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Chartered Accountant SINGAPORE

Singapore CA Qualification Examination

9 June 2021

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 **EIGHTEEN (18)** pages (including this instruction sheet) and **TWO (2)** EXCEL spreadsheets (Appendices A and B). 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. During the examination, videos of you and your computer screen will be recorded for the purpose of ensuring examination integrity and you have consented to these recordings.
5. This examination paper is the property of the Singapore Accountancy Commission.

MODULE-SPECIFIC INSTRUCTIONS:

6. 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.

IMPORTANT NOTICE:

If you are not feeling well, please do not press "Start Assessment". If you have started and leave during the exam, you would be deemed to have attempted the paper.

ISCA INSTITUTE OF SINGAPORE CHARTERED ACCOUNTANTS

SINGAPORE ACCOUNTANCY COMMISSION

e-Exam Question Number

1

VERY IMPORTANT NOTICE

1. Your question paper is attached under the **"Resources"** tab found at the bottom right of **EACH** question.

2. Please download the relevant required Appendices in Question 1 of the e-Exam portal.

Other important information:

3. You will be allowed to access your reference materials but **will not be allowed** to communicate with anyone either physically or through any electronic means.

4. You are **NOT ALLOWED** to access any websites during the exam.

5. You are **NOT ALLOWED** to print the question paper.

6. **Please take note that your screen will be monitored throughout the examination. If you are found to have accessed any websites, or if you cheat or attempt to cheat, you will be liable to severe disciplinary action.**

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7. **You do not need fill in an answer for this question.**

Background into the South East Asia shipbuilding industry

Singapore is ideally suited for shipbuilding due to its location in the heart of an archipelagic region. Its deep bay means Singapore shipyards can operate from drydock units to compete with international shipbuilders.

Large oil tankers are supplied by international shipbuilders which have developed the infrastructure to construct large units, such as in Japan and Korea. Singapore shipbuilders have focused on the small/medium shipbuilding markets such as supply ships, barges, anchor handling tugs, hydrographical vessels, pontoons, piers, general cargo ships and smaller ships for the oil industry.

Historically, the fortunes of the shipping industry have been linked to the demand for oil. The oil industry has slowed in recent years as the world is learning to make do with less oil. This has contributed to a decline in new shipbuilding for the oil industry. Some Singapore based shipyards are seeing reduced order books and shipbuilders are having to look to the other markets to survive.

Demand for cargo shipbuilding in the region, especially from Malaysia, Indonesia and the Philippines has increased as new maritime health and safety regulations mean existing wooden vessels require phasing out over the next few years. However, competition is high and customers are highly price sensitive.

Shipbuilders are looking elsewhere to deliver vessels to support the increase in global supply chains with container ships, product tankers, combination carriers, cement carriers and high-speed catamarans, particularly to demand from the Middle East, Hong Kong and China. Various shipbuilding industry leaders are predicting high demand for Singapore-made ships when the economy is expected to recover in late 2021.

Singapore Ship Build and Repair PLC (SSBR)

Singapore Ship Build and Repair PLC (SSBR) is a listed company which provides ship design, shipbuilding and ship repair services and prides itself on providing bespoke maritime solutions and quality craftsmanship to its customers.

SSBR has operated for over seventy years and has built over 5,000 ships at this time. SSBR's shipyard has ten drydocks which it uses to build new vessels. Additionally, SSBR's ship repair yard of four maintenance docks can accommodate medium-sized vessels to sail in for repair or refit.

SSBR mostly builds vessels to order which means the shipbuilding yards often have excess capacity. This year, in order to utilise spare dry dock capacity, SSBR has started building a small number of standard container vessels to have in inventory to meet future immediate demand. In 2020, this has increased inventory with work in progress of new container ships which do not yet have a buyer.

In the past few years, SSBR has struggled to deliver some orders on time, and has incurred cost overruns as ship workers have taken longer to complete some construction tasks than expected. Also, SSBR has had a higher than usual number of quality control issues which have been identified during quality inspections.

It has been a number of years since the Board of SSBR revisited the company's strategic objectives and the Board noted in the most recent Board minutes that SSBR should be open to responding to new international shipbuilding enquires, as these are received.

