PP

Chartered Accountant SINGAPORE

Singapore CA Qualification Examination

11 December 2018

Business Value, Governance & Risk

INSTRUCTIONS TO CANDIDATES:

1. The time allowed for this examination paper is **3 hours 15 minutes**.
2. This examination paper has **FOUR (4)** questions and comprises **NINETEEN (19)** pages (including this instruction sheet). Each question may have **MULTIPLE** parts and **ALL** questions are examinable.
3. This is an open book examination. During the examination, you are allowed to use your laptop and any calculators that comply with the SAC's regulations. Please note that mobile phones, tablets, and all other electronic devices **MUST NOT** be used during the examination.
4. This examination paper is the property of the Singapore Accountancy Commission.

MODULE-SPECIFIC INSTRUCTIONS:

5. This case is hypothetical and has been written exclusively for the purpose of this examination. Names, characters, places and incidents used are imaginary or fictional. Any resemblance to actual events or locales or persons, living or dead, is entirely coincidental. This case is not to be cited without the permission of the Singapore Accountancy Commission.

ISCA INSTITUTE OF SINGAPORE CHARTERED ACCOUNTANTS

SINGAPORE ACCOUNTANCY COMMISSION

Company Background Information
(Applicable to all the questions)

ComTech Ltd is a medium size company listed on SGX Catalist. It designs and assembles personal computers using its own patented brand of microchip. ComTech develops microchips from its manufacturing plant in Jurong, Singapore and assembles personal computers from its product assembly plant in Tuas, Singapore. It sells to a loyal group of Singapore and regional electronic stores. ComTech's microchip has exceptional processing speed and power and it is sold at a price that is lower than its competitors. The company is expanding quickly as it sells to an increasing number of electronic retail stores each year. About 10 customers are added each year. Recently in August 20x1, ComTech won a contract to supply a large number of laptops to two Singapore government agencies over the next 6 months (October 20x1 to March 20x2). This is the first time ComTech has won a sizeable government contract.

ComTech operates an online system which enables all the electronic stores to place orders. ComTech does not have an in-house Information Technology (IT) department as it outsources all its IT functions to IBM Singapore. In order to allow ComTech to focus on its core competency, the management also outsources other areas such as payroll processing and accounting to other service providers.

The overseas electronic stores are billed in Singapore dollars (S$) and payment from all the stores is due 90 days after delivery. The online system also allows companies and individuals to buy ComTech's computers on an ad hoc basis and payments are made through credit cards. Sales volume from this sales channel has been growing annually.

ComTech's business objective is to sell computers that are reliable, of high quality and affordable. Hence, it only procures its inventory from two reputable companies, namely, Samsung and Toshiba. ComTech purchases electronics components, such as motherboard and disk drive, directly from Samsung in Korea, while other hardware components, such as keyboard and monitor, are purchased from Toshiba in Thailand.

Question 1 – (a), (b) and (c)

Board Matters

ComTech's current board consists of 7 directors as shown below:

Name	Board Role	Brief Background	Years with Board	Age
Daniel Lee	Executive Chairman	Founder & NC* member	18	90
Henry Subianto	Executive Director	Chief Executive Officer (son-in-law of Chairman)	10	65
Hamid Zaid	Executive Director	Chief Operating Officer	8	70
Hanson Hong	Lead Independent Director	AC** Chair. Partner of a medium size accounting firm	6	70
Mike Hague	Independent Director	NC* Chair. Owner of a Human Resources consulting firm	5	69
James Ng	Independent Director	AC** member. Doctor and owner of a healthcare products company	9	70
Alex Tan	Independent Director	AC** and NC* member. Owner of a building construction company	9	60

* NC: Nominating Committee

** AC: Audit Committee

In accordance with good corporate governance practice, the Board decided that James and Alex will retire. Following this, the Executive Chairman offered the names of 5 candidates (all known to him) for the NC's consideration. He provided only a very brief background of each candidate as shown below:

List of Candidates to replace retiring board members

Candidate	**Brief Background Provided by Executive Chairman**
Abram Thomas	Chief Executive Officer (CEO) of one of ComTech's outsourced service providers
Bruno Tan	Retired audit partner of Company's current external audit firm
Carissa Tan	Retired Chief Operating Officer (COO) of ComTech
Darius Lim	Current Head of Corporate Banking of DBS Bank
Eileen Low	Current CEO of a SingTel Limited's subsidiary. SingTel is the provider of telecommunication services to ComTech.

The NC proceeded with the selection based on the information provided by the Executive Chairman in the above table.

