Hong Kong Institute of
Accredited Accounting Technicians
香港財務會計協會

# Professional Bridging Examination

## December 2009 Session

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## Paper II
## PBE Management Accounting and Finance

## Questions & Answers Booklet

Hong Kong Institute of
Accredited Accounting Technicians
香港財務會計協會

# Professional Bridging Examination

# Paper II
# PBE Management Accounting and Finance

# December 2009 Session (Questions)

| | |
|---|---|
| Time Allowed | 3 hours |
| Examination Assessment Allocation | |
| • Section A – All TWO questions are compulsory | 40 Marks |
| • Section B – Answer 3 out of 4 questions | 60 Marks |

## PAPER II – PBE MANAGEMENT ACCOUNTING AND FINANCE

This examination is divided into TWO sections.

- Section A (40%). This consists of TWO compulsory questions. You should allocate approximately 1 hour 12 minutes in total for Section A.

- Section B (60%). This consists of four questions, of which you must answer THREE questions only. Each of these three questions is worth 20% of the total marks (making Section B worth 60% of the total marks). You should allocate approximately 36 minutes for each question (that is, 1 hour 48 minutes in total for Section B).

Suggested Time Allocation (by marks):

| Marks | Approximate time (minutes) |
|---|---|
| 1 | 2 |
| 2 | 3 |
| 3 | 5 |
| 4 | 7 |
| 5 | 9 |
| 6 | 11 |
| 7 | 12 |
| 8 | 14 |
| 9 | 16 |
| 10 | 18 |
| 11 | 20 |
| 12 | 21 |
| 13 | 23 |
| 14 | 25 |
| 15 | 27 |
| 16 | 29 |
| 17 | 30 |
| 18 | 32 |
| 19 | 34 |
| 20 | 36 |

## SECTION A (COMPULSORY) (Total: 40 marks)

*Answer **ALL** questions in this section. Marks are indicated at the end of each question. Together they are worth 40% of the total marks for this examination. Both questions 1 and 2 are related to this case.*

## CASE

Longrange is a manufacturer of parts for truck suppliers in southern China. The company consists of four major divisions:

1. Assembly
2. Manufacturing
3. Design
4. Marketing

Due to a booming economy, the company is considering to build a new manufacturing plant at its Wuhan site. The purchase costs is $8,000,000 and the plant can be used for 25 years. It is expected that the plant can generate cash revenue of $4,000,000 and incur cash expenses of $3,000,000 a year. At the beginning of the project, a working capital of $1,000,000 is needed, to be released at the end of 25 years. The plant will be depreciated on a straight line basis to $0. Assume the tax rate can be ignored and a discount rate of 10% is used for project evaluation purposes.

According to prevailing company practice, the Assembly Division asked the Manufacturing Division to supply it with 4,000 units of part D367 to use in one of its products. The Assembly Division often receives bids from external suppliers and it has just received one such bid for the parts at a price of $25.00 per unit. The Manufacturing Division has the maximum capacity to produce 15,000 units of part D367 per year. The Manufacturing Division expects to sell 12,000 units of part D367 to outside customers this year at a price of $32.00 per unit.

To meet the order from the internal Assembly Division, the Manufacturing Division has to reduce its sales to external customers. It produces part D367 at a variable cost of $18.00 per unit. The cost of packing and delivering the parts for external customers is $3.00 per unit. These packing and delivering costs are not included in sales of the parts to the Assembly Division.

The new CEO has just come on board and he is very concerned about value creation from the different divisions. He is particularly interested in applying the concept of the value chain to Longrange.

**Question 1** **(20 marks – approximately 36 minutes)**

You are the Chief Financial Analyst. The new CEO has asked you to perform a project evaluation for the construction of the new manufacturing plant in Wuhan.

**Required:**

(a) **What is the NPV of the proposed new manufacturing plant in Wuhan and your recommendation as to whether to take the project or not?**

**(10 marks)**

(b) **Apart from the NPV method, IRR is often used in project evaluation. What is IRR? What is the implication when the company's discount rate is higher than the IRR?**

**(3 marks)**

(c) **"The result of NPV depends very much on the discount rate", claims the new CEO. Analyse and explain how the discount rate affects NPV by presenting a memo to the CEO explaining how the discount rate is determined and the generation of a different scenario.**

**(7 marks)**

**Question 2** **(20 marks – approximately 36 minutes)**

(a) **Determine the range of transfer price such that the profits for both the Assembly Division and the Manufacturing Division would improve if the former agrees to purchase 4,000 parts from the latter in the coming year.**

**(10 marks)**

(b) **If transfer price does occur, is it a good deal for both parties and the company as a whole? Explain briefly.**

**(8 marks)**

(c) **What is a value chain and what are the four support activities in the value chain?**

**(2 marks)**

* * * END OF SECTION A * * *

**SECTION B (ANSWER THREE QUESTIONS ONLY)** **(Total: 60 marks)**

*Answer any **THREE** questions in this section. Each question carries 20 marks. Together they are worth 60% of the total marks for this examination.*

**Question 3** **(20 marks – approximately 36 minutes)**

Financial markets can be divided into Money Markets and Capital Markets. Hong Kong is now regarded as one of the major international financial centres and has a position as a bridge between the time lapse between Europe and North America, linking up China and other Asian countries. Whether in the Money Market or the Capital Market, investors look for returns, in particular dividends from stocks and interest from other financial instruments.

**Required:**

(a) **Distinguish between Money Market and Capital Market? Indicate which type of investors are the clientele of each market.**

**(6 marks)**

(b) **Hong Kong has established FOUR major markets. Describe these four briefly with examples.**

**(10 marks)**

(c) **Explain in terms of cash flow and mark-to-market reporting requirements, why big property developers in Hong Kong usually earn very high profits and yet they have a low dividend payout ratio.**

**(4 marks)**

**Question 4** **(20 marks – approximately 36 minutes)**

The North China Sports Club is a privately owned limited company formed by 25 shareholders. It also issued bonds to private bondholders some years ago. The club is studying the ticket prices for the forthcoming volleyball game season. Statistics showed that ticket sales on Friday and Saturday night games are higher than on other days. The average number of tickets sold is 2,500 per night and the figure is higher on Friday and Saturday. In a season, there are 30 games and the stadium can accommodate 3,500 spectators. On some nights involving final matches, although the demand for tickets far exceeds the supply, it is not possible to change to a bigger stadium due to government regulations. The variable costs per operating hour are $5,000, and marketing costs and customer service costs per season are $1,400,000 and $250,000 respectively. Each game lasts for 5 operating hours. The management of the Club wants to charge more for games on Friday and Saturday nights in order to maximize profit.

