FN 201 Business Finance

Midterm Exercise 1/2020

(Guided Solution)

Part 1:

Question 1

An incomplete 2013 balance sheet for O' Keefe Industries is expressed below together with the following key financial data:

O'Keefe Industries Balance Sheet
December 31, 2013

ASSETS		LIABILITIES AND STOCKHOLDERS' EQUITY	
Cash	$ 30,000	Accounts payable	$120,000
Marketable securities	25,000	Notes payable	**160,000**
Account receivable	**200,000**	Accruals	20,000
Inventories	**225,000**	Total current liabilities	**300,000**
Total current assets	**$480,000**	Long-term debt	**600,000**
Net fixed assets	**1,020,000**	Stockholders' equity	$600,000
Total assets	**1,500,000**	**Total liabilities and stockholders' equity**	**1,500,000**

(1) Sales totaled $1,800,000.
(2) The gross profit margin was 25%.
(3) Inventory turnover was 6.0.
(4) There are 360 days in the year.
(5) The average collection period was 40 days.
(6) The current ratio was 1.60.
(7) The total asset turnover ratio was 1.20.
(8) The debt ratio was 60%.
(9) O'Keefe had common stocks outstanding at 150,000 shares with market price of $5.15.
(10) EBIT of O'Keefe was $200,000, which resulted in net income of $90,000.

1.1 Complete the 2013 balance sheet for O'Keefe Industries by using provided information. **(10 Points)**
Note: Please fill your answer into the balance sheet above.

1.2 Given the preceding financial statements, complete the following table. Assume that the industry averages given in the table are applicable for both 2012 and 2013. Summarize the company's overall financial condition, comparing with its own performance and industry average. **(10 Points)**

Ratio	**Industry average**	**Actual 2012**	**Actual 2013**
Current ratio	1.80	1.74	1.60
Quick ratio	0.70	0.78	**0.85**
Inventory turnover [a]	7.50	4.59	6.00
Average collection period [a]	30 days	38 days	40 days
Debt ratio	50%	57%	60%
Return on total assets	4.00%	5.00%	**6.00%**
Return on common equity	12.50%	14.75%	**15.00%**

[a] Based on a 360-day year.

Question 2

Winnie Corp. has an inventory conversion period of 60 days, an average collection period of 38 days, and an account payable period of 30 days. Winnie's annual sales are $3,421,875 which are all on credit, and cost of goods sold is 75% of sales. Assume a 360-day year.

2.1 Calculate firm's cash conversion period and the amount of resources or minimum cash needed to support its cash conversion cycle. **(10 Points)**

ANSWER

Inv days	60.00	
A/R days	38.00	
A/P days	30.00	
Sales	3,421,875.00	
CoGS	2,566,406.25	75% of sales
a 360-day year		

Cash conversion period = 68

Min cash needed:

- for Inv =	427,734.38
- for A/R =	361,197.92
- for A/P =	213,867.19
Min cash needed =	**575,065.10**

2. 2 Discuss the importance of the cash conversion cycle and possible management that might be able to reduce the cash conversion cycle. **(10 Points)**

ANSWER

- **Importance:** The cash conversion cycle is the period that company lacks of cash inflow due to trade credit given to customers but it has prior payment to account payables. As such, this implies minimum cash needed that the company has to reserve so as to run normal operations. Higher cash conversion cycle suggests that the company has to reserve more cash, and vice versa.
- **Possible Management to reduce cash conversion cycle:** Since the cash conversion cycle is the summation of inventory days and collection periods, minus account payable days. Possible management to reduce cash conversion cycle is to:
    1) Speed up inventory turnover (which will in turn lower the inventory days), and/or collection period from the customers.
    2) Delay short-term trade credit payment of the company's account payable as long as possible.

Part 2:

Question 1

The financial statements of Win Hom Industries for the year ended December 31, 2013, follow.

