CASE

Television manufacturing is a highly competitive industry which procures a lot of parts and components. New models with various functionalities are offered to the market on a yearly basis in order to stimulate sales. Tiger TV Manufacturing Company Limited (TTV or the Group), a listed company on the Hong Kong Stock Exchange, has recently (2 months after the fiscal year end date) announced a positive profit alert which states that the Group has recorded substantial profit growth which is attributable to (i) the successful implementation of the Group's supply chain strategies resulting in a reduction in raw material and other related costs; (ii) the Group's sales have maintained double-digit growth in mainland China; and (iii) the successful execution of the Group's promotion and pricing strategies in the rural/countryside and metropolitan areas.

The following items are discussed during a board meeting:

Investment Plan

The management of TTV has decided to make a huge investment in the coming financial year in setting up LCD (Liquid Crystal Display) and LED (Light-Emitting Diode) panel module facilities in mainland China to sustain the profit growth of the Group and stabilise the upstream supply chain. It is estimated that a capital investment of HK$200 million is required to purchase additional machineries and other long-term financing funding may be required for this investment ("Investment Project"). Currently, the Group maintains a short-term bank loan of HK$100 million and overdraft facility of HK$50 million with the Scott Bank.

In a board meeting, Ms. Tina So, a board member, has raised that since TTV has accumulated over HK$1,500 million accounts receivable and a cash balance of HK$500 million, the Group should try to use its best efforts to collect the receivable as early as possible to fund the aforesaid investment instead of obtaining long-term finance. The meeting also deliberated whether this approach was too aggressive in terms of short-term and long-term implications to the Group in the aftermath of financial tsunami.

TTphone Opportunity

The Chief Financial Officer (CFO) reports in the board meeting that TTV has a subsidiary TTphone which has performed so well in selling mobile phones in the past three years that the members agree to explore the opportunity to spin off TTphone in the Hong Kong Stock Exchange. Continuous investment in distribution networks is a key driver of success in this industry.

Declaration

Tina So declares that she has sold all her shareholding of TTV right after the public announcement of the positive profit alert i.e. 3 weeks before the final result announcement is to be released.

Operation Discussions

(1) Target Cost

Even though TTV has had a very good business performance in the past years, the competition becomes more intense than ever. It is expected that competitors have started their plans to cut product costs. In order to cope with the competition, the management of TTV has set a target cost for future LCD and LED TV products that is to reduce by 15% the existing product costs and increase two more functionalities compared to the market available functionalities.

A memorandum will be circulated to the board members to explain the target costing concepts shortly after the board meeting.

(2) Departmental Pricing

TTV has an LCD and LED module making subsidiary TTM. As a group policy, and in fact an industrial norm, TTM has the free autonomy to sell its products to TTV to make "Tiger" LCD and LED TVs, or to other external TV or display manufacturing companies to make other branded TVs or display products depending on the profitability. Similarly, TTV could buy the modules on the open market if the price offered by TTM is higher than the market price.

Three scenarios have been considered:

Scenario A	=	TTM has no spare capacity at all
Scenario B	=	TTM has spare capacity
Scenario C	=	TTM has a total 4,500,000 modules production capacity

Current TTM output and external sales	=	4,000,000 modules per annum
TTM current selling price	=	HK$1,600/unit
TTM marginal cost	=	HK$867/unit
TTV total demand from internal / external suppliers	=	10,000,000 modules per annum
TTV purchase price from external suppliers	=	HK$1,400/unit

A report on the discussion between TTM and TTV will be documented for the next board to understand their logic for determining the departmental transfer pricing.

SECTION A – CASE QUESTIONS (Total: 50 marks)

Answer ALL of the following questions. Marks will be awarded for logical argumentation and appropriate presentation of the answers.

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

Assume that you are Mr. T. T. Chan, the Deputy CFO of TTV, and you are asked by the CFO to write a memorandum to the board to further explain target costing concepts due to the shortage of board meeting time.