**Required:**

(a) **What should be minimum or breakeven price charged for a normal attendance night?**

**(5 marks)**

(b) **In reality, the actual prices are different from the result calculated in (a). What are the reasons for that?**

**(5 marks)**

(c) **"The goal of a company is to maximize shareholders' wealth, not to maximize profit." Discuss this statement.**

**(6 marks)**

(d) **Why is there normally no goal congruence between bondholders and shareholders?**

**(4 marks)**

**Question 5** **(20 marks – approximately 36 minutes)**

MMX Co. is experiencing rapid growth. Dividends are expected to grow at 20% a year during the next three years, 15% in the following year, and then 10% per year, indefinitely. The required return on this stock is 15%, and the stock currently sells for $50 per share.

**Required:**

(a) **What is the projected dividend for the coming year?**

**(10 marks)**

(b) **What are the meanings of cum-div and ex-div? What can you observe on ex-div?**

**(6 marks)**

(c) **Use the Dividend Growth Model to explain why no-dividend growth stock has no capital gain.**

**(4 marks)**

**Question 6** **(20 marks – approximately 36 minutes)**

In financial markets, investors, particularly institutional investors, use various methods such as diversification, hedging and arbitrage to reduce risk or gain profits. They also look for investment products which suit their investment objectives.

**Required:**

(a) **In diversification, one can diversify one type of risk but fail to diversify another. Identify these risks and distinguish them with examples.**

**(4 marks)**

(b) **What is the meaning of hedging? Explain briefly how a currency call option could be used as a hedging tool to cope with a rising currency?**

**(4 marks)**

(c) **What is the meaning of arbitrage? Explain briefly how borrowing in one currency and investment in another currency could bring about arbitrage.**

**(5 marks)**

(d) **Explain the three forms of market efficiency. If an investor can always gain profit by reading published financial statements and announcements made by the stock exchange, point out which form of market efficiency is violated.**

**(7 marks)**

* * * END OF EXAMINATION PAPER * * *

## Formula Sheet

**Effective Annual Rate:**

$$EAR = \left(1 + \frac{r}{m}\right)^M - 1 \qquad EAR = e^r - 1$$

**Present Values:**

Ordinary annuity: $PV = C\left(\frac{1-(1+r)^{-T}}{r}\right)$

Growing annuity: $PV = \left(\frac{C_1}{r-g}\right)\left[1 - \left(\frac{1+g}{1+r}\right)^T\right]$

Constant perpetuity: $PV = \frac{C}{r}$

Growing perpetuity: $PV = \frac{C_1}{r-g}$

**IRR:**

$$NPV = 0 = -C_0 + \frac{C_1}{(1+IRR)} + \frac{C_2}{(1+IRR)^2} + \frac{C_3}{(1+IRR)^3} + \ldots + \frac{C_T}{(1+IRR)^T}$$

**Expected Return, Variance, Covariance, and Correlation Coefficient:**

$$\overline{R} = \sum_{i=1}^{S} p_i R_i \qquad \sigma^2 = \sum_{i=1}^{S} p_i (R_i - \overline{R})^2 \qquad \sigma_{AB} = \sum_{i=1}^{S} p_i (R_{Ai} - \overline{R}_A)(R_{Bi} - \overline{R}_B) \qquad \rho_{AB} = \frac{\sigma_{AB}}{\sigma_A \sigma_B}$$

$$\overline{R}_p = X_A \overline{R}_A + X_B \overline{R}_B \qquad \sigma_p^2 = X_A^2 \sigma_A^2 + X_B^2 \sigma_B^2 + 2 X_A X_B \sigma_{AB}$$

**Beta (or $\beta$):**

$$\beta_i = \frac{Cov(R_i, R_M)}{\sigma_{R_M}^2}$$