Win Hom Industries' Income Statement
for the Year Ended December 31, 2013

Sale revenue	160,000
Less: Cost of goods sold	106,000
Gross profit	**54,000**
Less Operating expenses	
Selling expense	16,000
General and administrative expenses	10,000
Lease expense	1,000
Depreciation expense	10,000
Total operating expense	37,000
Operating profits	**17,000**
Less: Interest expense	6,100
Net profits before taxes	**10,900**
Less: Taxes	4,360
Net profit after taxes	**6,540**

Win Hom Industries' Balance Sheet
December 31, 2013

Assets	
Cash	500
Marketable securities	1,000
Account receivable	25,000
Inventories	45,500
Total current assets	**72000**
Land	26,000
Buildings and equipment	90,000
Less: Accumulated depreciation	38,000
Net fixed assets	**78,000**
Total assets	**150,000**
Liabilities and Stockholders' Equity	
Account payable	22,000
Notes payable	47,000
Total current liabilities	**69,000**
Long-term debt	22,950
Common stock [a]	31,500
Retained earnings	26,550
Total liabilities and stockholders' equity	**150,000**

[a] The firm's 3,000 outstanding shares of common stocks closed 2013 at a price of $25 per share.

1.1 Use the preceding financial statements to complete the following table. Assume that the industry averages given in the table are applicable for both 2012 and 2013. (10 Points)

Ratio	**Industry average**	**Actual 2012**	**Actual 2013**
Current ratio	1.80	1.84	**1.04348**
Quick ratio	0.70	0.78	**0.3841**
Inventory turnover [a]	2.50	2.59	**2.3297**
Average collection period [a]	37 days	36 days	**56.25 days**
Debt ratio	65%	67%	**61.30%**
Time interest earned ratio	3.80	4.00	**2.7869**
Gross profit margin	38%	40%	**33.75%**
Net profit margin	3.50%	3.60%	**4.0875%**
Return on total assets	4.00%	4.00%	**4.36%**
Return on common equity	9.50%	8.00%	**11.26615%**

[a] Based on a 360-day year.

1.2 Summarize the company's overall financial condition, comparing with its own performance and industry average, as related to liquidity, activity, debt, and profitability. (10 Points)

ANSWER

2.3 Summarize the company's overall financial condition, comparing with its own performance and industry average, as related to liquidity, activity, debt, and profitability. (10 Points)

10

Company's liquidity decreased from year 2012 to 2013 implying the ability of firm to pay off their liabilities and when comparing to the industry average, company is still lower which should be improved to the higher number of current and quick ratios. The company ~~performance in liquidity~~ falls over year 2012 to 2013

Activity Ratios as indicated by Inventory and average collection period not quite good comparing to the industry average because company required more day to collect cash ~~but~~ shorter time to turn turn asset to sales

Company assets have been financed by debts not as much as the year before (2012) or the industry average which quite a good sign, however, the ability to pay interest with business income still lower than the industry and the year 2012

Overall, Profitability of firms is quite well. Firm performs quite good as the better/higher ratio over the year 2012 to 2013, And even better than the industry average in ROA and ROE which is the good sign of positive profits and high rate of return to investors.

2.3 Summarize the company's overall financial condition, comparing with its own performance and industry average, as related to liquidity, activity, debt, and profitability. (10 Points)

10

For liquidity, the company liquidity decreases and falls below industry average.
For activity, inventory turnover also falls from last year and industry average. There might be some sale problem or ineffective inventory management. And average collection ~~year~~ days is longer than last year and industry average. Might be problem with credit extension and management.
For debt, debt ratio is lower than last year and industry average. Ability of firm to cover interest expense is lower than last year and industry.
For profitability, Overall is above last year and industry average. sign of increase in profitability.

Question 2

Maggie Inc. turns over its inventory 6 times each year; it has an average collection period of 45 days and an average payment period of 30 days. The firm's annual operating-cycle investment is \$3 million. Assume a 360-day year.

2. 1 Calculate firm's operating cycle, cash conversion cycle, its daily cash operating expenditure, and the amount of resources needed to support its cash

ANSWER

Inventory days	= 360 / 6	= 60 days
Collection period		= 45 days
Hence, operating cycle		**= 105 days**

Daily cash for operating = 3,000,000 / 105 = **28,571.42875**

Cash conversion period = 105 – 30 days = **75 days**

The amount of resources to support cash cycle:
= 28,571.42875 x 75
= 2,142,857.143

2. 2 Discuss the importance of the cash conversion cycle and possible management that might be able to reduce the cash conversion cycle. (10 Points)

ANSWER

The importance of cash conversion cycle

= Cash conversion cycle reflects minimum cash to be required and tied up in net operating working capital. Rather than using the reserved cash for other investment, company has to maintain it and thus incur opportunity cost of carrying its working capital.