Examplify Question Number	Question 1 required:
1	**(a)** Critically evaluate whether each of the above candidates is independent. Identify any additional information that may be required and the potential impact the additional information may have on your conclusion. **(10 marks)**
2	**(b)** Considering the composition of the Nominating Committee and the nomination process, identify two areas where the Nominating Committee Chairman should have taken steps to ensure good governance in the selection process. **(4 marks)**
3	**(c)** Comment on TWO aspects of the current board diversity that the Nominating Committee should take into account when selecting new directors**.** **(4 marks)** **(Total: 18 marks)**

Question 2 – (a), (b) and (c)

A crisis situation arose one month (i.e. September 20x1) after winning the government contract. Samsung Korea uses Hanjin Shipping, the largest in South Korea and 7th globally, to ship all its exports. Hanjin Shipping is on the brink of bankruptcy and some of its ships have been seized by creditors. Its collapse is expected to cause significant disruption to the global supply chain and will last for several months. As the largest shipping company in South Korea, exporters including Samsung are facing tremendous difficulties in finding alternative transport for their goods.

ComTech's inventory policy is to maintain only one-month of inventory level to save on holding costs and avoid the risk of stock obsolescence. This one-month inventory policy, and Samsung's facing difficulties with their shipments, will jeopardise the contracted delivery of computers to the two government agencies and exposes ComTech to liquidated damages.

A crisis management committee, chaired by the Chief Executive Officer (CEO), was formed almost two weeks into the crisis after the inventory manager alerted that components inventory has fallen significantly and were not replenished. The delay in forming this committee was because the management personnel responsible for procurement and inventory management have never experienced a similar incident in the past. In addition, the Supply Chain manager was on overseas vacation and uncontactable. Therefore, there was a lack of ownership over managing this crisis. This can be seen from the late escalation of the potential inventory shortages, the uncertainty of who should the escalation be made to, and who in management should be a member of this crisis management committee. The CEO subsequently defined the committee's objective as being to identify measures necessary to avert a disruption to fulfilling the government contract.

Examplify Question Number	**Question 2 required:**
4	**(a)** What are FOUR possible actions, in relation to the crisis, that management could take to alleviate the potential disruption to the two government agencies? **(8 marks)**
	The Chairman believes that this Hanjin Shipping incident that hit ComTech was a black swan as he has never experienced an incident of such scale and magnitude in his 18 years of managing the company. He felt that the event was unforeseen.
5	**(b)** Do you agree with the Chairman that this crisis is unforeseen? Discuss. **(4 marks)**
	(c) The Board was not satisfied with the management on how the crisis was handled and was of the view that measures must be implemented to reduce the risk impact from a similar crisis in the future. Your firm has been appointed to identify the factors that have contributed to the crisis in ComTech, and to recommend mitigating measures to help ComTech be more resilient to a similar crisis in the future.
6	**(i)** From the collapse of Hanjin Shipping, identify FOUR new or emerging risks arising that ComTech is exposed to, AND briefly discuss why these risks are significant. **(8 marks)**

Examplify Question Number		
7	**(ii)**	Identify THREE factors that have contributed to the crisis in ComTech AND the corresponding mitigating measures that management should take to become more resilient in a similar crisis in the future.

(12 marks)

(Total: 32 marks)

Question 3 – (a), (b), (c), (d) and (e)

It is now December 20x3 and the Chief Executive Officer (CEO) of ComTech, Daniel Lee, has been encouraged by the recent sales figures that he is now considering implementing a new strategic objective to manufacture and sell its computers in international markets. Daniel is looking at ways to raise capital to fund expansion into the Malaysian and Indian computer retail markets and market its online sales system across the Asia Pacific region to increase its online presence.

ComTech has four operating subsidiaries: retail, online sales, microchip manufacturing and product assembly. Each subsidiary is managed independently by a managing director who reports directly to the ComTech parent company.

Potential divestment

Four years ago, ComTech invested in developing a large, state of the art manufacturing plant in Singapore with the capacity to manufacture microchips at approximately three times its current production volume. The manufacturing plant also has the potential to expand its production capacity. This manufacturing plant is owned and managed by the microchip manufacturing subsidiary. It was envisaged that ComTech would manufacture microchips for other companies, but this is proving to be a challenging strategic goal to meet and at this time, the board of directors cannot see a strategic use for the plant's excessive spare production capacity.

ComTech is already highly geared as it borrowed a substantial amount to establish the microchip manufacturing plant and therefore further borrowing is not an option at this time. Therefore, the board of directors of ComTech is looking at a divestment strategy to sell its microchip manufacturing subsidiary and outsource the production of microchips to an external supplier.