**Capital Structure - MM II (with corporate taxes):**

$$r_s = r_0 + \frac{B}{S}(r_0 - r_B)(1 - T_c)$$

## Present Value of $1

| Period | 0.50% | 1% | 2% | 3% | 4% | 5% | 6% | 7% | 8% | 9% | 10% | 11% | 12% | 13% | 14% | 15% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.9950 | 0.9901 | 0.9804 | 0.9709 | 0.9615 | 0.9524 | 0.9434 | 0.9346 | 0.9259 | 0.9174 | 0.9091 | 0.9009 | 0.8929 | 0.8850 | 0.8772 | 0.8696 |
| 2 | 0.9901 | 0.9803 | 0.9612 | 0.9426 | 0.9246 | 0.9070 | 0.8900 | 0.8734 | 0.8573 | 0.8417 | 0.8264 | 0.8116 | 0.7972 | 0.7831 | 0.7695 | 0.7561 |
| 3 | 0.9851 | 0.9706 | 0.9423 | 0.9151 | 0.8890 | 0.8638 | 0.8396 | 0.8163 | 0.7938 | 0.7722 | 0.7513 | 0.7312 | 0.7118 | 0.6931 | 0.6750 | 0.6575 |
| 4 | 0.9802 | 0.9610 | 0.9238 | 0.8885 | 0.8548 | 0.8227 | 0.7921 | 0.7629 | 0.7350 | 0.7084 | 0.6830 | 0.6587 | 0.6355 | 0.6133 | 0.5921 | 0.5718 |
| 5 | 0.9754 | 0.9515 | 0.9057 | 0.8626 | 0.8219 | 0.7835 | 0.7473 | 0.7130 | 0.6806 | 0.6499 | 0.6209 | 0.5935 | 0.5674 | 0.5428 | 0.5194 | 0.4972 |
| 6 | 0.9705 | 0.9420 | 0.8880 | 0.8375 | 0.7903 | 0.7462 | 0.7050 | 0.6663 | 0.6302 | 0.5963 | 0.5645 | 0.5346 | 0.5066 | 0.4803 | 0.4556 | 0.4323 |
| 7 | 0.9657 | 0.9327 | 0.8706 | 0.8131 | 0.7599 | 0.7107 | 0.6651 | 0.6227 | 0.5835 | 0.5470 | 0.5132 | 0.4817 | 0.4523 | 0.4251 | 0.3996 | 0.3759 |
| 8 | 0.9609 | 0.9235 | 0.8535 | 0.7894 | 0.7307 | 0.6768 | 0.6274 | 0.5820 | 0.5403 | 0.5019 | 0.4665 | 0.4339 | 0.4039 | 0.3762 | 0.3506 | 0.3269 |
| 9 | 0.9561 | 0.9143 | 0.8368 | 0.7664 | 0.7026 | 0.6446 | 0.5919 | 0.5439 | 0.5002 | 0.4604 | 0.4241 | 0.3909 | 0.3606 | 0.3329 | 0.3075 | 0.2843 |
| 10 | 0.9513 | 0.9053 | 0.8203 | 0.7441 | 0.6756 | 0.6139 | 0.5584 | 0.5083 | 0.4632 | 0.4224 | 0.3855 | 0.3522 | 0.3220 | 0.2946 | 0.2697 | 0.2472 |
| 11 | 0.9466 | 0.8963 | 0.8043 | 0.7224 | 0.6496 | 0.5847 | 0.5268 | 0.4751 | 0.4289 | 0.3875 | 0.3505 | 0.3173 | 0.2875 | 0.2607 | 0.2366 | 0.2149 |
| 12 | 0.9419 | 0.8874 | 0.7885 | 0.7014 | 0.6246 | 0.5568 | 0.4970 | 0.4440 | 0.3971 | 0.3555 | 0.3186 | 0.2858 | 0.2567 | 0.2307 | 0.2076 | 0.1869 |
| 13 | 0.9372 | 0.8787 | 0.7730 | 0.6810 | 0.6006 | 0.5303 | 0.4688 | 0.4150 | 0.3677 | 0.3262 | 0.2897 | 0.2575 | 0.2292 | 0.2042 | 0.1821 | 0.1625 |
| 14 | 0.9326 | 0.8700 | 0.7579 | 0.6611 | 0.5775 | 0.5051 | 0.4423 | 0.3878 | 0.3405 | 0.2992 | 0.2633 | 0.2320 | 0.2046 | 0.1807 | 0.1597 | 0.1413 |
| 15 | 0.9279 | 0.8613 | 0.7430 | 0.6419 | 0.5553 | 0.4810 | 0.4173 | 0.3624 | 0.3152 | 0.2745 | 0.2394 | 0.2090 | 0.1827 | 0.1599 | 0.1401 | 0.1229 |
| 16 | 0.9233 | 0.8528 | 0.7284 | 0.6232 | 0.5339 | 0.4581 | 0.3936 | 0.3387 | 0.2919 | 0.2519 | 0.2176 | 0.1883 | 0.1631 | 0.1415 | 0.1229 | 0.1069 |
| 17 | 0.9187 | 0.8444 | 0.7142 | 0.6050 | 0.5134 | 0.4363 | 0.3714 | 0.3166 | 0.2703 | 0.2311 | 0.1978 | 0.1696 | 0.1456 | 0.1252 | 0.1078 | 0.0929 |
| 18 | 0.9141 | 0.8360 | 0.7002 | 0.5874 | 0.4936 | 0.4155 | 0.3503 | 0.2959 | 0.2502 | 0.2120 | 0.1799 | 0.1528 | 0.1300 | 0.1108 | 0.0946 | 0.0808 |
| 19 | 0.9096 | 0.8277 | 0.6864 | 0.5703 | 0.4746 | 0.3957 | 0.3305 | 0.2765 | 0.2317 | 0.1945 | 0.1635 | 0.1377 | 0.1161 | 0.0981 | 0.0829 | 0.0703 |
| 20 | 0.9051 | 0.8195 | 0.6730 | 0.5537 | 0.4564 | 0.3769 | 0.3118 | 0.2584 | 0.2145 | 0.1784 | 0.1486 | 0.1240 | 0.1037 | 0.0868 | 0.0728 | 0.0611 |