Possible management to reduce cash conversion cycle:

= Necessary management to speed up collection period and inventory conversion (inventory days), and to have longer payable deferral (accounts payable) days.

Part 3:

Question 1

The key financial statements of Total Access Communication PLC. (DTAC) and Advanced Info Service PLC. (AIS) for the year ended December 31, 2013, are as follows.

BALANCE SHEET (Million Baht)	**DTAC 2013**	**AIS 2013**
Cash & Equivalent	5,472	16,831
Accounts receivable	10,351	10,264
Inventory	1,683	2,865
PP&E-net	15,120	35,922
Other fixed assets	72,428	45,490
Total assets	**105,054**	**111,372**
Accounts payable	28,190	11,718
ST debts & current portion	8,296	5,303
Long-term debt	23,164	15,355
Other long-term liabilities	4,029	5,287
Total liabilities	**72,334**	**65,480**
Paid-up capital	4,736	2,973
Share premium	23,543	22,372
Retained earnings	2,782	20,403
Shareholder’s equity	**32,720**	**45,892**
Total Liab.&Shareholders' equity	**105,054**	**111,372**

INCOME STATEMENT (Million Baht)	**DTAC 2013**	**AIS 2013**
Revenue	94,369	142,783
Cost of sales and services	(65,119)	(81,141)
Gross profit	**29,250**	**61,642**
Selling, general, and administration expenses	(13,630)	(14,847)
EBIT	**15,620**	**46,795**
Interest expense	(1,270)	(1,002)
Other income/exp.	335	871
EBT	**14,685**	**46,664**
Corporate tax	(2,888)	(10,008)
After-tax net profit (loss)	**11,797**	**36,656**

1.1 Use the preceding financial statements of DTAC to compute key financial ratios by completing the following table. **(10 Points)**

Ratio	AIS	DTAC
Current ratio	1.7602	**0.4798**
Quick ratio	1.5919	**0.4337**
Inventory turnover [a]	28.3215	**38.6922**
Average collection period [a]	25.8787	**39.4871**
Debt ratio (%)	58.7940	**68.8541**
Time interest earned ratio	46.7016	**12.2992**
Gross profit margin (%)	43.1718	**30.9953**
Net profit margin (%)	25.6725	**12.5009**
Return on total assets (%)	32.9131	**11.2295**
Return on equity (%)	79.8745	**36.0544**

[a] Based on a 360-day year.

1.2 Summarize overall financial condition of DTAC by comparing with AIS under each criterion. If you want to invest in either DTAC or AIS, which company should you choose? **(10 Points)**

ANSWER

Question 2

Jackie Corp. turns over its inventory 9 times during the year, and its days sales outstanding was 36 days. Under regular payment policy, the company payables deferral period is 40 days. Jackie's daily operating cash is around $64,000. Assume a 360-day year.

2.1 Calculate firm's cash conversion period and the amount of resources or minimum cash needed to support its cash conversion cycle. **(10 Points)**

ANSWER

Cash conversion period = Inv. Days + A/R days – A/P days
= (360/9) + 36 – 40 days
= 36 days

Cash require = 36 days x (64,000)
= $2,304,000

Part 4:

Question 1

Win Hom Railroad, a public transportation company, would like to form a complete Balance Sheet and Income Statement for the year end 2013. However, some of the entries were missing. The only available data were financial ratios which could help the finance department to work out.

