----	41
五、	結論與建議-----	42
5.1	結論-----	42
5.2	未來研究建議-----	43
參考文獻	-----	44



參 考 文 獻

一、中文部份

1. 王健合、莊傑雄、林常青，2010，歐元對美元拋補利率動態及效率研究，第十一屆全國實證經濟學研討會，台北。
2. 冷傳強，2008，拉丁美洲新興國家未拋補利率學說之非線性模型分析，國立中山大學經濟學研究所碩士在職專班碩士論文
3. 李順發，1999，資本管制、資產替代與利率平價，國立台灣大學經濟學研究所碩士論文。
4. 林家民，2005，亞太地區未拋補利率平價說之檢定：STAR 模型之應用，南台科技大學行銷與流通管理學系碩士學位論文。
5. 林意萍，1997，無風險利率平價說之檢定-台灣的實證研究，國立政治大學經濟學研究所碩士論文。
6. 康義鑫，2009，ICA-GARCH 模型在期貨避險方面的應用，國立暨南國際大學財務金融學系碩士論文。
7. 陳依萍，2002，臺灣地區資本帳開放程度之實證研究，國立東華大學國際經濟研究所碩士論文。
8. 陳炳森，2000，拋補利率平價理論之研究-台灣實證分析，國立中山大學經濟學研究所碩士論文。
9. 陳悅治，2005，歐元利率平價說之實證研究，國立政治大學社會科學學院行政管理碩士學程第四屆碩士論文。
10. 黃小娟，2005，台灣利率平價說之實證研究，國立政治大學社會科學學院行政管理碩士學程第三屆碩士論文。
11. 葉輔鋁，1996，台灣與主要貿易國即期匯率間之研究—多變數共整合模型分析，私立淡江大學財務金融研究所碩士論文。
12. 魏僑志，2008，狀態變遷下的資產配置模型—以外匯資產為例，私立真理大學財經研究所碩士論文。

二、英文部份

1. Aliber, R.Z., 1973, The Interest Rate Parity Theorem: A Reinterpretation, Journal of Political Economy, 81, 1451-59.
2. Bahmani-Oskooee, M. and Das, S. P., 1985, Transaction Cost and the Interest Parity Theorem, Journal of Political Economy, 93(4), 793-99.
3. Balke, N.S. and Wohar, M. E., 1998, Nonlinear Dynamics and Covered Interest Rate Parity, Empirical Economics, 23, 535-99.
4. Barkoulas, J. and Baum, C. F., 1997, A Re-examination of the Fragility of Evidence from Cointegration-based tests of Foreign Exchange Market Efficiency, Applied Financial Economics, 7, 635-43.
5. Bhargava, A., 1986, On the Theory of Testing for Unit Roots in Observed Time Series, Review of Economic Studies, 53, 369-384.
6. Chu, M.L. and Ferng, L. K., 2001, International Capital Mobility in Taiwan, International Journal of Management Theory and Practices, 2(1), 39-51.
7. Cliton, K., 1988, Transactions Costs and Covered Interest Arbitrage: Theory and Evidence, Journal of Political Economy, 96(2), 358-70.
8. Cosandier, P.A. and Long, B.R., 1981, Interest Rate Parity Tests, Journal of Banking and Finance, 5, 187-200.
9. Dickey, D.A. and Fuller, W.A., 1979, Distribution of the Estimation for Autoregressive Time Series with a Unit Root, Journal of American Statistical Association, 74, 427-31.
10. Dickey, D. A. and Fuller, W. A., 1981, Likelihood Ratio Statistics for Autoregressive Time Series with a Unit Root, Econometrica, 49, 1057-72.
11. Engle, R. F. and Granger, C. W. J., 1987, Cointegration and Error Correction Representation, Estimation and Test, Econometrica, 55, 2, 251-273.
12. Frenkel, J. A. and Levich, R. M., 1975, Covered Interest Arbitrage: Unexploited Profit?, Journal of Political Economy, 83(2), 325-338.
13. Frenkel, J.A., 1992, Measuring International Capital Mobility: A Review, The American Economic Review, 28(2), 197-202.

