

HW1.2.3 問答&易錯題

(A) 貨幣市場(money market)

指融資期限在一年以下的金融市場、短期資金市場，特性：流動性高、交易期限短、倒帳風險較低。如：商業票據、國庫券。

(B) 資本市場(capital market)

是長期資金市場，也稱中長期資金市場。指證券融資和經營一年以上或未定期限的資金借貸和證券交易的場所。如：長期公債股票、長期公司債券。

(C) 債券市場(bond market)

發行和買賣債券的市場。如：政府債券。

(D) 股票市場(stock market)

指對已發行的股票進行買賣和轉讓的場所/股票發行和流通的市場。如：股票。

1. What is money? Give some examples of ancient money.

I. 貨幣(money)，指在特定國家或經濟體內的物資和服務交換中充當等價物，又可稱錢財，貨幣是作交易媒介、儲藏價值和記帳單位的一種工具。隨意一種被普通接受的交易媒介……等的工具。

II. 如：實物貨幣是最早的貨幣，中國 -> 貝，古代歐洲 -> 牛，其他地區 -> 鹽、菸草……等。

2. Explain in your own words the paradox why each individual can increase his/her total real wealth by possessing more fiat money but

貨幣的價值與物價水準成反比，大量印鈔票會導致通貨膨脹，通貨膨脹等同“物價上升”因為貨物為了維持相同的價值，而代表商品的貨幣因為大量印製，而造成鈔票價值貶值而需得花費更多錢去購買 -> 貨幣價值貶值。但對個人而言，雖然其持有貨幣數量雖大幅增加，但因國總家人口數巨大，不會顯著影響總貨幣額，故不會造成物價膨脹，其財富確實增加。

3. Is cashless society near the corner? Agree or disagree. State precisely your Reasons

[參考解答]不同意。

A. 設備花費高，安裝成本昂貴 -> 成本高如各種身分驗證系統，EX: 手紋閱讀器……，若要成為無現金社會，那麼社會中的每家商店無論是大是小都得裝設，成本耗費太大。

B. 容易過度消費

C. 隱私被侵犯的可能性提高(購買的紀錄有可能被侵犯、監視)

4. What are M1A, M1B, and M2?

M1A = 通貨淨額 + 活期存款 + 支票存款(包括本票、保付支票、旅行支票)

M1B = 通貨淨額 + 活期存款 + 支票存款 + 活期儲蓄存款 = M1A + 活期儲蓄存款

M2 = M1B + 準貨幣(郵匯局轉存款 + 定期存款 + 定期儲蓄存款 + 外幣存款 + 外匯存款 + 外匯信託資金 + 外幣定期存單)

16. If the interest rate is 5%, what is the present value of a security that pays you \$1,050 next year and \$1,102.50 two years from now? If this security sold for \$2200, is the yield to maturity greater or less than 5%? Why?

$$PV = 1050/(1+5\%) + 1102.5/(1+5\%)^2 = 2000$$

PV 和 YTM 呈負向相關，PV ↑ 則 YTM ↓，2200 > 2000 所以 YTM < 5%

*第 3 題 If a security pays \$55 in one year and \$133 in three years, its present value is \$150

then the interest rate is A) 5 percent. B) 10 percent. C) 12.5 percent. D) 15 percent.

其實這一題不用想的那麼複雜，可以運用先前在財管上學的折算現值的方式去推敲答案。

$$150 = 55/(1+r) + 133/(1+r)^3 \text{ 推出 } r=10\% \text{ 解釋附圖}$$

*第 12 題 Which of the following \$5,000 face-value securities has the highest yield to maturity?

A) A 6 percent coupon bond selling for \$5,000 B) A 6 percent coupon bond selling for \$5,500

C) A 10 percent coupon bond selling for \$5,000 D) A 12 percent coupon bond selling for \$4,500

(A)平價 所以 YTM=6% (B)溢價 所以 YTM<6% (C)平價 所以 YTM=10% (D)折價 所以 YTM>10%

17 題 Which of the following are true concerning the distinction between interest rates and returns?