2013 INCOME STATEMENT (Unit: Million US$)

Net sales	**180.00**
Cost of goods sold	**110.00**
Selling, general, and administrative expenses	10.00
Depreciation	20.00
Earnings before interest and taxes (EBIT)	**40.00**
Interest expense	**5.00**
Income before tax	**35.00**
Tax	**10.50**
Net income	**24.50**

2013 BALANCE SHEET (Unit: Million US$)

	2013
Assets	
Cash and marketable securities	**11.00**
Receivables	**44.00**
Inventories	***22.00***
Total current assets	**77.00**
Net property, plant, and equipment	**38.00**
Total assets	**115.00**

Liabilities and shareholders' equity	
Accounts payable	**25**
Notes payable	**30**
Total current liabilities	***55.00***
Long-term debt	**23.00**
Shareholders' equity	**37.00**
Total liabilities and shareholders' equity	**115**

1. 1 Complete the 2013 Balance Sheet and Income Statement for Win Hom Railroad by using the financial ratios provided. Assume a 360-day year. Fill your answer into the Balance Sheet and the Income Statement on previous page. **(10 Points)**

Ratios	**2013 Win Hom Railroad**
Long-term debt ratio	0.20
Times interest earned	8.00
Current ratio	1.40
Quick ratio	1.00
Cash ratio	0.20
Return on assets	21.30%
Return on equity	66.22%
Inventory turnover	5.00
Average collection period	88.00 days

Note: You may use the space below to draft your answer.

1. 2 Financial Manager of Win Hom Railroad wanted to measure overall performance of the company. She wondered whether the benchmark should be BangChak Hospital, which is a company in health service industry, or its own performance of the previous year. How would you suggest? Why? **(5 Points)**

Ratios	**2013 Win Hom Railroad**	**2013 BangChak Hospital**	**2012 Win Hom Railroad**
Long-term debt ratio	0.20	0.40	0.30
Times interest earned	8.00	5.00	6.50
Current ratio	1.40	2.00	1.20
Quick ratio	1.00	0.90	0.85
Cash ratio	0.20	0.75	0.25
Return on assets	21.30%	25.00%	20.00%
Return on equity	66.22%	45.00%	50.00%
Inventory turnover	5.00	10.00	3.00
Average collection period	88.00 days	28.00 days	75.00 days

ANSWER

If we use company as a benchmark, the benchmark company should be within the same industry. Otherwise, we should compare the company’ s operating performance by benchmarking with the previous year(s).

1.3 Summarize the company's overall performance compared with an appropriate benchmark you suggested from (1.2). **(15 Points)**

ANSWER

- Liquidity: Win Hom had 2013 performance better than 2012. Both current and quick ratios were improved. Especially, current ratio was greater than 1 and a bit higher than 2012's.
- Activity: In 2013, Win Hom could turn out its inventory into sale revenue more often – on average 5 times – than in 2012. However, collection period from its receivables was greater. This implied than the company took longer time to collect cash from customers – on average 13 days more.
- Leverage: It is quite common for Railroad Company that more would have relatively low debt ratio. During 2012-2013, Win Hom had debt around 20% of the total assets. With regard the ability to make interest payment on its debt obligation, the company much improved on this criterion. Its time interest earned ratio was increased to 8 times from 6 times in 2012. This implied that the company had EBIT 8 times higher than its interest payment obligation.
- Profitability: Profitability of Win Hom was improved in 2013. Both ROA and ROE was increased to 21.30% (from 20%) and 66.22% (from 50%), respectively.
- Overall, the performance of Win Hom was improved significantly, especially ROE.

Question 2

MWH Corporation purchases the inventory under the credit terms of **2/15, net 45** for the whole year. Since the company believes that it could not find advantage from taking 2 percent discount, it always takes the full 45 days to pay its bills. Thus, the average payment period is 45 days. A new member in finance department considered that there might be benefit from taking cash discount by paying on the 15th day after purchasing. However, this will require additional short-term capital. If MWH turns over its inventory 6 times each year and has an average collection period of 30 days. The company's annual operating-cycle investment is $630 million. Assume a 360-day year.

2.1 In case that MWH takes the full 45 days to pay its bills, what is the company's cash cycle and the amount of resources needed to support the cycle? **(10 Points)**

ANSWER

	A/R days	**Inv days**	**AP days**	**Cash Cycle**	**Daily cash**	**Min. Cash Required**
Not take	30	60	45	45	7	315

2.2 If MWH pays its bills on the 15th date, how much is the additional short-term capital required to support the cash cycle? **(10 Points)**

ANSWER

	A/R days	**Inv days**	**AP days**	**Cash Cycle**	**Daily cash**	**Min. Cash Required**
Not take	30	60	15	75	7	525

Hence, the additional short-term capital required is 525-315 = $210 million.

