

**Financial accounting and reporting**

Final exam Summer 2021

Copenhagen Business School

BSc International Business and Politics

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Pages excluding front page: 13

Question 1

- 1.1 TRUE
- 1.2 TRUE
- 1.3 TRUE
- 1.4 FALSE
- 1.5 TRUE

Question 2

1.1

- 1. 6%

<b>Factor calculation (Present Value of 1\$)</b>	
Face rate of interest	6%
Market rate of interest	10%
Amount of payments per year	2
Years to maturity	5
Total Number of Periods, n	10

Factors:

**Present value of 1\$ annuity**  
7,721734929

**Present Value of a 1\$ principal**  
0,613913254

<b>Present value calculation</b>	
Face value	2.000.000
Interest/annuity payment (face value * face interest / payment per year)	60.000
Present value of Annuity (interest payment * PV 1\$ annuity)	463304,1
Present value of Principal (Face value * PV 1\$ principal)	1227827
<b>Bond Issuance Price (PV of annuity + PV of principal)</b>	<b>1691131</b>

- 2. 10%

<b>Factor calculation (Present Value of 1\$)</b>	
Face rate of interest	10%
Market rate of interest	10%
Amount of payments per year	2
Years to maturity	5
Total Number of Periods, n	10

Factors:

**Present value of 1\$ annuity**  
7,721734929

**Present Value of a 1\$ principal**  
0,613913254

<b>Present value calculation</b>	
Face value	2.000.000
Interest/annuity payment (face value * face interest / payment per year)	100.000
Present value of Annuity (interest payment * PV 1\$ annuity)	772173,5
Present value of Principal (Face value * PV 1\$ principal)	1227827
<b>Bond Issuance Price (PV of annuity + PV of principal)</b>	<b>2000000</b>

## 3. 16%

<b>Factor calculation (Present Value of 1\$)</b>	
Face rate of interest	16%
Market rate of interest	10%
Amount of payments per year	2
Years to maturity	5
Total Number of Periods, n	10

Factors:  
**Present value of 1\$ annuity**  
 7,721734929  
**Present Value of a 1\$ principal**  
 0,613913254

<b>Present value calculation</b>	
Face value	2.000.000
Interest/annuity payment (face value * face interest / payment per year)	160.000
Present value of Annuity (interest payment * PV 1\$ annuity)	1235478
Present value of Principal (Face value * PV 1\$ principal)	1227827
<b>Bond Issuance Price (PV of annuity + PV of principal)</b>	<b>2463304</b>

For the coupon rate and the bond issuance price, they follow each other. The higher the face rate (coupon rate) all else equal, the higher bond issuance price.

## 2.2

## 1. 10 years

<b>Factor calculation (Present Value of 1\$)</b>	
Face rate of interest	10%
Market rate of interest	7%
Amount of payments per year	2
Years to maturity	10
Total Number of Periods, n	20

Factors:  
**Present value of 1\$ annuity**  
 14,2124033  
**Present Value of a 1\$ principal**  
 0,502565884

<b>Present value calculation</b>	
Face value	2.000.000
Interest/annuity payment (face value * face interest / payment per year)	100.000
Present value of Annuity (interest payment * PV 1\$ annuity)	1421240
Present value of Principal (Face value * PV 1\$ principal)	1005132
<b>Bond Issuance Price (PV of annuity + PV of principal)</b>	<b>2426372</b>

## 2. 15 years

<b>Factor calculation (Present Value of 1\$)</b>	
Face rate of interest	10%

Factors:  
**Present value of 1\$ annuity**

Market rate of interest	7%
Amount of payments per year	2
Years to maturity	15
Total Number of Periods, n	30

18,39204541  
**Present Value of a 1\$ principal**  
0,356278411

<b>Present value calculation</b>	
Face value	2.000.000
Interest/annuity payment (face value * face interest / payment per year)	100.000
Present value of Annuity (interest payment * PV 1\$ annuity)	1839205
Present value of Principal (Face value * PV 1\$ principal)	712556,8
<b>Bond Issuance Price (PV of annuity + PV of principal)</b>	<b>2551761</b>

3.20 years

<b>Factor calculation (Present Value of 1\$)</b>	
Face rate of interest	10%
Market rate of interest	7%
Amount of payments per year	2
Years to maturity	20
Total Number of Periods, n	40

Factors:  
**Present value of 1\$ annuity**  
21,35507234  
**Present Value of a 1\$ principal**  
0,252572468