## Present Value of Annuity of $1

| Period | 0.50% | 1% | 2% | 3% | 4% | 5% | 6% | 7% | 8% | 9% | 10% | 11% | 12% | 13% | 14% | 15% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.9950 | 0.9901 | 0.9804 | 0.9709 | 0.9615 | 0.9524 | 0.9434 | 0.9346 | 0.9259 | 0.9174 | 0.9091 | 0.9009 | 0.8929 | 0.8850 | 0.8772 | 0.8696 |
| 2 | 1.9851 | 1.9704 | 1.9416 | 1.9135 | 1.8861 | 1.8594 | 1.8334 | 1.8080 | 1.7833 | 1.7591 | 1.7355 | 1.7125 | 1.6901 | 1.6681 | 1.6467 | 1.6257 |
| 3 | 2.9702 | 2.9410 | 2.8839 | 2.8286 | 2.7751 | 2.7232 | 2.6730 | 2.6243 | 2.5771 | 2.5313 | 2.4869 | 2.4437 | 2.4018 | 2.3612 | 2.3216 | 2.2832 |
| 4 | 3.9505 | 3.9020 | 3.8077 | 3.7171 | 3.6299 | 3.5460 | 3.4651 | 3.3872 | 3.3121 | 3.2397 | 3.1699 | 3.1024 | 3.0373 | 2.9745 | 2.9137 | 2.8550 |
| 5 | 4.9259 | 4.8534 | 4.7135 | 4.5797 | 4.4518 | 4.3295 | 4.2124 | 4.1002 | 3.9927 | 3.8897 | 3.7908 | 3.6959 | 3.6048 | 3.5172 | 3.4331 | 3.3522 |
| 6 | 5.8964 | 5.7955 | 5.6014 | 5.4172 | 5.2421 | 5.0757 | 4.9173 | 4.7665 | 4.6229 | 4.4859 | 4.3553 | 4.2305 | 4.1114 | 3.9975 | 3.8887 | 3.7845 |
| 7 | 6.8621 | 6.7282 | 6.4720 | 6.2303 | 6.0021 | 5.7864 | 5.5824 | 5.3893 | 5.2064 | 5.0330 | 4.8684 | 4.7122 | 4.5638 | 4.4226 | 4.2883 | 4.1604 |
| 8 | 7.8230 | 7.6517 | 7.3255 | 7.0197 | 6.7327 | 6.4632 | 6.2098 | 5.9713 | 5.7466 | 5.5348 | 5.3349 | 5.1461 | 4.9676 | 4.7988 | 4.6389 | 4.4873 |
| 9 | 8.7791 | 8.5660 | 8.1622 | 7.7861 | 7.4353 | 7.1078 | 6.8017 | 6.5152 | 6.2469 | 5.9952 | 5.7590 | 5.5370 | 5.3282 | 5.1317 | 4.9464 | 4.7716 |
| 10 | 9.7304 | 9.4713 | 8.9826 | 8.5302 | 8.1109 | 7.7217 | 7.3601 | 7.0236 | 6.7101 | 6.4177 | 6.1446 | 5.8892 | 5.6502 | 5.4262 | 5.2161 | 5.0188 |
| 11 | 10.6770 | 10.3676 | 9.7868 | 9.2526 | 8.7605 | 8.3064 | 7.8869 | 7.4987 | 7.1390 | 6.8052 | 6.4951 | 6.2065 | 5.9377 | 5.6869 | 5.4527 | 5.2337 |
| 12 | 11.6189 | 11.2551 | 10.5753 | 9.9540 | 9.3851 | 8.8633 | 8.3838 | 7.9427 | 7.5361 | 7.1607 | 6.8137 | 6.4924 | 6.1944 | 5.9176 | 5.6603 | 5.4206 |
| 13 | 12.5562 | 12.1337 | 11.3484 | 10.6350 | 9.9856 | 9.3936 | 8.8527 | 8.3577 | 7.9038 | 7.4869 | 7.1034 | 6.7499 | 6.4235 | 6.1218 | 5.8424 | 5.5831 |
| 14 | 13.4887 | 13.0037 | 12.1062 | 11.2961 | 10.5631 | 9.8986 | 9.2950 | 8.7455 | 8.2442 | 7.7862 | 7.3667 | 6.9819 | 6.6282 | 6.3025 | 6.0021 | 5.7245 |
| 15 | 14.4166 | 13.8651 | 12.8493 | 11.9379 | 11.1184 | 10.3797 | 9.7122 | 9.1079 | 8.5595 | 8.0607 | 7.6061 | 7.1909 | 6.8109 | 6.4624 | 6.1422 | 5.8474 |
| 16 | 15.3399 | 14.7179 | 13.5777 | 12.5611 | 11.6523 | 10.8378 | 10.1059 | 9.4466 | 8.8514 | 8.3126 | 7.8237 | 7.3792 | 6.9740 | 6.6039 | 6.2651 | 5.9542 |
| 17 | 16.2586 | 15.5623 | 14.2919 | 13.1661 | 12.1657 | 11.2741 | 10.4773 | 9.7632 | 9.1216 | 8.5436 | 8.0216 | 7.5488 | 7.1196 | 6.7291 | 6.3729 | 6.0472 |
| 18 | 17.1728 | 16.3983 | 14.9920 | 13.7535 | 12.6593 | 11.6896 | 10.8276 | 10.0591 | 9.3719 | 8.7556 | 8.2014 | 7.7016 | 7.2497 | 6.8399 | 6.4674 | 6.1280 |
| 19 | 18.0824 | 17.2260 | 15.6785 | 14.3238 | 13.1339 | 12.0853 | 11.1581 | 10.3356 | 9.6036 | 8.9501 | 8.3649 | 7.8393 | 7.3658 | 6.9380 | 6.5504 | 6.1982 |
| 20 | 18.9874 | 18.0456 | 16.3514 | 14.8775 | 13.5903 | 12.4622 | 11.4699 | 10.5940 | 9.8181 | 9.1285 | 8.5136 | 7.9633 | 7.4694 | 7.0248 | 6.6231 | 6.2593 |
| 25 | 23.4456 | 22.0232 | 19.5235 | 17.4131 | 15.6221 | 14.0939 | 12.7834 | 11.6536 | 10.6748 | 9.8226 | 9.0770 | 8.4217 | 7.8431 | 7.3300 | 6.8729 | 6.4641 |
| 30 | 27.7941 | 25.8077 | 22.3965 | 19.6004 | 17.2920 | 15.3725 | 13.7648 | 12.4090 | 11.2578 | 10.2737 | 9.4269 | 8.6938 | 8.0552 | 7.4957 | 7.0027 | 6.5660 |
| 40 | 36.1722 | 32.8347 | 27.3555 | 23.1148 | 19.7928 | 17.1591 | 15.0463 | 13.3317 | 11.9246 | 10.7574 | 9.7791 | 8.9511 | 8.2438 | 7.6344 | 7.1050 | 6.6418 |
| 60 | 51.7256 | 44.9550 | 34.7609 | 27.6756 | 22.6235 | 18.9293 | 16.1614 | 14.0392 | 12.3766 | 11.0480 | 9.9672 | 9.0736 | 8.3240 | 7.6873 | 7.1401 | 6.6651 |
| 80 | 65.8023 | 54.8882 | 39.7445 | 30.2008 | 23.9154 | 19.5965 | 16.5091 | 14.2220 | 12.4735 | 11.0998 | 9.9951 | 9.0888 | 8.3324 | 7.6919 | 7.1427 | 6.6666 |
| 120 | 90.0735 | 69.7005 | 45.3554 | 32.3730 | 24.7741 | 19.9427 | 16.6514 | 14.2815 | 12.4988 | 11.1108 | 9.9999 | 9.0909 | 8.3333 | 7.6923 | 7.1429 | 6.6667 |
| 240 | 139.5808 | 90.8194 | 49.5686 | 33.3057 | 24.9980 | 19.9998 | 16.6667 | 14.2857 | 12.5000 | 11.1111 | 10.0000 | 9.0909 | 8.3333 | 7.6923 | 7.1429 | 6.6667 |