Part 5:

Question 1

Bualuang Securities summarized key financial statements for the year ended December 31, 2014 of the two important companies in the Energy & Utilities industry, which are BANPU Public Company Limited (BANPU) and Electricity Generating Public Company Limited (EGCO). Income Statement and Balance Sheet are reported as follows:

Income Statement

(Unit: Million Baht)	BANPU	EGCO
Revenue	102,122	17,201
Cost of sales and services	(79,272)	(10,310)
Gross profit	**22,850**	**6,891**
Operating Expenses	(14,638)	(2,956)
EBIT	**8,212**	**3,935**
Interest expense	(4,271)	(2,794)
Other income/exp.	1,443	1,853
EBT	**5,384**	**2,994**
Corporate tax	(2,260)	(792)
Profit (Loss)	**3,124**	**2,202**

Balance Sheet

(Unit: Million Baht)	BANPU	EGCO
Cash & Equivalent	13,951	8,653
Accounts receivable	10,107	3,358
Inventory	55,758	2,603
PP&E-net	43,883	55,275
Other fixed assets	153,735	90,798
Total assets	**277,434**	**160,687**
Accounts payable	1,233	791
ST debts & current portion	11,647	15,681
Long-term debt	96,802	67,735
Other long-term liabilities	38,640	2,261
Total liabilities	**148,322**	**86,468**
Paid-up capital	2,582	5,265
Share premium	5,058	8,649
Retained earning	71,472	60,305
Share holders' equity	**79,112**	**74,219**
Total Liab. & Equity	**227,434**	**160,687**

1.1 Use the preceding financial statements of EGCO to compute key financial ratios by completing the following table. **(10 Points)**

Ratio [a]	**BANPU**	**EGCO**
Current ratio	6.20	**0.89**
Quick ratio	1.87	**0.73**
Inventory turnover	1.42	**3.96**
Average collection period	35.63	**70.28**
Debt ratio	53.46%	**53.81%**
Time interest earned ratio	1.92	**1.41**
Gross profit margin	22.38%	**40.06%**
Net profit margin	3.06%	**12.80%**
Return on total assets	1.13%	**1.37%**
Return on common equity	3.95%	**2.97%**

[a] Based on a 360-day year.

1.2 Summarize overall financial performance of EGCO comparing with BANPU under each criterion. If you want to invest either in BANPU or EGCO, which company would you recommend? **(15 Points)**

ANSWER

Question 2

Winnie Manufacturing reported sales last year of $5,000 million with 30% gross profit margin and inventory level at $437.50 million. The company had an average collection period of 60 days and an average payment period of 45 days. Assume a 360-day year.

2.1 Calculate the company's cash conversion cycle and the amount of resources needed to support the cash conversion cycle. **(10 Points)**

ANSWER

Days	360.00		Inv Day	45.00
Sales	5,000.00		AR day	60.00
COGS	3,500.00		AP day	45.00
Inventory	437.50		**Cash cycle**	**60.00**
Inv Turn	8.00			

Inv Investment	437.50
AR Investment	833.33
AP Investment	437.50
Min Cash	**833.33**

2.2 Assume that inventory of the company was transacted with the credit terms of **2/15, net 45**. If Winnie decides to take cash discount and makes payment on the 15th day after purchasing, how much is the additional short-term capital needed to support the cash cycle? **(10 Points)**

ANSWER

Days	360.00		Inv Day	45.00
Sales	5,000.00		AR day	60.00
COGS	3,500.00		AP day	15.00
Inventory	437.50		**Cash cycle**	**90.00**
Inv Turn	8.00			

Inv Investment	437.50
AR Investment	833.33
AP Investment	145.83
Min Cash	**1,125.00**

Additional = 1,125-833.33
= 291.67

Part 6:

Question 1

Bualuang Securities summarized key financial statements for the year ended December 31, 2015 of the two key players in the Aviation industry, which are Bangkok Airways (BA) and Asia Aviation (AAV). Income Statement and Balance Sheet were reported as follows:

Income Statement

(Unit: Million Baht)	BA: 2015	AAV: 2015
Revenue	23,113	29,507
Cost of sales and services or COGS	-18,626	-25315
Selling, general, and administrative expenses	-2,967	-2,377
EBIT	**1,520**	**1,815**
Interest Expense	-1,606	-457
Other income or expense	1,458	956
EBT	**1,372**	**2,314**
Corporate tax	-250	-151
Net profit (loss)	**1,122**	**2,163**

Balance Sheet

(Unit: Million Baht)	BA: 2015	AAV: 2015
Cash & Equivalent	4,628	6,123
Accounts receivable	1,847	439
Inventory	306	94
Net fixed assets	9,559	18,216
Other fixed assets	40,673	27,955
Total assets	**57,013**	**52,827**
Account payable	2,261	336
Short-term debt	500	1,261
Long-term debt	13,858	12,775
Other long-term liabilities	9,438	18,313
Total liabilities	**26,057**	**32,685**
Paid-up capital	2,100	485
Common stock	28,425	2,599
Retained earnings	431	17,058
Shareholders' equity	**30,956**	**20,142**
Total Shareholders' Equity & Liabilities	**57,013**	**52,827**

1.1 Use the preceding financial statements of AAV to compute key financial ratios by completing the following table. **(10 Points)**

Ratio [a]	**BA: 2015**	**AAV: 2015**
Current ratio	2.46	**4.17**
Quick ratio	2.35	**4.11**
Inventory turnover	60.87	**269.31**
Average collection period	28.77	**5.36**
Debt ratio	45.70%	**61.87%**
Time interest earned ratio	0.946	**3.972**
Gross profit margin	19.41%	**14.21%**
Net profit margin	4.85%	**7.33%**
Return on total assets	1.97%	**4.09%**
Return on common equity	3.62%	**10.74%**

[a] Based on a 360-day year.

1.2 Summarize overall financial performance of AAV comparing with BA under each criterion. If you want to invest either in AAV or BA, which company would you recommend? **(15 Points)**

ANSWER

- **Liquidity** **AAV better**
- **Activity** **AAV better**
- **Leverage** **AAV better**
- **Profitability** **AAV better (except gross profit margin)**
- **Overall** **AAV better**

Question 2

Linda Manufacturing has an inventory conversion period of 60 days, an average collection period of 30 days, and an account payable period of 45 days. Linda's annual sales are $4,860,000 which are all on credit, and the gross profit margin is 20% of sales. Assume a 360-day year.

2. 1 Calculate the company's cash conversion cycle and the amount of resources needed to support the cash conversion cycle. **(10 Points)**

ANSWER

Cash conversion cycle = 60 + 30 – 45 = 45 days

Inv investment		648,000.00
AR investment		405,000.00
AP investment	-	486,000.00
Min Cash required		567,000.00

Part 7:

Question 1

Settrade. com reported key financial statements for the year ended December 31, 2015 of the two important companies in the Energy & Utilities industry, which are SOLARTRON Public Company Limited (SOLAR) and IRPC Public Company Limited (IRPC). Income Statement and Balance Sheet are as follows.

Income Statement	**IRPC 2015**	**SOLAR 2015**
Items	**(Unit: MB.)**	**(Unit: MB.)**
Revenues from Sale	218,519	697
Cost of Sale of Goods and Services	-197,914	-635
Selling and Administrative Expenses	-6,356	-118
EBIT	14,250	-57
Finance Costs	-2,481	-17
EBT	11,769	-74
Income Tax Expenses	-2,346	14
Net Profit (Loss)	**9,423**	**-60**

Balance Sheet	**IRPC 2015**	**SOLAR 2015**
Assets	**(Unit: MB.)**	**(Unit: MB.)**
Cash and equivalents	3,576	74
Account Receivables	9,033	371
Inventories	23,376	1,022
Total CA	**35,984**	**1,467**
Fixed Assets	127,189	2,033
Total Assets	**163,174**	**3,501**
Liabilities & Equities	**(Unit: MB.)**	**(Unit: MB.)**
Account Payable	28,450	348
Short-term Debt	4,492	868
Accrued Expense	3,268	27
Total CL	**36,210**	**1,243**
Long-term Debt	51,086	242
Retained Earnings	26,956	253
Equity	48,922	1,763
Total Liabilities & Equities	**163,174**	**3,501**