COVID-19 has had some impact on operations as the site was closed for two months in the second quarter of 2020 although SSBR mainly had spare dry dock capacity at this time so the impact was minimal and shipbuilding has since caught up.

Regional competition

Shipowners tend to be very price-sensitive and are concerned about the high costs of annual maintenance. Competition is high, particularly as larger shipyards are able to build bigger ships.

SSBR's main competitor, Neptune Shipyard Ltd (Neptune), is aiming to deliver a new generation of longer lasting, low maintenance, and more environmentally friendly sea-going vessels with high shipbuilding standards at lower prices. It is also aiming to target cruise liners, the military, and the luxury yacht markets, as well as standard vessels such as tugs, container barges, dredgers and high-speed crafts such as catamarans. With the benefits of digitalisation to its production process, Neptune aims to become the region's most sustainable shipbuilder and promises its customers fast delivery, competitive pricing and innovation.

SSBR's recent performance

At the most recent quarterly presentation to investors and market analysts, some investors have raised concerns about SSBR's declining profitability, its ability to meet future loan repayments and the exclusion of individual Directors' remuneration disclosures in the last annual report. Some market analysts have complained that Directors' remuneration has increased by over 30% over the past three years whilst SSBR's profits have declined.

SSBR has a fixed 6.5% loan of S$1,440 million, of which S$500 million is due for repayment on 31 December 2021, with the remainder due for repayment on 31 December 2025. The bank has confirmed that loan repayments are expected to be repaid in line with the loan agreement and has not yet confirmed it will agree to refinance the existing loan. The bank has confirmed it will accept early repayment with zero penalty. In response, the Board of Directors has been asked by the company's Chairman to look into alternative refinancing options.

One option which the Board is considering is the issue of a five-year 4% S$2,000 million convertible loan note on which will be used to repay the existing bank loan of S$1,440 million and to finance a future acquisition opportunity. The start date of the convertible loan note is expected to be 1 January 2021 if the Board agrees to proceed with refinancing.

The convertible loan note includes an option to convert the debt into new SSBR equity shares in five years' time at a conversion price of S$32.00 per share. The Directors are optimistic that this conversion price will provide an attractive incentive for new investors.

Recent quoted credit risk premiums for companies operating in the shipping sector are as follows:

Credit Rating	**1 year**	**2 years**	**3 years**	**5 years**	**7 years**	**10 years**
AAA	27	33	37	42	52	66
AA	37	46	52	64	72	84
A	62	80	86	100	105	112
BBB	76	122	142	150	170	178
BB	252	287	299	322	329	346
Note: The table above is quoted in basis points where 1% = 100 basis points.						

The current yield on Singapore Government bonds is 3.50% for all bond maturities.

SSBR is listed on the Singapore Exchange (SGX) at S$28.50 per share on 1 December 2020 and has 500 million shares in issue. SSBR's current credit rating is BBB. A summary of SSBR's financial information has been provided by the Directors, as follows:

Singapore Ship Build and Repair PLC
Statement of Profit and Loss
For the years ended 31 December

	2020	**2019**
	S$'m	***S$'m***
	(expected)	
Revenue	994.5	1,013.3
Raw materials and other consumables	(430.5)	(363.1)
Staff costs	(136.7)	(123.1)
Depreciation	(260.5)	(244.0)
Other expenses	(116.8)	(132.2)
Finance costs	(93.6)	(93.6)
(Loss)/Profit before tax	**(43.6)**	**57.3**
Corporate tax at 17%	7.4	(9.7)
(Loss)/Profit for the year	**(36.2)**	**47.6**

Singapore Ship Build and Repair PLC
Statement of Financial Position
As at 31 December

	2020 S$'m (expected)	2019 S$'m
Property plant and equipment	3,637.8	3,662.8
Non-current assets	**3,637.8**	**3,662.8**
Inventories	398.1	223.7
Trade receivables	662.6	550.3
Cash and cash equivalents	131.0	500.5
Current assets	**1,191.7**	**1,274.5**
Total assets	**4,829.5**	**4,937.3**
Equity		
Share capital	500.0	500.0
Retained earning	2,285.0	2,321.2
Total Equity	**2,785.0**	**2,821.2**
Liabilities		
Trade and other payables	604.5	676.1
Loans and borrowings	500.0	0
Current liabilities	**1,104.5**	**676.1**
Loans and borrowings	940.0	1,440.0
Total liabilities	**2,044.5**	**2,116.1**
Total Liabilities & Equity	**4,829.5**	**4,937.3**