# Future Value of $1

| Period | 0.50% | 1% | 2% | 3% | 4% | 5% | 6% | 7% | 8% | 9% | 10% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.0050 | 1.0100 | 1.0200 | 1.0300 | 1.0400 | 1.0500 | 1.0600 | 1.0700 | 1.0800 | 1.0900 | 1.1000 |
| 2 | 1.0100 | 1.0201 | 1.0404 | 1.0609 | 1.0816 | 1.1025 | 1.1236 | 1.1449 | 1.1664 | 1.1881 | 1.2100 |
| 3 | 1.0151 | 1.0303 | 1.0612 | 1.0927 | 1.1249 | 1.1576 | 1.1910 | 1.2250 | 1.2597 | 1.2950 | 1.3310 |
| 4 | 1.0202 | 1.0406 | 1.0824 | 1.1255 | 1.1699 | 1.2155 | 1.2625 | 1.3108 | 1.3605 | 1.4116 | 1.4641 |
| 5 | 1.0253 | 1.0510 | 1.1041 | 1.1593 | 1.2167 | 1.2763 | 1.3382 | 1.4026 | 1.4693 | 1.5386 | 1.6105 |
| 6 | 1.0304 | 1.0615 | 1.1262 | 1.1941 | 1.2653 | 1.3401 | 1.4185 | 1.5007 | 1.5869 | 1.6771 | 1.7716 |
| 7 | 1.0355 | 1.0721 | 1.1487 | 1.2299 | 1.3159 | 1.4071 | 1.5036 | 1.6058 | 1.7138 | 1.8280 | 1.9487 |
| 8 | 1.0407 | 1.0829 | 1.1717 | 1.2668 | 1.3686 | 1.4775 | 1.5938 | 1.7182 | 1.8509 | 1.9926 | 2.1436 |
| 9 | 1.0459 | 1.0937 | 1.1951 | 1.3048 | 1.4233 | 1.5513 | 1.6895 | 1.8385 | 1.9990 | 2.1719 | 2.3579 |
| 10 | 1.0511 | 1.1046 | 1.2190 | 1.3439 | 1.4802 | 1.6289 | 1.7908 | 1.9672 | 2.1589 | 2.3674 | 2.5937 |
| 11 | 1.0564 | 1.1157 | 1.2434 | 1.3842 | 1.5395 | 1.7103 | 1.8983 | 2.1049 | 2.3316 | 2.5804 | 2.8531 |
| 12 | 1.0617 | 1.1268 | 1.2682 | 1.4258 | 1.6010 | 1.7959 | 2.0122 | 2.2522 | 2.5182 | 2.8127 | 3.1384 |
| 13 | 1.0670 | 1.1381 | 1.2936 | 1.4685 | 1.6651 | 1.8856 | 2.1329 | 2.4098 | 2.7196 | 3.0658 | 3.4523 |
| 14 | 1.0723 | 1.1495 | 1.3195 | 1.5126 | 1.7317 | 1.9799 | 2.2609 | 2.5785 | 2.9372 | 3.3417 | 3.7975 |
| 15 | 1.0777 | 1.1610 | 1.3459 | 1.5580 | 1.8009 | 2.0789 | 2.3966 | 2.7590 | 3.1722 | 3.6425 | 4.1772 |
| 16 | 1.0831 | 1.1726 | 1.3728 | 1.6047 | 1.8730 | 2.1829 | 2.5404 | 2.9522 | 3.4259 | 3.9703 | 4.5950 |
| 17 | 1.0885 | 1.1843 | 1.4002 | 1.6528 | 1.9479 | 2.2920 | 2.6928 | 3.1588 | 3.7000 | 4.3276 | 5.0545 |
| 18 | 1.0939 | 1.1961 | 1.4282 | 1.7024 | 2.0258 | 2.4066 | 2.8543 | 3.3799 | 3.9960 | 4.7171 | 5.5599 |
| 19 | 1.0994 | 1.2081 | 1.4568 | 1.7535 | 2.1068 | 2.5270 | 3.0256 | 3.6165 | 4.3157 | 5.1417 | 6.1159 |
| 20 | 1.1049 | 1.2202 | 1.4859 | 1.8061 | 2.1911 | 2.6533 | 3.2071 | 3.8697 | 4.6610 | 5.6044 | 6.7275 |
| 25 | 1.1328 | 1.2824 | 1.6406 | 2.0938 | 2.6658 | 3.3864 | 4.2919 | 5.4274 | 6.8485 | 8.6231 | 10.8347 |
| 30 | 1.1614 | 1.3478 | 1.8114 | 2.4273 | 3.2434 | 4.3219 | 5.7435 | 7.6123 | 10.0627 | 13.2677 | 17.4494 |
| 40 | 1.2208 | 1.4889 | 2.21 | 3.26 | 4.80 | 7.04 | 10.29 | 14.97 | 21.72 | 31.41 | 45.26 |
| 60 | 1.3489 | 1.8167 | 3.28 | 5.89 | 10.52 | 18.68 | 32.99 | 57.95 | 101.26 | 176.03 | 304.48 |
| 80 | 1.4903 | 2.2167 | 4.88 | 10.64 | 23.05 | 49.56 | 105.80 | 224.23 | 471.95 | 986.55 | 2048.40 |
| 120 | 1.8194 | 3.3004 | 10.77 | 34.71 | 110.66 | 348.91 | 1088.19 | 3357.79 | 10252.99 | 30987.02 | 92709.07 |
| 240 | 3.3102 | 10.8926 | 115.89 | 1204.85 | 12246.20 | 121739.57 | 1184152.57 | 11274742.82 | 105123864.28 | 960195145.04 | 8594971441.07 |

| Period | 11% | 12% | 13% | 14% | 15% |
|---|---|---|---|---|---|
| 1 | 1.1100 | 1.1200 | 1.1300 | 1.1400 | 1.1500 |
| 2 | 1.2321 | 1.2544 | 1.2769 | 1.2996 | 1.3225 |
| 3 | 1.3676 | 1.4049 | 1.4429 | 1.4815 | 1.5209 |
| 4 | 1.5181 | 1.5735 | 1.6305 | 1.6890 | 1.7490 |
| 5 | 1.6851 | 1.7623 | 1.8424 | 1.9254 | 2.0114 |
| 6 | 1.8704 | 1.9738 | 2.0820 | 2.1950 | 2.3131 |
| 7 | 2.0762 | 2.2107 | 2.3526 | 2.5023 | 2.6600 |
| 8 | 2.3045 | 2.4760 | 2.6584 | 2.8526 | 3.0590 |
| 9 | 2.5580 | 2.7731 | 3.0040 | 3.2519 | 3.5179 |
| 10 | 2.8394 | 3.1058 | 3.3946 | 3.7072 | 4.0456 |
| 11 | 3.1518 | 3.4785 | 3.8359 | 4.2262 | 4.6524 |
| 12 | 3.4985 | 3.8960 | 4.3345 | 4.8179 | 5.3503 |
| 13 | 3.8833 | 4.3635 | 4.8980 | 5.4924 | 6.1528 |
| 14 | 4.3104 | 4.8871 | 5.5348 | 6.2613 | 7.0757 |
| 15 | 4.7846 | 5.4736 | 6.2543 | 7.1379 | 8.1371 |
| 16 | 5.3109 | 6.1304 | 7.0673 | 8.1372 | 9.3576 |
| 17 | 5.8951 | 6.8660 | 7.9861 | 9.2765 | 10.7613 |
| 18 | 6.5436 | 7.6900 | 9.0243 | 10.5752 | 12.3755 |
| 19 | 7.2633 | 8.6128 | 10.1974 | 12.0557 | 14.2318 |
| 20 | 8.0623 | 9.6463 | 11.5231 | 13.7435 | 16.3665 |
| 25 | 13.5855 | 17.0001 | 21.2305 | 26.4619 | 32.9190 |
| 30 | 22.8923 | 29.9599 | 39.1159 | 50.9502 | 66.2118 |
| 40 | 65.00 | 93.05 | 132.78 | 188.88 | 267.86 |
| 60 | 524.06 | 897.60 | 1530.05 | 2595.92 | 4384.00 |
| 80 | 4225.11 | 8658.48 | 17630.94 | 35676.98 | 71750.88 |
| 120 | 274635.99 | 805680.26 | 2341063.63 | 6738793.69 | 19219445.00 |
| 240 | 75424928785.77 | 649120673317.10 | 5480578920960.75 | 45411340363982.90 | 369387066182044.00 |

