

系所別： 財務金融學系甲、乙、丙組 科目： 經濟分析

【1】下表顯示王先生與邵小姐的財富效用：

| 財富 | 王先生的 財富效用 | 邵小姐的 財富效用 |
|-------|--------------|--------------|
| 0 | 0 | 0 |
| \$100 | 200 | 512 |
| \$200 | 300 | 640 |
| \$300 | 350 | 672 |
| \$400 | 375 | 678 |
| \$500 | 387 | 681 |
| \$600 | 393 | 683 |
| \$700 | 396 | 684 |

- (a) 王先生或邵小姐中的那一位更有可能去買保險？為什麼？(7%)
- (b) 若是王先生與邵小姐各有\$400投資在一項計劃，此計劃有85%的機率能夠得到\$600，而有15%的機率能夠得到\$200，兩人中的那一位會投資？(7%)

【2】本題與貨幣需求的實証研究有關。

倘使貨幣需求方程式為： $L = ky + hi + \lambda W$

在此 L 為貨幣需求， y 為所得， i 為市場利率， W 為財富， k 、 h 、 λ 俱為正值的參數。

- (a) 試問你會如使估算參數 k 、 h 與 λ ？詳述你如何取得數據資料、時間序列的頻率、與迴歸方程式。(7%)
- (b) 倘使社會大眾的貨幣需求對利率變動反應遲緩，你會如何修正上述方程式？(7%)
- (c) 倘使我們將上面的貨幣需求方程式修改為： $L = ky + hi$ 。試比較這個程式與原來程式在做實証研究方面的優缺點。(6%)

【3】近兩年來，美國聯準理事會多次調降利率，企圖以此來刺激景氣，而市場利率更是降至超低水平，銀行存款的掛牌利率已跌破2%，報章雜誌上一再出現“我國將步上日本後塵，零利率時代即將來臨”等字句。請問：

- (a) 在那些假設下，以寬鬆的貨幣政策刺激景氣方才有效？以總供給 (aggregate supply) 與總需求 (aggregate demand) 曲線圖示之。(4%)
- (b) “零利率”究竟是指名目利率或實質利率？名目利率與實質利率的區分何在？在通貨緊縮時期，名目利率與實質利率孰大孰小？(4%)
- (c) 過去近一百年，美國的實質利率大約是有分之多少？(4%)
- (d) 我國是否將會步上日本後塵，發生零利率時代？試分析之。(4%)

【4】 There are two identical firms (firm A and firm B) in the market, and each has a cost function $TC = 2+Q$. The market demand is $Q = 13 - P$. If they cooperate and collude, they will set the same price, and split the market demand equally. If a firm sets a price slightly lower than the other, it takes the whole market share. Firm B threatens Firm A that if he will cooperate, but if Firm A cheats once, then Firm B will set a price such that both earn zero profit for the rest of the game (this is called a “triggering” strategy in game theory). Now, suppose the game will be played infinitely, and suppose that the interest rate for each period is $k\%$.

- a. (10%) What will be the market price and the per-period profit for each firm?
- b. (20%) Derive the condition such that Firm A will conform to the agreement.

【5】 (20%) Suppose the demand for pizza in a small isolated town is $P = 10 - Q$. There are only two firms, A and B. Each has a cost function $TC=2+Q$. Determine the equilibrium quantities of each if firm A is the Stackelberg leader.

參考用