SSBR's Board of Directors are considering two options to manage future cash flows and have provided the following information so a five-year profit and cash flow forecast starting from 1 January 2021 can be prepared for each option as follows:

Option 1: No refinancing and capital expenditure freeze

- Under Option 1, the refinancing does not occur, S$500 million of the existing fixed-rate bank loan is repaid on 31 December 2021 and the remainder is repaid on 31 December 2025.

- Revenue, raw materials and other consumables are expected to grow by 1% per annum, each year for the next five years. All other costs are expected to remain unchanged.
- Annual depreciation for the next five years is expected to remain the same as 2020 as capital expenditure will not be allowed for the next five years.
- From 1 January 2021, no dividend will be paid for the next five years.
- Assume no change in working capital or any other change except where detailed above.

Option 2: Refinancing and future acquisition plan

- Under Option 2, the Directors of SSBR are assuming the existing bank loan is repaid in full on 1 January 2021 and a new five-year 4% BBB convertible loan note of S$2,000 million is issued on the same day.
- Option 2 assumes that the S$2,000 million convertible loan note will be repaid in full at 31 December 2025 for the purpose of cashflow forecasting.
- Revenue is expected to grow by 10% per annum, each year for the next three years and 5% per annum for years 4 and 5.
- Raw materials and other consumables are expected to grow at 3% per annum each year for the next five years.
- Due to significant planned restructuring, staff costs and other expenses are expected to decrease by 15% in 2021 and then increase by 2% each year thereafter.
- Annual capital expenditure will be capped at S$100 million per annum for each of the next five years. These assets are expected, on average, to have a useful economic life of 10 years. The annual depreciation for the next five years is expected to remain the same as 2020 except for these additions.
- The value of inventory at the year-end reduces by S$20 million each year for the next two years and then reduces by S$10 million each year for years 3 to 5.
- Each year, forecast year-end receivables will be 95% of the preceding year.
- From 1 January 2021, the annual dividend will be 10% of profit after tax.
- Assume no change in trade payables or any other change except where detailed above.

For Option 1 and Option 2

- There is no difference between accounting depreciation and tax depreciation (capital allowances) for the calculation of corporation tax at 17%. A corporation tax credit of 17% is available on a forecast loss before tax. Therefore, a capital allowance forecast is unnecessary.
- Ignore any unabsorbed tax losses from prior years in both forecasts.

Investment in a Japanese shipbuilder

The Operation Director of SSBR has recently identified a private Japanese company called Yokohama Shipbuilding Ltd (YSL) which operates a shipbuilding and repair facility in Yokohama and has approached the Directors of YSL to enquire if it is for sale.

Refinancing by issuing a S$2,000 million convertible loan note means there may be sufficient investment capital available to fund the acquisition of YSL. The Directors of SSBR have therefore decided to undertake a valuation of YSL to determine if the offer price of S$625 million made by the Directors of YSL represents a good value. YSL has provided its most recent accounts and a report of the company's short-term outlook.

From this, the Directors of SSBR have made the following assumptions for the purpose of a free cash flow valuation of YSL using a risk-adjusted weighted average cost of capital.

Information provided by YSL and assumptions made by SSBR in order to value YSL

1) YSL's expected results for the year ended 31 December 2020 are as follows:

Yokohama Shipbuilding Ltd
Statement of Profit or Loss
For the year ended 31 December 2020

	JPY'm
Revenue	32,588.4
Expenditure:	
Raw materials and other consumables	(14,246.5)
Staff costs	(7,243.7)
Depreciation	(3,222.4)
Other expenses	(5,397.3)
Total expenditure	**(30,109.9)**
Operating Profit	**2,478.5**
Finance charges	0.0
Profit before tax	**2,478.5**
Corporate Tax at 23.2%	(575.0)
Profit after tax	**1,903.5**

2) Annual growth is expected as follows:

	2021-2024 (% per annum)	**2025 and onwards (% per annum)**
Annual revenue growth	5.0%	0%
Expenditure growth (excluding capital expenditure)	2.5%	0%

3) For 2021 to 2024, annual capital expenditure is expected to be JPY5,000 million. For 2025 and each year thereafter, capital expenditure is expected to be JPY2,500 million per annum.