The most recent results for the microchip manufacturing subsidiary for the year to 30 September 20x3 are as follows:

	S$ (Singapore dollars) million
Revenue	47.6
Cost of sales	(12.4)
Production overheads	(20.0)
Operating profit	15.2
Corporate tax at 17%	(2.6)
Profit after tax	**12.6**

Note that all external and inter-company microchip sales are transacted at arm's length prices.

The objectives of this sale are to raise capital to fund a marketing programme to raise brand awareness and also invest in research and development to increase its product offerings so as to generate a higher demand for its computers in Malaysia and India. The marketing programme includes marketing of its online sales platform across Asia. Investment in research and development includes funding of the design and development of enhanced microchips and possibly acquiring innovative young technology start-up companies to extend ComTech's range of computer products.

ComTech has identified a listed company, IndScan Limited ("IndScan"), which manufactures high specification computerised analytical devices for the medical, pharmaceutical and chemical industries. IndScan is looking to purchase its own microchip manufacturing and research facility.

IndScan has indicated that it is willing to provide a long term supply contract to continue manufacturing ComTech's microchips at existing production levels as a condition of the sale agreement and use the plant's spare capacity to manufacture microchips for its own industrial analytical and research devices.

Market information

ComTech has in issue 60 million ordinary shares trading on SGX Catalist. The market value of each ordinary share is S$2.50. The company is also financed by 7% bonds with a nominal value of S$100 per bond, which will be redeemed in 6 years' time at nominal value. The bonds have a total nominal value of S$60 million. Interest on the bonds has just been paid and the current market value of each bond is S$105.

Daniel Lee has identified a very large microchip manufacturing company in Taiwan. This company has a quoted equity beta of 1.5, an equity market value of S$540 million and a market value of the debt of S$120 million. He also considers the risk-free rate of return to be 3.5% per annum and the average return on the stock market to be 8.5% per year. Corporation tax is expected to remain at 17%.

Daniel Lee considers the gearing expectation by ComTech investors of the microchip division to be the same as the company as a whole.

Valuation and potential synergy

The divestment of the microchip manufacturing subsidiary was discussed at the board meeting held on 30 November 20x3 where the CEO said he believes:

- The free cash flow method is the most appropriate method to value the microchip manufacturing subsidiary. He suggests that profit after tax is a good approximation to free cash flow. Recent year's annual capital expenditure at the subsidiary has been approximately equal to its depreciation charge. Using a simplified assumption, future working capital is expected to remain at current levels;

- Revenue at the microchip division is expected to grow at 5% per annum for the next four years, and then remain constant at the same value for all years thereafter;

- Cost of sales at the microchip division is expected to grow at 3% per annum for the next four years, and then remain constant at the same value for all the years thereafter;

- No change in overheads is forecasted from current levels;

- All debt will remain with ComTech following the divestment of the microchip division. However, Daniel wants the free cash flow valuation determined at ComTech's existing risk adjusted weighted average cost of capital to a similar large microchip manufacturing companies;

- Present all valuations at 30 September 20x3 values; and

- The potential acquirer is likely to benefit substantially from three types of synergy which increase the value over and above ComTechs' current valuation as follows:

  1. **Revenue synergy** - IndScan is expected to create at least an additional S$7 million of gross profit in the first year by using growth from the manufacturing of its own microchips which is expected to grow at 10% per annum for the next three years and then remain constant at the same value for all years thereafter;

  2. **Cost synergy** - IndScan will save 25% of the subsidiary's existing overheads through economy of scale efficiencies as IndScan utilises its spare manufacturing capacity; and

  3. **Financial risk synergy** - IndScan is a very large, ungeared, cash-rich company with a current quoted beta of 1.1 so its investors are highly likely to have different risk and return expectations as ComTech's shareholders.

Examplify Question Number	**Question 3 required:**
8	**(a)** Determine an appropriate discount rate which ComTech can use to evaluate the sale of its microchip manufacturing subsidiary. Present your answer to the nearest whole percentage. **(8 marks)**
9	**(b)** Discuss any TWO considerations concerning the use of the Capital Asset Pricing Model (CAPM) to determine the discount rate in part (a). **(2 marks)**
10	**(c)** From the selling company's perspective, compute the enterprise value of ComTech's microchip manufacturing subsidiary, using the free cash flow valuation method and year-end discount factors, to establish a minimum selling price and comment on why this is a minimum value. Ignore acquisition synergy and present your answer to the nearest million Singapore dollars. **(8 marks)**
11	**(d)** From the acquiring company's perspective, determine a maximum enterprise value of its subsidiary by including revenue, cost and financial risk synergies which will assist ComTech in its negotiations with IndScan to divest the microchip manufacturing division. Comment on why the maximum enterprise value may not be realised on sale. Use the free cash flow valuation method and year-end discount factors for your computation. Present your answer to the nearest million Singapore dollars. **(8 marks)**