14. Granger, C. W. J., 1969, Investigating Causal Relation by Econometric Model and Cross -Spectral Method, *Econometric*, 36, 424-438.
15. Granger, C. W. J. and Terasvirta, T., 1993, Modeling Non-linear Economic Relationships, Oxford: Oxford University Press.
16. Hyvarinen, A., 1997, Fast and Robust Fixed-point Algorithms for Independent Component Analysis, *IEEE Transactions on Neural Networks*, 10, 626-634.
17. Jianxin, W. and Minxian, Y., 2006, Asymmetric Volatility in the Foreign Exchange Markets, Available at SSRN: <http://ssrn.com/abstract=927173>
18. Johansen, S. and Juselius, K., 1990, Maximun Likelihood Estimation and Inference on Cointegration with Applications to the Demand for Money, *Oxford Bulltin of Economics and Statistics*, 52, 169-210.
19. Johansen, S., 1988, Statistical Analysis of Cointegration Vectors, *Journal of Economic Dynamics and Control*, 12, 231-254.
20. Johansen, S., 1991, Estimation and Hypothesis Testing of Cointegration Vectors in Gaussian Vector Regression Models, *Econometrica*, 59, 1551-1580.
21. Maasoumi, E. and Pippenger, J., 1989, Transaction Cost and The Interest Parity Theorem: Comment, *Journal of Political Economy*, 97, 236-243.
22. MacDonald, R. and Taylor, M. P., 1989, Interest Rate Parity: Some New Evidence, *Bulletin of Economic Research*, 41, 255- 274.
23. MacDonal, R. and Torrance, T.S., 1989, Some Survey-based Tests of Uncovered Interest Parity, In *Exchange Rates and Open Economy Macroeconomics*, eds. R. MacDonald and M.P. Taylor, Mass.: Blackwell, 239-248.
24. Makin, T. and Robson, A., 1999, Comparing Capital- and Trade Weighted Measures of Australia's Effective Exchange Rate, *Pacific Economic Review*, 4(2), 203-214.
25. Markowitz, H. M., 1952, Portfolio Selection, *Journal of Finance*, 7, 77-91.
26. Mckenzie, M., 2002, The Economics of Exchange Rate Volatility Asymmetry, *International Journal of Finance and Economics*, 7, 247-260
27. Miffre, J., 2004, Conditional OLS Minimum Variance Hedge Ratios, *Journal of Futures Markets* 24, 945-964.
28. Ng, S. and Perron, P., 2001, Lag Length Selection and the Construction of Unit Root

- Tests With Good Size and Power., *Econometrica*, 69, 1519-1554.
- 29.Said, S. and Dickey, D. K., 1984, Testing for Unit Roots in Autoregressive-Moving Average Model of Unknown Order, *Biometrica*, 71, 599-607.
- 30.Sephton, P. S. and Larsen, H. K., 1991, Tests of Exchange Market Efficiency: Fragile Evidence from Cointegration Tests, *Journal of International Money and Finance*, 10, 561-70.
- 31.Shamsuddin, A. F. M. and Kim, J. H., 2003, Integration and Interdependence of Stock and Foreign Exchange Markets: An Australian Perspective, *International Financial Markets, Institutions and Money*, 13, 229-254.
- 32.Sjaastad, L. A., 1998, Why PPP Real Exchange Rate Mislead, *Journal of Applied Economics*, 1, 179-207.
- 33.Taylor, M.P., 1987a, Covered Interest Parity: A High-Frequency, High-Quality Data, *Economica*, 54, 429-38.
- 34.Taylor, M. P., 1987b, Risk Premia and foreign Exchange: A Multiple Time Series Approach to Testing Uncovered Interest-Rate Parity, *Weltwirtsch aftliches Archiv*, 123, 579-590.
- 35.Terasvirta, T., 1994, Specification, Estimation, and Evaluation of Smooth Transition Autoregressive Models, *Journal of the American Statistical Association*, 89, 208–218.
- 36.Woodward, R.S., 1987, Interest Rate Arbitrage Using the Forward and Future Markets, 1977-85, *Applied Economics*, 19, 1329-1335.