<b>Present value calculation</b>	
Face value	2.000.000
Interest/annuity payment (face value * face interest / payment per year)	100.000
Present value of Annuity (interest payment * PV 1\$ annuity)	2135507
Present value of Principal (Face value * PV 1\$ principal)	505144,9
<b>Bond Issuance Price (PV of annuity + PV of principal)</b>	<b>2640652</b>

### Question 3

3.1

3.1	<b>Straight line</b>		
Acquisition Cost		125.000	
Residual value		15.000	
Years		4	5 month deprecation (Jan-May)
Depreciation per year		27500	11458,33

Journal entries			
Date	Description	Debit	Credit
01-01-18	Purchase of equipment	125.000	
	Cash		125.000
31-12-18	Depreciation expense	27.500	
	Accumulated depreciation		27.500
31-12-19	Depreciation expense	27.500	
	Accumulated depreciation		27.500
31-12-20	Depreciation expense	27.500	
	Accumulated depreciation		27.500
01-06-21	Depreciation expense	11458,33	
	Accumulated depreciation		11.458,33
	Cash	18.000	
	Accumulated depreciation	93.958	
	Other expenses	-13.042	
	Sold Equipment		125.000

The asset is only depreciated the first five month in 2021, before it is sold on 1. June 2021.

Calculations:

Purchase of equipment	100.000
Repair of equipment	5.000
Upgrade of equipment	20.000
<hr/> Acquisition costs	<hr/> 125.000

Acquisition cost	125.000
Acc. Depreciation	<u>93.958</u>
Book value as of sale date 1 June	31.042
 Selling value	 18.000
Book value as of sale date 1 June	<u>31.042</u>
Loss from selling*	-13.042

## 3.2

**Double declining Method**

Acquisition Cost	125.000
Residual value	15.000
Years	4
Straight depreciation of 100%/4 years	0,25
Accelerated (0,2*2)	0,5

Date	Depreciation	Book value
2018	62500	62.500
2019	31250	31.250
2020	15625	15.625
2021	3255,208333	12.370

Journal entries			
Date	Description	Debit	Credit
01-01-18	Purchase of equipment	125.000	
	Cash		125.000
31-12-18	Depreciation expense	62.500	
	Accumulated depreciation		62.500
31-12-19	Depreciation expense	31.250	
	Accumulated depreciation		31.250
31-12-20	Depreciation expense	15.625	
	Accumulated depreciation		15.625
01-06-21	Depreciation expense	3255,21	
	Accumulated depreciation		3.255,21
	Cash	18.000	
	Accumulated depreciation	112.630	
	Other income	5.630	
	Sold Equipment		125.000

The asset is only depreciated the first five month in 2021, before it is sold on 1. June 2021.

Calculations:

Purchase of equipment	100.000
Repair of equipment	5.000
<u>Upgrade of equipment</u>	<u>20.000</u>
Acquisition costs	125.000

Acquisition cost	125.000
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<u>Acc. depreciation</u>	<u>112.630</u>
Book value as of sale date 1 June	12.370
Selling value	18.000
<u>Book value as of sale date 1 June</u>	<u>12.370</u>
Profit from selling*	5.630

## 3.3

\*It is assumed that salary (3000) and rent expenses (4000) are for a year, as there is no information about anything else.

Nakasaki Inc	
Income statement	
2018	
<b>Revenues</b>	
Revenue	<u>120.000</u>
Total revenue	<u><u>120.000</u></u>
<b>Expenses</b>	
Salary expenses	3.000
Rent expenses	4.000
Depreciation expenses	<u>62.500</u>
Total expenses	<u>69.500</u>
<b>Net income before taxes (taxable income)</b>	<b><u><u>50.500</u></u></b>

Nakasaki Inc	
Income statement	
2019	
<b>Revenues</b>	
Revenue	<u>120.000</u>
Total revenue	<u><u>120.000</u></u>
<b>Expenses</b>	
Salary expenses	3.000
Rent expenses	4.000
Depreciation expenses	<u>31.250</u>
Total expenses	<u>38.250</u>
<b>Net income before taxes (Taxable income)</b>	<b><u><u>81.750</u></u></b>

Nakasaki Inc  
Income statement  
2020

<b>Revenues</b>		
	Revenue	<u>120.000</u>
Total revenue		<u><u>120.000</u></u>
<b>Expenses</b>		
	Salary expenses	3.000
	Rent expenses	4.000
	Depreciation expenses	<u>15.625</u>
Total expenses		<u><u>22.625</u></u>
<b>Net income before taxes (Taxable income)</b>		<b><u><u>97.375</u></u></b>