# Future Value of Annuity of $1

| Period | 0.50% | 1% | 2% | 3% | 4% | 5% | 6% | 7% | 8% | 9% | 10% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 2 | 2.0050 | 2.0100 | 2.0200 | 2.0300 | 2.0400 | 2.0500 | 2.0600 | 2.0700 | 2.0800 | 2.0900 | 2.1000 |
| 3 | 3.0150 | 3.0301 | 3.0604 | 3.0909 | 3.1216 | 3.1525 | 3.1836 | 3.2149 | 3.2464 | 3.2781 | 3.3100 |
| 4 | 4.0301 | 4.0604 | 4.1216 | 4.1836 | 4.2465 | 4.3101 | 4.3746 | 4.4399 | 4.5061 | 4.5731 | 4.6410 |
| 5 | 5.0503 | 5.1010 | 5.2040 | 5.3091 | 5.4163 | 5.5256 | 5.6371 | 5.7507 | 5.8666 | 5.9847 | 6.1051 |
| 6 | 6.0755 | 6.1520 | 6.3081 | 6.4684 | 6.6330 | 6.8019 | 6.9753 | 7.1533 | 7.3359 | 7.5233 | 7.7156 |
| 7 | 7.1059 | 7.2135 | 7.4343 | 7.6625 | 7.8983 | 8.1420 | 8.3938 | 8.6540 | 8.9228 | 9.2004 | 9.4872 |
| 8 | 8.1414 | 8.2857 | 8.5830 | 8.8923 | 9.2142 | 9.5491 | 9.8975 | 10.2598 | 10.6366 | 11.0285 | 11.4359 |
| 9 | 9.1821 | 9.3685 | 9.7546 | 10.1591 | 10.5828 | 11.0266 | 11.4913 | 11.9780 | 12.4876 | 13.0210 | 13.5795 |
| 10 | 10.2280 | 10.4622 | 10.9497 | 11.4639 | 12.0061 | 12.5779 | 13.1808 | 13.8164 | 14.4866 | 15.1929 | 15.9374 |
| 11 | 11.2792 | 11.5668 | 12.1687 | 12.8078 | 13.4864 | 14.2068 | 14.9716 | 15.7836 | 16.6455 | 17.5603 | 18.5312 |
| 12 | 12.3356 | 12.6825 | 13.4121 | 14.1920 | 15.0258 | 15.9171 | 16.8699 | 17.8885 | 18.9771 | 20.1407 | 21.3843 |
| 13 | 13.3972 | 13.8093 | 14.6803 | 15.6178 | 16.6268 | 17.7130 | 18.8821 | 20.1406 | 21.4953 | 22.9534 | 24.5227 |
| 14 | 14.4642 | 14.9474 | 15.9739 | 17.0863 | 18.2919 | 19.5986 | 21.0151 | 22.5505 | 24.2149 | 26.0192 | 27.9750 |
| 15 | 15.5365 | 16.0969 | 17.2934 | 18.5989 | 20.0236 | 21.5786 | 23.2760 | 25.1290 | 27.1521 | 29.3609 | 31.7725 |
| 16 | 16.6142 | 17.2579 | 18.6393 | 20.1569 | 21.8245 | 23.6575 | 25.6725 | 27.8881 | 30.3243 | 33.0034 | 35.9497 |
| 17 | 17.6973 | 18.4304 | 20.0121 | 21.7616 | 23.6975 | 25.8404 | 28.2129 | 30.8402 | 33.7502 | 36.9737 | 40.5447 |
| 18 | 18.7858 | 19.6147 | 21.4123 | 23.414 | 25.645 | 28.132 | 30.906 | 33.999 | 37.450 | 41.301 | 45.599 |
| 19 | 19.8797 | 20.8109 | 22.8406 | 25.117 | 27.671 | 30.539 | 33.760 | 37.379 | 41.446 | 46.018 | 51.159 |
| 20 | 20.9791 | 22.0190 | 24.2974 | 26.870 | 29.778 | 33.066 | 36.786 | 40.995 | 45.762 | 51.160 | 57.275 |
| 25 | 26.5591 | 28.2432 | 32.0303 | 36.459 | 41.646 | 47.727 | 54.865 | 63.249 | 73.106 | 84.701 | 98.347 |
| 30 | 32.2800 | 34.7849 | 40.5681 | 47.575 | 56.085 | 66.439 | 79.058 | 94.461 | 113.283 | 136.308 | 164.494 |
| 40 | 44.1588 | 48.8864 | 60.4020 | 75.401 | 95.026 | 120.800 | 154.762 | 199.635 | 259.057 | 337.882 | 442.593 |
| 60 | 69.7700 | 81.6697 | 114.0515 | 163.053 | 237.991 | 353.584 | 533.128 | 813.520 | 1253.213 | 1944.792 | 3034.816 |
| 80 | 98.0677 | 121.6715 | 193.7720 | 321.363 | 551.245 | 971.229 | 1746.600 | 3189.063 | 5886.935 | 10950.574 | 20474.002 |
| 120 | 163.8793 | 230.0387 | 488.3 | 1123.7 | 2741.6 | 6958.2 | 18119.8 | 47954.1 | 128149.9 | 344289.1 | 927080.7 |
| 240 | 462.0409 | 989.2554 | 5744.4 | 40128.4 | 306130.1 | 2434771.5 | 19735859.6 | 161067740.3 | 1314048291.0 | 10668834933.8 | 85949714400.7 |

| Period | 11% | 12% | 13% | 14% | 15% |
|---|---|---|---|---|---|
| 1 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 2 | 2.1100 | 2.1200 | 2.1300 | 2.1400 | 2.1500 |
| 3 | 3.3421 | 3.3744 | 3.4069 | 3.4396 | 3.4725 |
| 4 | 4.7097 | 4.7793 | 4.8498 | 4.9211 | 4.9934 |
| 5 | 6.2278 | 6.3528 | 6.4803 | 6.6101 | 6.7424 |
| 6 | 7.9129 | 8.1152 | 8.3227 | 8.5355 | 8.7537 |
| 7 | 9.7833 | 10.0890 | 10.4047 | 10.7305 | 11.0668 |
| 8 | 11.8594 | 12.2997 | 12.7573 | 13.2328 | 13.7268 |
| 9 | 14.1640 | 14.7757 | 15.4157 | 16.0853 | 16.7858 |
| 10 | 16.7220 | 17.5487 | 18.4197 | 19.3373 | 20.3037 |
| 11 | 19.5614 | 20.6546 | 21.8143 | 23.0445 | 24.3493 |
| 12 | 22.7132 | 24.1331 | 25.6502 | 27.2707 | 29.0017 |
| 13 | 26.2116 | 28.0291 | 29.9847 | 32.0887 | 34.3519 |
| 14 | 30.0949 | 32.3926 | 34.8827 | 37.5811 | 40.5047 |
| 15 | 34.4054 | 37.2797 | 40.4175 | 43.8424 | 47.5804 |
| 16 | 39.1899 | 42.7533 | 46.6717 | 50.9804 | 55.7175 |
| 17 | 44.5008 | 48.8837 | 53.7391 | 59.1176 | 65.0751 |
| 18 | 50.396 | 55.750 | 61.725 | 68.394 | 75.836 |
| 19 | 56.939 | 63.440 | 70.749 | 78.969 | 88.212 |
| 20 | 64.203 | 72.052 | 80.947 | 91.025 | 102.444 |
| 25 | 114.413 | 133.334 | 155.620 | 181.871 | 212.793 |
| 30 | 199.021 | 241.333 | 293.199 | 356.787 | 434.745 |
| 40 | 581.826 | 767.091 | 1013.704 | 1342.025 | 1779.090 |
| 60 | 4755.066 | 7471.641 | 11761.950 | 18535.133 | 29219.992 |
| 80 | 38401.025 | 72145.693 | 135614.927 | 254828.441 | 478332.529 |
| 120 | 2496681.8 | 6713993.8 | 18008174.1 | 48134233.5 | 128129626.7 |
| 240 | 685681170770.6 | 5409338944300.8 | 42158299391998.1 | 324366716885585.0 | 2462580441213620.0 |

# Answers

Paper II
PBE Management
Accounting and Finance
(December 2009 Session)

**SECTION A (Total: 40 marks)**

**Answer 1(a)**

| | |
|---|---|
| Initial outlay | = $8,000,000 |
| Working capital requirement | = $1,000,000 (will be released at the end of year 25) |
| Total initial cash requirement | = $9,000,000 |
| Cash profit | = $1,000,000 ($4,000,000 - $3,000,000) |

Annuity factor = 9.077 (n = 25, r = 10%)

NPV = ($9,000,000) + 9.077 x $1,000,000 + $1,000,000/$(1+10\%)^{25}$

= $169,296

Since the NPV is positive, the project should be taken.