Examplify Question Number		
12	**(e)**	Evaluate the advantages and disadvantages of divesting the microchip manufacturing subsidiary. **(4 marks)**
		(Total: 30 marks)

Question 4 – (a), (b) and (c)

ComTech has recently identified an unlisted new start-up company, TechEase Pte Ltd ("TechEase"), also based in Singapore. TechEase manufactures and sells its TabEase brand of tablet smart devices using its innovative software which is designed to optimise the ease of user social media interactions. Due to this design feature, the TabEase tablet device is showing signs of market growth and consumer approval in Singapore.

Since its launch, the TabEase has experienced high growth but TechEase is struggling to improve its margin and manage the high production and distribution costs of the TabEase product. TechEase is currently ungeared and has been funded by equity contributions from its founders and a local tech entrepreneur but it has been unable to secure a loan facility as it is perceived as a high-risk technology start-up company.

TechEase is also experiencing working capital issues and the existing owners are therefore considering selling a 75% stake in TechEase so a larger company can provide the financial resources, manufacturing and distribution infrastructure it needs to optimise the future growth potential of the TabEase product.

The directors of ComTech are excited about the future potential of the TabEase tablet as it will allow the company to extend its product range of laptops into the tablet market. Also, the introduction of the ComTech microchip is believed to have the potential to create a very high-performance tablet in the affordable price bracket.

In order to evaluate the potential acquisition, the directors of ComTech would like to complete the following three valuations so the Board can consider a 100% acquisition or a 75% acquisition of TechEase:

1. **Net assets basis valuation** at 30 September 20x3 values, and a net asset valuation which includes an estimate for the intellectual property and brand value of TabEase product;

2. **Future maintainable earnings basis valuation**, by applying market multiples to (i) current 20x3 earnings and (ii) forecast 20x4 earnings; and

3. A **free cash flow valuation** at 30 September 20x3 values based on the 20x4 forecast and applying expected growth rates for revenue and costs.

Below is the summary of financial data for TechEase for 20x3 and forecast revenue and costs for 20x4 in **thousand Singapore dollars**:

Statement of profit and loss for the years ended 30 September

	Actual 20x3 S$'000	**Forecast 20x4 S$'000**
Revenue	738	815
Cost of sales	(533)	(563)
Overheads	(120)	(150)
Profit before taxation	**85**	**102**
Taxation	(14)	(17)
Profit after taxation	**71**	**85**

Statement of financial position at 30 September

	20x3 S$'000
Assets	
Property, plant and equipment	242
Current assets	57
Total Assets	**299**
Equity	
Share capital (Shares of S$1)	50
Retained earnings	92
Total Equity	**142**
Liabilities	
Current liabilities	157
Total Liabilities + Equity	**299**

Additional information and assumptions about the valuation of TechEase provided by the directors of ComTech on 1 December 20x3 are listed below:

1. When valuing potential intangible assets and intellectual property, the directors would like you to use a pre-tax return on total assets of 15% which is the average return for the technology sector in the past three years;

2. Over the past 12 months, the average P/E ratio for technology entities quoted on various stock exchanges in Asia has been 18. It is thought that TechEase might be able to command a P/E ratio premium, 30% higher than the market average;

3. The directors of ComTech understand that technology start-up companies are riskier than established large and listed companies. Therefore, the directors consider a 20% return as sufficient when discounting TechEase's future cashflows;

4. Growth for beyond 20x4 is assumed to be, indefinitely:
   - Revenue - 8% per annum;
   - Cost of sales - 3% per annum; and
   - Overhead - 2% per annum.

5. Corporation Tax has been payable at 17% per annum and this rate is expected to continue.

Examplify Question Number	Question 4 required:
13	**(a)** Using the THREE methods of valuation requested by the directors of ComTech, provide a summary of the range of possible valuations of TechEase for both a 100% acquisition and a 75% acquisition. You are required to use year-end discount factors, where applicable. **<u>Present your answers to the nearest thousand Singapore dollars.</u>** **(11 marks)**
14	**(b)** Explain the results of the valuations from part (a) and recommend, with justifications, a suitable price to commence negotiations. **(3 marks)**
15	**(c)** Discuss the relative merits and drawbacks of the three methods of valuation. **(6 marks)**
	(Total: 20 marks)

END OF PAPER