Required:

(a) Explain what target costing is and the reasons for using it.
(3 marks)

(b) Why is the target costing approach relevant to TV production?
(6 marks)

(c) What are the three steps that you will design to attain the target cost?
(6 marks)

(d) What are the benefits and limitations of target costing?
(5 marks)

<u>Question 2</u> (23 marks – approximately 42 minutes)

With reference to the information as set out under the section headed “Departmental Pricing”.

<u>Required:</u>

(a) **Assuming you are the CFO of TTV, what should be the objectives in setting the transfer pricing system between a group of companies or divisions?**

(3 marks)

(b) **Set out the minimum transaction price(s) between TTM and TTV with an explanation for each scenario.**

(13 marks)

(c) **In which scenario do you think that negotiation may happen? If the scenario fails, what should the Group management do? Justify your decision.**

(7 marks)

<u>Question 3</u> (7 marks – approximately 12 minutes)

Refer to the case and advise whether Tina So’s disposal of the Group shareholding is proper. Give advice to the Group and Tina So regarding her disposal of the shares.

(7 marks)

* * * * * * * *

End of Section A

SECTION B – ESSAY / SHORT QUESTIONS (Total: 50 marks)

Answer ALL of the following questions. Marks will be awarded for logical argumentation and appropriate presentation of the answers.

Refer to the Case information.

Question 4 **(24 marks – approximately 43 minutes)**

Assume that you are Mr. T. T. Chan and you are asked by the CFO to write a memorandum to the board addressing the following board members' concerns:

Required:

(a) **How does the early settlement discount work for turning the normal accounts receivable into cash as early as possible in terms of working capital management? What are the associated cost and benefits?**

(7 marks)

(b) **Explain whether the Group should obtain long-term financing to fund the Investment Project even the Group could turn the accounts receivable into cash quickly.**

(8 marks)

(c) **Advise on the reasons for spinning off TTphone in the Hong Kong Stock Exchange.**

(9 marks)

Question 5 (16 marks – approximately 29 minutes)

TTphone is considering an investment in a high-tech equipment. The useful life of this equipment is estimated to be four years. Mr. T.T. Chan estimates the cash flows as follows:

Year End	Description	Amount (HK$)
0	Initial equipment investment	$100 million
1-4	Estimated annual operational cash flows	$40 million
4	Cash inflow from disposal of equipment	$200,000

The depreciation is calculated on a straight line basis for tax purposes using the initial investment minus the disposal value of the equipment at the end of year 4. The company has a cost of capital of 10% and the applicable tax rate is 16%. It is also the company practice to use initial investment value and after tax results to measure the return of a project.

Assuming the tax benefit could be claimed in the year of use and the tax would be paid at the end of each year. There would be no balancing charge and allowance at the year of disposal.

Required:

(a) **Calculate the net present value (NPV) and internal rate of return (IRR) of the project based on the above estimates and assumptions.**

(6 marks)

(b) **Calculate two additional measures in order to reflect the liquidity and reported financial performance of the project.**

(4 marks)

(c) **Identify the advantages and disadvantages of the two additional measures that you calculated. Make a recommendation for the project.**

(6 marks)

<u>Question 6</u> **(10 marks – approximately 18 minutes)**

TTphone now evaluates another investment project and considers investing in a project by using one of the following finance options:

(i) issuing 25 million shares on top of the currently issued 100 million shares at HK$10 each; or

(ii) issuing 250 million debentures at a rate of 3% per annum at par.

Assume the income tax level is 16%.

<u>Required:</u>

(a) Calculate the operating profit at a point of indifference between issuing equity shares and issuing the debentures.

(4 marks)

(b) Calculate the earnings after tax per share for both methods.

(3 marks)

(c) By interpreting the figures in (a) and (b), when would it be appropriate to decide to issue the shares or debentures?

(3 marks)

* * * END OF EXAMINATION PAPER * * *