4) For 2021 to 2024, capital allowances on property, plant and equipment are expected to be available at 25% per annum on a reducing balance basis. For the purposes of estimating an initial company valuation, assume no other capital

allowances are available and the tax written down value on YSL's current assets at 1 January 2021 is nil.

5) For 2025 and each year thereafter, assume the total tax saved on capital allowances for 2025 and onwards is JPY750 million per annum.

6) Corporate tax in Japan is payable at 23.2% per annum in the year it is incurred, and this rate is expected to continue.

7) For the years 2021 to 2024, additional working capital, equivalent to 20% of the increase in revenue for that year, will be required. For simplicity, assume that working capital cash flows occur at the end of the year in which the increase in revenue arises. For 2025 and each year thereafter, assume the increased working capital requirement is JPY10 million per annum.

8) The exchange rate between the Japanese yen (JPY) and the Singapore dollar (SGD) are expected to be as follows:

At 31 December	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
JPY/S$	77.1	77.6	78.1	78.7	79.2	79.7

9) Singapore government bonds are currently available at 3.5% per annum.

10) The average market return on the Singapore equity market portfolio is 6.80% and the Singapore corporate tax rate is expected to remain at 17% for the foreseeable future.

11) The beta of a similar Singapore listed company is 2.21 which is 50% geared (measured as debt : equity). The Directors believe that risk for an unlisted, foreign company is higher and suggest the asset beta is adjusted upwards by 50% to reflect higher international operating risks.

12) The gearing level of SSBR, after refinancing, is expected to be 60% (measured as debt : equity).

Risk evaluation

The Finance Director is looking to renew SSBR's insurance policy. The insurance policy should protect SSBR in the event that a customer-owned ship is seriously damaged by SSBR employees whilst docked for repair in SSBR's ship repair yard.

The following information has been provided by SSBR's Operations Manager relating to the range of potential costs in the event of damage to a customer's ship when docked in SSBR's ship repair yard:

	Probability	**Cost to SSBR**
Repair minor damage	45%	S$75 million
Repair major damage	35%	S$150 million
Ship write off so replacement required	20%	S$250 million

From past history, incidents of damage by SSBR during ship repair are rare. There has been on average, one incident where a customer's ship has been damaged for every 1,000 ship repairs.

The Finance Director has checked and cannot find this specific risk listed in SSBR's risk register.

Environmental sustainability

As with many industries, the shipping and shipbuilding industries environmental and sustainability record is under increasing scrutiny. Increasingly, important stakeholders now expect companies to improve sustainability within their operations in order to provide greater protection to the environment.

Due to its low cost, the cargo vessels manufactured by SSBR are powered by heavy fuel oil which contains higher sulphur levels and result in substantial carbon dioxide emissions. Also, many ships dump domestic waste into the ocean, which can include plastics, as the vessels are not designed with sufficient storage on board for domestic waste which can be recycled when the ships dock at port.

Currently, no recycled materials or components are used by SSBR in the manufacture of its ships and the procurement director is unaware if the shipbuilding materials purchased by SSBR come from renewal sources. A further concern is that many customers prefer to operate ships until they fail, rather than lose business when docked for routine servicing and professional repair.

The Board of SSBR would like to be at the forefront of change within the shipbuilding industry.

Board matters

There are currently eight Executive Board members including the CEO, and six Non-Executive Directors (NEDs), as three NED's have recently resigned. Due to time constraints of dealing with ongoing commercial and operational issues, the Board has not had time to appoint three new NEDs. Additionally, some Executive and Non-Directors have not had time for all scheduled Board meetings and committee meetings which has meant some meetings have been postponed or cancelled. Furthermore, a scheduled performance review of the Board of Directors has been deferred again for a third year.

