

國立成功大學

113學年度碩士班招生考試試題

編 號：222

系 所：財務金融研究所

科 目：經濟學

日 期：0202

節 次：第 1 節

備 註：不可使用計算機

※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。試回答下列各問題。英文題請用英文答題，除了指定用中文答題的部分之外，英文題用中文答題者不予計分。答題時務必將所有推論過程清楚完整列示，如有需要，請自行擬定必要之假設與定義。

1. Multiple Choice (40%)

Instruction: Please fill in your answers in a table format as follows.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
				請於答案卷上作答					

(1) Gasoline and bicycles are substitutes in consumption. Suppose we increase the federal gasoline tax to \$1.2 per gallon. What are the initial changes that result from the tax as these markets adjust to a new general equilibrium?

- A) Gasoline price rises, demand for bicycles shift s leftward.
- B) Gasoline price rises, demand for bicycles shifts rightward.
- C) Gasoline price rises, and there is a move downward along the bicycle demand curve.
- D) Gasoline price rises, and there is a move upward along the bicycle demand curve.

(2) Tina is a 25-year-old nonsmoking, non-drinking female of normal weight. Because of adverse selection in health insurance,

- A) she will be charged less for her premiums than people who are higher risks.
- B) when she gets health insurance, she will be less likely to take care of herself.
- C) she is less likely to buy health insurance than the average person, because policy premiums are based on expected medical expenditures of people who are less healthy than she is.
- D) she must get health insurance early in life, and is likely to lose health insurance if she smokes, drinks to excess, or gains weight.
- E) she is more likely than the average person to buy health insurance, because she is more likely to be offered it.

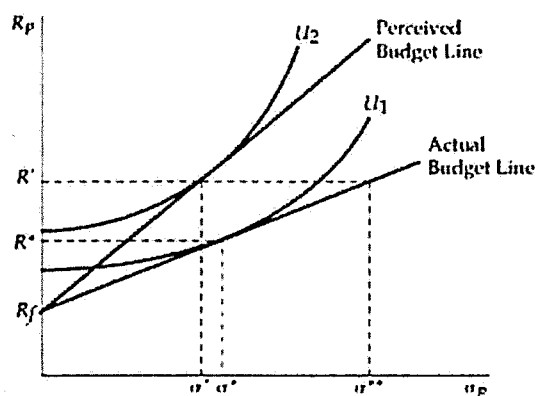
(3) Consider the following statements when answering this question:

- I. If a technology exhibits diminishing returns then it also exhibits decreasing return to scale.
- II. If a technology exhibits decreasing returns to scale then it also exhibits diminishing returns.
- A) I is true, and II is false.
- B) I is false, and II is true.
- C) Both I and II are true.
- D) Both I and II are false.

(4) 下列敘述何者正確?

- A) 卡台爾組織在我國是合法的

- B) 獨占與獨占性競爭兩種市場，長期時的相似程度高於短期。
- C) 新廠商想要進入一個同質商品的市場，其困難程度比較高。因為該廠商生產的商品無法與其他廠商有所區隔。
- D) 達到長期均衡的獨占性競爭廠商，如果擴大生產量可以降低平均成本，但此舉會造成該廠商的虧損。
- E) 在寡占市場中，鮮少有價格競爭現象，但我們卻常看到各百貨公司與汽車公司等採行降價促銷手段，違反寡占市場價格穩定的原則。



Please answer questions (5) and (6) based on the Figure.

(5) Refer to the Figure above. In this diagram of an overconfident investor, the utility-maximizing investment portfolio is:

- A) at the tangency of U_1 and the actual budget line.
- B) at the tangency of U_1 and the perceived budget line.
- C) at the tangency of U_2 and the perceived budget line.
- D) at R' on the actual budget line.

(6) Refer to the Figure above. The slope of the perceived budget line is steeper because the investor:

- A) decides to invest more in the risk-free asset and less in the stock market.
- B) perceives an increase in the standard deviation of the return in the stock market.
- C) perceives the riskiness of stocks to be smaller than it really is.
- D) becomes more risk averse.

(7) Mickey consumes only two goods, X and Y. Assume that Mickey is not at a corner solution, but he is maximizing utility. Which of the following is NOT necessarily true?