**Answer 1(b)**

IRR is the internal rate of return. It is the discount rate when NPV = 0. IRR and discount rate are used by firms to determine whether they should make investments. When the discount rate is higher than IRR, NPV is negative. This implies that the project should not be taken.

**Answer 1(c)**

To: CEO of Longrange Co.
From: Chief Financial Analyst
Date: XX June 2009

Re: Discount Rate

I would like to clarify the process in the determination of discount rate.

It is true that the result of NPV depends very much on the discount rate as different discount rates will give different results. A low discount rate implies more positive NPV while a high discount rate likely leads to low or even negative NPV. However, this process is not arbitrary.

Discount rate is affected by the capital structure. That is, the proportion of debt and proportion of equity in the company.

Another important factor is the cost of debt, which is the prevailing cost of borrowing in the market. The higher the cost of debt, the higher the discount rate.

The cost of equity also affects the discount rate. This is the cost of raising equity capital from the market. Again, the higher the cost of equity, the higher the discount rate. In usual cases, the cost of equity is higher than the cost of debt.

It is quite logical to use several discount rates for different scenarios in our evaluation. We may discuss this further in detail.

Best regards,
Andy Lau

**Answer 2(a)**

Loss of profit after taking the order from the Assembly Division = 1,000 units x ($32-$18-$3) = $11,000

The unit cost of part D367 excluding loss of profit = $18 (packing and delivering costs are not included in internal transfers)

Unit cost of part D367 including loss of profit = $18 + $11,000/4,000 = $20.75

The transfer price should be above $20.75 but below $25. That is, if the Assembly Division is willing to pay a price above $20.75, the Manufacturing Division can still benefit from the purchase.

**Answer 2(b)**

If the Assembly Division can purchase part D367 from the Manufacturing Division at a price lower than $25, it still benefits from the internal transfer. If the transfer price is set at a lower limit of $20.75, obviously the Assembly Division gains $4.25. From the perspective of the Manufacturing Division, a $20.75 transfer price allows it to gain at $2.75 per unit. Sales of 4,000 units to the Assembly Division are equivalent to $11,000, sufficient to cover the loss of profit from the external customers.

From the company perspective, if the transfer price is set at $20.75 instead of buying at $25, the total gain for the Assembly Division is $4.25 x 4,000 = $17,000. Loss of profit for the Manufacturing Division = ($32 - $18 - $3) x 1000 = $11,000. Profit generated to the Manufacturing Division from the Assembly Division = ($20.75 - $18) x 1000 = $2,750. The total company gain is $8,750 ($17,000 – $11,000 + $2,750). The higher the transfer price, the smaller the gain to the company as a whole.

$20.75 ≤ Transfer Price ≤ $25

**Answer 2(c)**

A value chain is a chain of activities for adding value for transforming inputs to outputs to the customers. The four support activities in the value chain include Firm Infrastructure, Human Resources, Technology and Purchasing.

* * * END OF SECTION A * * *

**SECTION B (Total: 60 marks)**

**Answer 3(a)**

A money market consists mainly of short-term investment products with a maturity of less than 1 year. These include short term notes, bonds and bank deposits. A capital market consists mainly of investment products with a maturity of more than 1 year. These include shares and longer term bonds.

Money markets focus on short-term investment. Investors who want to maintain liquidity are the clientele of the money market. Investors who want to maintain less liquidity (i.e. longer than one year) are the clientele of the capital market.

**Answer 3(b)**

Hong Kong has established four major markets:

1. The Hong Kong Stock Market. This allows investors to trade stocks in the Hong Kong Stock Exchange and is one of the most actively traded markets in the world in terms of trading volume and market capitalization.

2. The Hong Kong Debt Market. This is also known as the fixed income market. It allows the trading of fixed income investment products like bonds and notes. Compared with the Stock Market, its trading volume is comparatively small.

3. The Foreign Exchange Market. Hong Kong does not have exchange control and it allows the trading of foreign currency. People can make use of computer systems in trading and a physical establishment is not required.

4. The Derivative Market. Hong Kong has an active derivative market for the trading of forwards, futures and warrants. The market provides both speculative and hedging functions and the former far exceeds the latter.

**Answer 3(c)**

Property developers in Hong Kong are able to earn high profits through economies of scale and favourable government policies. However, it is observed that the dividend pay-out ratio ranges from 20% to 30%. The main reason is that due to the mark-to-market reporting requirement, profit earned is accounting profit, which does not mean that the cash level of the company will increase by that amount. As the distribution of dividends is generally cash in nature, without a corresponding amount of cash increase, a high dividend pay-out ratio is not possible.

**Answer 4(a)**

Minimum or breakeven charge corresponds to 2,500 tickets sold per night. There are 30 games per season.

Total tickets sold = 2,500 x 30 = 75,000

Total cost incurred = $1,400,000 + $250,000 + $5,000 x 5 x 30 = $2,400,000

Price per ticket = $2,400,000 / 75, 000 = $32

**Answer 4(b)**

In determining pricing, there are various strategies. The answer from (a) follows a cost-based calculation. That is, the price must be able to recover costs incurred. In reality, pricing decisions may involve factors such as competition with competitors. Political reasons such as government policy may also be considered. In this case, even if North China Sports Club wants to sell more tickets for its final matches, this may not be possible due to government regulations. Besides, business may levy low prices for market entry or as a goodwill to the society.

**Answer 4(c)**

A company can generate profits from its assets because shareholders contribute equity to the company at the very beginning. After getting the equity, the company is able to purchase assets for its operation. Investors expect to share the profits from the operation and thus whenever there is a profit, the company must distribute part of the profit to the shareholders. Such distribution is usually in the form of a dividend. The higher the dividend distributed, the higher the stock price. This also implies higher shareholder wealth.

**Answer 4(d)**

Bondholders look for stable income in the form of interest and secured repayment of principal. Shareholders, on the other hand, look for increasing dividends and thus an increasing share price. The former do not prefer risky projects while the latter do not object to risky projects as the higher the risk, the higher the return. This illustrates the goal incongruence between bondholders and shareholders.