Nakasaki Inc  
Income statement  
2021

<b>Revenues</b>		
	Revenue	<u>120.000</u>
Total revenue		<u><u>120.000</u></u>
<b>Expenses</b>		
	Salary expenses	3.000
	Rent expenses	4.000
	Depreciation expenses	<u>7.813</u>
Total operating expenses		<u><u>14.813</u></u>
<b>Net income before taxes (Taxable income)</b>		<b><u><u>105.188</u></u></b>

3.4

For full year 2018-2021:

Nakasaki Inc  
Income statement  
2018-2021

<b>Revenues</b>		
	Revenue	<u>120.000</u>
Total revenue		<u><u>120.000</u></u>
<b>Expenses</b>		
	Salary expenses	3.000
	Rent expenses	4.000
	Depreciation expenses	27.500



Total operating expenses	<u>34.500</u>
<b>Net income before taxes (Taxable income)</b>	<b><u>85.500</u></b>

3.5

For straight-line depreciation method:

Journal entries			
Date	Description	Debit	Credit
31-12-18	Tax expense	25.650	
	Cash		25.650
31-12-19	Tax expense	25.650	
	Cash		25.650
31-12-20	Tax expense	25.650	
	Cash		25.650
31-12-21	Tax expense	25.650	
	Cash		25.650

For double-declining depreciation method

Journal entries			
Date	Description	Debit	Credit
31-12-18	Tax expense	25.650	
	Cash (tax paid)		15.150
	Deferred tax		10.500
31-12-19	Tax expense	25.650	
	Cash (tax paid)		24.525
	Deferred tax		1.125
31-12-20	Tax expense	25.650	
	Cash		29.213
	Deferred tax	3.563	
31-12-2021	Tax expense	25.650	
	Cash		31.556
	Deferred tax	5.906	

**Ending deferred tax liability account of: 2.156.**

Question 4

## 4.1

Date	Description	Debit	Credit
01-01-21	Capital stock		1.000.000
	Cash	1.000.000	
02-01-21	Cash		200.000
	Prepaid rent	100.000	
	Rent expense	100000	
03-01-21	Inventory	30.000	
	Accounts payable		30.000
10-01-21	Inventory		2.000
	COGS expense (@10\$ per unit)	2.000	
	Cash	3.000	
	Revenue		3.000
21-01-21	Inventory		3000
	COGS expense (@10\$ per unit)	3.000	
	Accounts receivable	4.400	
	Revenue		4.400
19-02-21	Accounts receivable		4.400
	Cash	4.400	
22-02-21	Inventory		5000
	COGS expense (@10\$ per unit)	5.000	
	Accounts receivable	7.300	
	Revenue		7.300
03-01-21	Retained earnings (Dividend payout)	30000	
	Cash		30.000
15-03-21	Inventory	10.000	
	Accounts payable		10.000
24-03-21	Inventory		4000
	COGS expense (@10\$ per unit)	4.000	
	Accounts receivable	5.700	
	Revenue		5.700
30-03-21	Cash	200	
	Unearned revenue		200
31-03-21	Doubtful debt expense	2.600	
	Allowance for doubtful debts		2.600

## Bad debts expense

Accounts receivable	13.000
Percentage uncollectable	0,2
Bad debt expense	2600

**No need to make running calculation of inventory, as the average COGS price stays at 10\$**

4.2

Family Farms Company  
Adjusted trial balance  
1st Quarter of Year 2021

Account Titles	Debit	Credit
Cash	777.600	
Accounts recievable	13.000	
Allowance for doubtful accounts		2.600
Inventory	26.000	
Prepaid rent	100.000	
Accounts payable		40.000
Unearned revenue		200
Capital stock		1.000.000
Retained earnings (dividend payout)	30000	
Revenue		20.400
COGS expense	14.000	
Doubtful accounts expense	2.600	
Rent expense	100.000	
<b>Total</b>	<b>1.063.200</b>	<b>1.063.200</b>

4.3

Family Farms Company  
Income statement  
1st Quarter of Year 2021

<b>Revenues</b>	
Revenue	20.400
Total revenue	<u>20.400</u>
<b>Expenses</b>	
COGS expenses	14.000
Doubtful account expenses	2.600
Rent expenses	<u>100.000</u>
Total expenses	<u>116.600</u>
Net loss (income)	<u><u>-96.200</u></u>