SSBR has a small internal audit department that undertakes projects set by the Executive Board. The Executive Board has recently tasked the internal audit department to review existing operations and consider where the introduction of digitisation and robotics could revolutionise the shipbuilding process.

SSBR's audit committee is led by a Non-Executive Director, however, the last audit committee meeting was on 7 February 2020 to approve the 2019 annual report and financial statements. Since then, there has been no meetings with the external auditors as a meeting to discuss the results of the recent interim audit was cancelled. The current external audit partner is expected to resign this year and the CEO has suggested that this partner be appointed as a Non-Executive Director to head up the audit committee. There is no separate risk committee as risk management is overseen by the audit committee. The last entry in the risk register was made in December 2017.

The remuneration committee is led by the CEO as the CEO believes he is the most experienced person to evaluate Executive Directors' performance and set pay levels. The Board minutes noted that the CEO overruled a Board decision on disclosing individual Directors' remuneration in the 2019 Annual Report on the grounds of commercial sensitivity.

A large institutional shareholder has complained that only out of date investor information is currently available on the SSBR website.

e-Exam Question Number	Question 1 – (a) and (b)
2	**(a)** Identify and explain the following risks relevant to SSBR to its Board of Directors: **-** Three strategic risks **(6 marks)** **-** Three operational risks **(6 marks)** **-** Three acquisition risks **(6 marks)** **(18 marks)**
3	**(b)** The Board of SSBR has requested an evaluation of risk that a customer's ship is damaged by SSBR whilst undergoing repair. In doing so, **i)** Compute the expected loss resulting from one customer ship sinking in SSBR's repair dock whilst under repair. Candidates are advised to apply the expected value technique. **(2 marks)** **ii)** Complete an evaluation of risk to SSBR by considering the severity of expected loss and the likelihood of a risk event occurring. **(1 mark)** iii) Additionally, state any concerns regarding the data and method used to evaluate this risk. **(4 marks)** **(Total 25 marks)**

e-Exam Question Number	**Question 2 – (a), (b), (c), (d)**
4	**(a)** Prepare a five-year profit after tax forecast and five-year cashflow forecast starting from 1 January 2021 by applying the financial information and assumptions provided by the Directors for **Option 1** and **Option 2**. **(15 marks)**
5	**(b)** Comment on the Directors' assumptions for **Option 2**. **(4 marks)**
6	**(c)** For **Option 1** and **Option 2**, comment on SSBR's capacity to meet its debt repayments and determine available capital for future acquisitions. **(2 marks)**
7	**(d)** Discuss advantages and disadvantage of refinancing using a 5-year convertible loan note and provide a recommendation, with reasons, whether or not SSBR should proceed and refinance using this method. **(4 marks)** **(Total 25 marks)**

e-Exam Question Number	Question 3 – (a), (b), (c), (d)
8	**(a)** Determine a suitable discount rate to evaluate the purchase of Yokohama Shipbuilding Ltd (YSL). **(8 marks)**
9	**(b)** Calculate a maximum valuation the Directors should consider paying for YSL. (Note: Year-end discount rates must be used.) **(11 marks)**
10	**(c)** Make a recommendation regarding the proposed acquisition of YSL based on the valuation from part **(b)** and advise on **ONE** action that the Board of SSBR should undertake before proceeding with the acquisition. **(2 marks)**
11	**(d)** Discuss the likely impact on the valuation of YSL in the event that SSBR is unable to repatriate profits from YSL to SSBR and discuss actions which SSBR could take to limit the impact of foreign currency repatriation restrictions. **(5 marks)** **(Total 26 marks)**

e-Exam Question Number	Question 4 – (a) and (b)
12	**(a)** Identify and explain **EIGHT** instances of poor governance at SSBR concerning the main Board of Directors, the audit committee and the remuneration committee. In each case, make a recommendation for improvement. **(16 marks)**
13	**(b)** Explain the current and identified challenges to environmental sustainability from operating in shipbuilding industry and for each challenge, and explain to the Board of Directors how SSBR could improve its sustainability record. **(8 marks)** **(Total 24 marks)**

END OF PAPER