- A) The rate of return on a bond will not necessarily equal the interest rate on that bond.
 - B) The return can be expressed as the difference between the current yield and the rate of capital gains.
 - C) The rate of return will be greater than the interest rate when the price of the bond falls between time t and time $t + 1$.
 - D) The return can be expressed as the sum of the discount yield and the rate of capital gains
- (B)不等於其兩者差異
(C)照題目敘述，債券價格會成遞減，代表他一開始是溢價，溢價的利率大於殖利率
(D) $\text{return} = \text{initial current yield} + \text{rate of capital gain}$

*第 18 題 Suppose you are holding a 5 percent coupon bond maturing in one year with a yield to maturity of 15 percent. If the interest rate on one-year bonds rises from 15 percent to 20 percent over the course of the year, what is the yearly return on the bond you are holding?

- A) 5 percent B) 10 percent C) 15 percent D) 20 percent

因為 YTM 是算你到持有到期日的報酬率，同樣一張債券 YTM 的變動只會受到"持有期間長度的"影響，而不會受到 interest rate 的影響，所以最後的報酬率還是 15%

如果你的疑慮是為甚麼不是看 coupon rate? (5%)

解釋如下：coupon rate 是算利息用的，YTM 是用來衡量未來價值折現到現在的價值，所以此題的持有至到期日債券的報酬率是要用 YTM 來衡量，也就是 15%。

舉例 如果你今天要算報酬率 你會用 未來價值-現在價值/現在價值 而不會用 未來價值-利息/利息

*第 19 題 If the interest rates on all bonds rise from 5 to 6 percent over the course of the year, which bond would you prefer to have been holding?

- A) A bond with one year to maturity B) A bond with five years to maturity
C) A bond with ten years to maturity D) A bond with twenty years to maturity

當利率上升，債券到期日越長，報酬率也越低，故選擇(A)。

*第 22 題 In which of the following situations would you prefer to be the borrower?

- A) The interest rate is 9 percent and the expected inflation rate is 7 percent.
B) The interest rate is 4 percent and the expected inflation rate is 1 percent.
C) The interest rate is 13 percent and the expected inflation rate is 15 percent.
D) The interest rate is 25 percent and the expected inflation rate is 50 percent.

[名目利率 = 實質利率 + 預期通貨膨脹率]，這一題要先將各個小題的實質利率算出：

(A) $9\% = 2\% + 7\%$ (B) $4\% = 3\% + 1\%$ (C) $13\% = -2\% + 15\%$ (D) $25\% = -25\% + 50\%$

實質利率越低，越多人想借錢，因為只需要支付少少的利息，對 borrower 越有利。
故選擇實質利率最低的(D)。

*第 23 題 If you expect the inflation rate to be 15 percent next year and a one-year bond has a yield to maturity of 7 percent, then the real interest rate on this bond is A) 7 percent. B) 22 percent. C) -15 percent. D) -8 percent.

[名目利率 = 實質利率 + 預期通貨膨脹率]，這邊的名目利率為 7% 預期通貨膨脹率為 15%， $\text{實質利率} = 7\% - 15\% = -8\%$ ，答案為(D)。

*第 24 題 Assuming the same coupon rate and maturity length, when the interest rate on a Treasury Inflation Protected Security is 3 percent, and the yield on a nonindexed Treasury bond is 8 percent, the expected rate of inflation is A) 3 percent. B) 5 percent. C) 8 percent. D) 11 percent

參考課本 P.84 FYI 處，內文提到 nonindexed treasury bond (8%)是為名目利率，而 TIPS(3%) 是為實質利率，
[名目利率 = 實質利率 + 預期通貨膨脹率]， $8\% = 3\% + 5\%$ ，得到解答。