4.4

Charlie Chocolate Company  
Balance sheet  
1st Quarter of Year 2021

**Assets**

*Current assets*

Cash	777.600
Accounts receivable	13.000
<i>Less: Allowance for doubtful debts</i>	2.600
Prepaid rent	100.000
Inventory	<u>26.000</u>
<i>Total current assets</i>	<u>914.000</u>
<b>Total assets</b>	<u><u>914.000</u></u>

**Liabilities**

*Current liabilities*

Accounts payable	40.000
Unearned revenue	<u>200</u>
<i>Total current liabilities</i>	<u>40.200</u>
<b>Total liabilities</b>	40.200

**Stockholder's Equity**

Common stock	1.000.000
Retained earnings	-126.200
<i>Less: Dividend payout</i>	-30000
<i>Less: Income loss</i>	<u>-96.200</u>
<b>Total Stockholder's Equity</b>	<u>873.800</u>
<b>Total Stockholder's Equity &amp; liabilities</b>	<u><u>914.000</u></u>

4.5

Family Farms Company  
Statement of Cash flow  
1st Quarter of Year 2021

<b>Cash flow from operating activities</b>	
Net loss (income)	-96.200
<u>Adjustments to reconcile net loss (income) to net cash</u>	
Increase in accounts receivable (deducted)	13.000
Increase in inventory (deducted)	26.000
Increase in prepaid rent (deducted)	100.000
Doubtful accounts expense (added back)	2.600
Increase in accounts payable (added back)	40.000
Increase in unearned revenue (added back)	200
Net cash used by operating activities	-192.400
 <b>Cash flow from financing activities</b>	
Issuance of stocks	1.000.000
Payment of cash dividend	30000
Net cash provided by financing activities	970.000
 Net increase in cash and cash equivalents	 777.600
Cash and cash equivalents beginning of period	<u>0</u>
<b>Cash and cash equivalents end of period</b>	<b><u>777.600</u></b>

## 4.6

The change in the cost of the 1000 units on March 15 from 10.000 to 9.000 would have meant that there would have been a difference in the per unit price after the purchase. Thereby, FFC could consider any of the three inventory cost of goods sold method that are weighted-average, FIFO and LIFO. The different methods affect the cost of goods sold expense and thereby possibly affect the income tax that FFC has to pay.

Question 5

In the case that a firm wants to invest in its own company by buying stocks, it can repurchase stocks that is issued, the so-called treasury stocks. The journal entry for buying back treasury stocks is debiting the treasury stock, which is a contra-equity account and crediting cash for the amount that the firm purchases (if it is a cash payment). The company may decide to retire the stocks after repurchasing. The repurchase is not recorded on the income statement.

In the case that the firm want to invest in a different firm, it may do so by buying up stocks for that particular company. In that case, the journal entry is debiting the stock value as an asset and crediting cash for the amount that is purchased. If a company considers buying another company's

stock, it must know the rules of the fair value method, equity method and consolidated financial statements. If it buys between 0-20%, the purchase should be declared as any other investment. If the company buys between 20-50%, the company gain significant influence and must use the accounting standards of the equity method. For purchases over 50%, the parent company usually consolidate the financial statements with the subsidiary company, from which it has purchased over 50% of stock.

### Question 6

#### 6.1

It becomes harder to compare Starbucks' financial statements, when the fiscal years end at different dates, as more days are included in some of the financial statements, while other have less dates. In the lecture, where we looked at Pepsi and Coca-Cola, I believe it was Pepsi that had fiscal years ending at different dates.

#### 6.2

Debt-to-equity ratio	2020	2019
Total Liabilities	37173,9	25450,6
Total Equity	-7805,1	-6232,2
<b>Debt-to-Equity ratio</b>	<b>-4,76277</b>	<b>-4,08373</b>

Lease liabilities have increased the liability side dramatically from 2019 to 2020, while long-term debt also increased substantially, which increased the debt-to-Equity ratio.

#### 6.3

	2020
Net income	928,3
Preferred dividends	0
Average common stockholders equity (2020 and 2019)	-7018,5
<b>ROE</b>	<b>-0,132</b>

#### 6.4

	2020
Net income before taxes + interest expense	1601,4
Total average assets (2020 and 2019)	24297,05
<b>ROA</b>	<b>0,0659</b>