- A) $MRS_{xy} = P_x/P_y$.
- B) $MU_x/MU_y = P_x/P_y$.
- C) $P_x/P_y = \text{money income}$.
- D) $P_x/P_y = \text{slope of the indifference curve at the optimal choice}$.
- E) $MU_x/P_x = MU_y/P_y$.

(8) A third-degree price discriminating monopolist can sell its output either in the local market or on an internet auction site (or both). After selling all of its output, the firm discovers that the marginal revenue earned in the local market was \$20 while its marginal revenue on the internet auction site was \$30. To maximize profits the firm should:

- A) have sold more output in the local market and less at the internet auction site.
- B) do nothing until it acquires more information on costs.
- C) have sold less output in the local market and more on the internet auction site.
- D) sell less in both markets until marginal revenue is zero.
- E) sell more in both markets until marginal cost is zero.

(9) The equation below gives the degree of economies of scope (SC):

$$SC = (C(Q1) + C(Q2) - C(Q1, Q2)) / C(Q1, Q2)$$

where $C(Q1)$ is the cost of producing output $Q1$, $C(Q2)$ is the cost of producing output $Q2$, and $C(Q1, Q2)$ is the joint cost of producing both outputs. If SC is negative:

- A) there are neither economies nor diseconomies of scope.
- B) there are diseconomies of scope.
- C) there are economies of scope.
- D) there are both economies and diseconomies of scope.

(10) Use the following statements to answer this question:

- I. The company cost of capital is identical to the risk-adjusted rate of return.
 - II. The company cost of capital does not depend on beta but does depend on the firm's interest rate on debt obligations.
- A) I and II are true.
 - B) I is true and II is false.
 - C) II is true and I is false.
 - D) I and II are false.

2. Are the following statements true or false? Explain your answer. (30%)

- (1) "The discounted cash flow analysis used by many businesses is inconsistent with the neoclassical theory of investment." (本小題請用中文作答)
- (2) "With a decrease in the marginal propensity to save, the IS-curve will become steeper."

3. Please read the following article carefully and answer the independent questions below. (30%)

DECEMBER 14, 2023

Breakingviews: Last word of 2023 goes to Jay Powell

by Breakingviews.



Having the last word doesn't always ensure winning the fight. But on Wednesday, U.S. Federal Reserve Chair Jerome Powell will try to have the final say of the year in his ongoing tussle with the markets. The central bank is set to keep interest rates steady and Powell will attempt to persuade investors that aggressive rate cuts aren't imminent despite falling inflation. If he is successful, stocks and bonds will have a tough holiday period. If he fails, the Fed's plans for next year could be derailed.

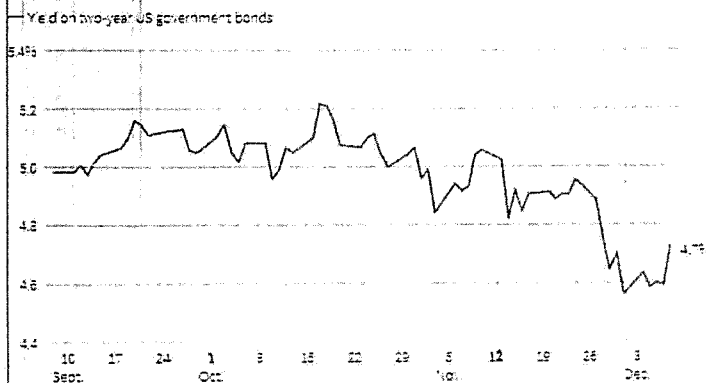
The market thinks the Fed will cut rates from the current 5.25% to 5.5% to around 4.25% in the next 12 months, according to derivatives prices collected by LSEG. Powell has different plans. He is expected to keep rates unchanged following the two-day meeting with other Fed bankers, which starts today. More importantly, having missed the inflationary spike on the way up, he doesn't want to run the risk of cutting them prematurely.

Markets could do his job for him. Higher bond yields increase the cost of borrowing, which helps to reduce consumption and quell inflation. But Treasury investors, not to be gaslit, are doing the opposite, reading good economic news as a green light for rate cuts.

Against the odds, the U.S. economy is gliding towards a rare so-called soft landing, with inflation converging towards the Fed's 2% target without a recession. The core personal consumption expenditure index, which excludes food and energy prices and is the Fed's preferred inflation measure, is running at an annualised rate of around 2.1% over the past six months. And although the unemployment rate is low, there are no signs of an inflationary wage spike.