**Answer 5(a)**

By using the dividend growth model (or stock valuation formula).

Let D0 be the current dividend, D1 be the dividend in the coming year and D2 be the dividend after two years and so on.

$P = D_1/(1+r)^1 + D_2/(1+r)^2 + D_3/(1+r)^3 + D_4/(1+r)^4 + P_4/(1+r)^4$

$P = D_1/(1+r)^1 + D_2/(1+r)^2 + D_3/(1+r)^3 + D_4/(1+r)^4 + D_4 x\ (1+g)/(r-g)/(1+r)^4$

$= D_0 x\ 1.2/(1+15\%)^1 + D_0 x1.2x1.2/(1+15\%)^2 + D_0 x1.2x1.2x1.2/(1+15\%)^3$
$+ D_0 x1.2x1.2x1.2x1.15/(1+15\%)^4 + D_0 x1.2x1.2x1.2x1.15x1.15/(15\%-10\%)/(1+15\%)^4$

Solving, $D_0$ = \$1.7 and $D_1$ = \$2.04

**Answer 5(b)**

Cum-div means with dividend; investors buying such stocks are entitled to receive the declared dividend.

Ex-div means without dividend, investors buying this stock are not entitled to receive the declared dividend. The boundary is called the ex-dividend date. As investors who buy stock on that day are not entitled to receive the declared dividend, stock prices usually fall on the ex-div date by the amount of dividend distributed.

**Answer 5(c)**

Consider the dividend growth model,

$P_0 = D_0(1 + g)/(r-g)$ where $D_0$ is the current dividend per share and g is the dividend growth rate. If there is no growth in dividend, g = 0 and the current price of the share is $D_0/r$. After one year, the dividend is still the same i.e. $P_1 = D_1/r = D_0/r$. The price does not change and there is no capital gain. In a fully efficient market, there is growth in stock prices due to factors other than dividend growth.

**Answer 6(a)**

There are two main types of risk: systematic risk and unsystematic risk. The former cannot be diversified away but the latter can be reduced through effective diversification. Macro factors such as inflation and economic growth are good examples of systematic risk. Unsystematic risks are unique factors such as firm-specific issues like strikes and bankruptcy.

**Answer 6(b)**

Hedging is a practice used to reduce risk through the use of counterbalance contracts. By using a currency call option, investors can hedge a rising currency by buying a currency call option at a certain exercise price $X. When the currency rises above $X, investors can still buy the currency at $X.

**Answer 6(c)**

Arbitrage is the process of buying a security at a low price in one market and simultaneously selling in another market at a higher price to make a profit.

An arbitrage situation can be structured as follows: Borrow currency A at interest rate r, convert it into currency B and deposit it at interest rate R where R is greater than r. If it is possible to convert back to currency A at a later time without an exchange rate loss, it is possible to generate profit.

**Answer 6(d)**

There are three forms of market efficiency: a weak form, semi-strong form and strong form.

In weak form market efficiency, current share prices fully reflect information included in historical share price movements. That is, investors cannot consistently generate profit through technical analysis.

In semi-strong form market efficiency, current share prices reflect not only historical share price information but also current publicly available information about the company. Investors cannot consistently generate profit through fundamental analysis.

In strong form market efficiency, current share prices reflect not only historical share prices but also private information.

If an investor can always gain profit by reading published financial statements and announcements made by the stock exchange, this violates the semi-strong form market efficiency as financial statements and announcements are public information.

* * * END OF EXAMINATION PAPER * * *

# Examination Panelist's Report

## Paper II
## PBE Management Accounting and Finance
## (December 2009 Session)

*(The main purpose of the following report is to summarise candidates' common weaknesses and make recommendations to help future candidates improve their performance in the examination.)*

**General Comments**

In general, the performance was unsatisfactory as quite a number of candidates did not master the fundamental concepts of management accounting and finance such as the composition of discount rate, analysis of transfer price, difference between Money Market and Capital Market, Conflicts between bondholders and shareholders, difference between cum-div and ex-div and different types of risk. Most questions were straightforward but students failed to demonstrate their understanding of fundamental concepts. In particular, they did not read the questions carefully. Though it was mentioned in previous reports, it was still observed that some students did not have a good examination technique. For example, they answered different parts of a question out of sequence and their answers were scattered across different pages. This gave rise to a risk with regard to miscalculating marks calculation and should be discouraged.

**Specific Comments**

**Section A – Compulsory Questions**

Question 1 – 20 marks

Some candidates failed to give the correct meaning of IRR and the implication of having negative NPV when the discount rate is higher than IRR. In that last part, it was very disappointing that candidates failed to present how the discount rate was determined by getting the cost of equity, cost of debt and capital structure. Candidates also forgot that, in reality, different scenarios were constructed by using different discount rates. Quite a lot of candidates just answered that positive NPV implies acceptance of the project and negative NPV implies rejection.

Question 2 – 20 marks

This was a straightforward question on transfer price. Many candidates got the correct answer in calculating the range of transfer price. In part (b), most candidates failed when using the case with figures to support their answers in analyzing from the perspectives of both departments and the company. As this part carried 8 marks, candidates were expected to give thorough analyses. In part (c), quite a lot of candidates failed to give the correct answers for the four support activities of the value chain.

## Section B – Optional Questions

Question 3 – 20 marks

This question tested candidates' knowledge of the Money Market, Capital Market and the structure of financial markets in Hong Kong. Students had a limited knowledge of such basic concepts. In part (c), quite a lot of candidates answered that having a low dividend pay-out from property developers was due to cash flow limitations and maintenance of cash for further investment. They did not notice that the information in the question was to focus on the mark-to-market accounting requirements.

Question 4 – 20 marks

This question was answered satisfactorily. In part (a), candidates did not have much problem giving correct answer. In part (b), candidates were expected to think outside of the box to give answers such as different views, market competition, and different matches would give rise to different prices. Part (c) and (d) were typical questions about agency problems. Some candidates did not understand the difference between accounting profit and dividend payout.

Question 5 – 20 marks

This was a difficult question in terms of deriving the correct dividend. Candidates were expected to demonstrate their understanding of the dividend growth model and the use of the correct discount rate. Only a few candidates succeeded in doing this. In part (b), it was very disappointing that candidates failed to distinguish between cum-div and ex-div. These are fundamental concepts in finance. In part (c), the use of the dividend growth model was essential.

Question 6 – 20 marks

This question tested candidates' fundamental concepts such as different types of risk and different forms of market efficiency. Surprisingly, many candidates mixed up systematic and unsystematic risks. The parts on hedging and arbitrage were answered satisfactorily. Candidates did well in pointing out the different forms of market efficiency.

* * * END OF EXAMINATION PANELIST'S REPORT * * *