Powell could lower borrowing costs next year and still cool price growth as long as borrowing costs stay higher than inflation, especially if core PCE drops to 2.6% in 2024 from 3.5% now.

Yields on short-term US Treasuries have tumbled



Source: LSEG / F. Guerrera / Breakingviews Dec. 11, 2023

as the Fed predicts. If markets continue to ignore Powell's pleas, a rally in both stocks and bonds might continue. The S&P 500 Index has gained 7.7% since October, including reinvested dividends, and is on track to return more than 20% for 2023. Yields on 2-year U.S. Treasuries, which move inversely to prices, have fallen from 5.2% in October to 4.7% now.

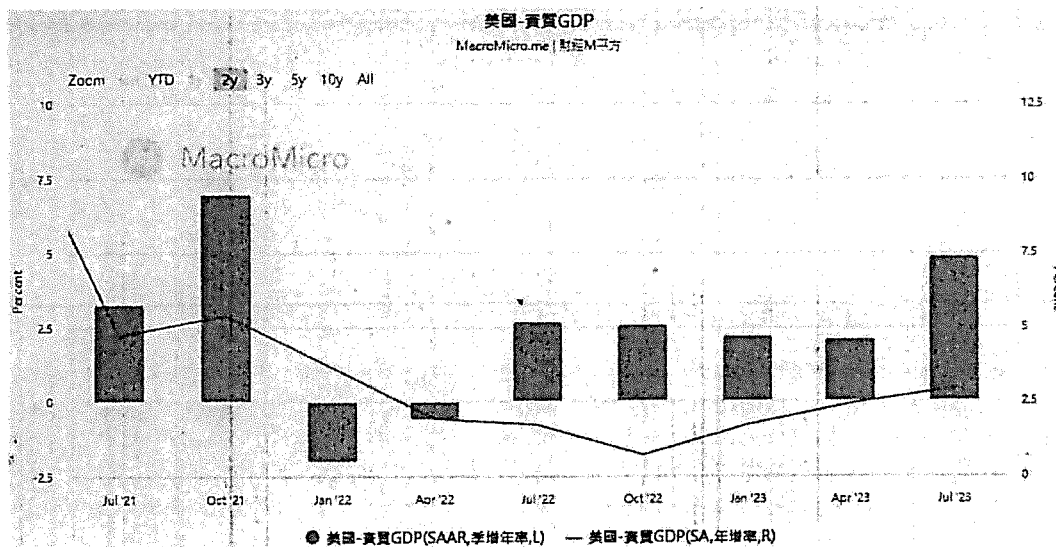
But that also makes Powell's life more difficult. Real-world rates are not dictated just by what the Fed would like, but also by markets. As long as market yields are low, Powell can make policy and argue his case, but he will find it hard to make a difference.

Context News

The U.S. Federal Reserve will announce its last decision of 2023 on interest rates on Dec. 13, following a two-day meeting. According to a Reuters poll of economists, the central bank will not increase rates at the meeting and will hold them steady at the current level of 5.25% to 5.5% until at least July. U.S. consumer prices rose at an annual rate of 3.1% in November, in line with market expectations and slightly lower than the 3.2% growth rate recorded in October, according to official data released on Dec. 12.

Article source: Reuters Breakingviews

<https://lipperalpha.refinitiv.com/2023/12/breakingviews-last-word-of-2023-goes-to-jay-powell/>



(1) (15%) The CPI (consumer price index) and the PPI (producer price index) are both measured by looking at a certain market basket. The article mentions that: “The core personal consumption expenditure index, which excludes food and energy prices and is the Fed’s preferred inflation measure...”. Please discuss why core CPI is preferred for the Fed to measure inflation, and discuss which price index would be more appropriate for forecasting purposes.

(2) (15%) Fed Chairman Powell’s final talk in 2023 was interpreted by the market as a sign that the Fed will cut interest rates earlier in the next year and by a larger margin than originally expected, which led to a surge in global equity and bond markets. Please use Taylor’s rule to test the appropriateness of Powell’s policy of cutting interest rates. (Assuming a long-term real interest rate of 1%) (本小題請用中文作答)