1.1 Use the preceding financial statements of SOLAR to compute key financial ratios by completing the following table. **(15 Points)**

Ratio [a]	**IRPC**	**SOLAR**
Current ratio	**0.99**	**1.18**
Quick ratio	**0.35**	**0.36**
Inventory turnover	**8.47**	**0.62**
Average collection period	**14.88**	**191.47**
Debt ratio	**53.50%**	**42.42%**
Time interest earned ratio	**5.74**	**-3.30**
Gross profit margin	**9.43%**	**8.83%**
Net profit margin	**4.31%**	**-8.62%**
Return on total assets	**5.77%**	**-1.72%**
Return on common equity	**12.42%**	**-2.98%**

[a] Based on a 360-day year.

1.2 Summarize overall financial performance of SOLAR comparing with IRPC under each criterion. If you want to recommend SOLAR to improve its operating performance, in which aspects would you suggest? **(15 Points)**

ANSWER

1. **Liquidity – GOOD and BETTER than IRPC**
2. **Activity – MUCH WORSE! Very few times of inventory turnover and very long time to collect money from receivables**
3. **Leverage – may be good in term of debt ratio, but very poor in the ability to pay interest expense**
4. **Profitability – MUCH WORSE! Even though gross profit margin seems to be OK, but o**

To improve its operating performance:

- **Improve activity management, especially the inventory and receivable concerns. Cost control strategy may also be needed – cost of goods sold and operating expenses. Thus, lead to poor in term of time interest earned ratio and all profitability ratios.**

Question 2

Big Bros Manufacturing turns over its inventory 8 times each year. It reported sales last year of $9,600 million with 25% gross profit margin. It has an average collection period of 50 days. Big Bros normally buys inventory on account with credit term of **2/10, net 60**, so its average payment period of 60 days. Assume a 360-day year.

2.1 Calculate the company's cash conversion cycle and the amount of resources needed to support the cash conversion cycle. **(10 Points)**

ANSWER

		daily $	total inv
Inv D	**45.00**	**20.00**	**900.00**
A/R D	**50.00**	**26.67**	**1333.33**
A/P D	**60.00**	**20.00**	**1200.00**
CC	**35.00**		**1033.33**

2.2 If Big Bros decides to take cash discount and makes payment on the 10th day after purchasing, how much is the additional short-term capital needed to support the cash cycle? **(10 Points)**

ANSWER

If take cash discount:			**Total inv**
Inv D	**45.00**	**20**	**900.00**
A/R D	**50.00**	**26.67**	**1333.33**
A/P D	**10.00**	**20**	**200.00**
CC	**85.00**		**2033.33**
DIFF	**1000.00**		

Part 8:

Question 1

Settrade. com reported key financial statements for the year ended December 31, 2015 of the two important companies in Agro & Food Industry, which are OISHI (OISHI Group PCL) and ICHI (ICHITAN Group PCL). Income Statement and Balance Sheet are as follows.

Income Statement	**OISHI 2015**	**ICHI 2015**
Items	**(Unit: MB.)**	**(Unit: MB.)**
Revenues from Sale	10,508	5,266
Cost of Sale of Goods and Services	6,607	3,944
Selling and Administrative Expenses	2,921	918
EBIT	**981**	**405**
Finance Costs	61	25
EBT	**920**	**379**
Income Tax Expenses	40	11
Net Profit (Loss)	**880**	**368**

Balance Sheet	**OISHI 2015**	**ICHI 2015**
Assets	**(Unit: MB.)**	**(Unit: MB.)**
Cash	597	34
Accounts receivable	424	875
Inventories	490	514
Fixed assets	7,561	7,166
Other fixed assets	205	38
Total assets	**9,278**	**8,627**
Liabilities & Equities	**(Unit: MB.)**	**(Unit: MB.)**
Accounts payable	2,005	257
Short-term debt	570	770
Bonds payable	2,093	1,069
Common stock	1,159	5,639
Retained earnings	3,450	892
Total liabilities and equity	**9,278**	**8,627**

1.1 Use the preceding financial statements of ICHI to compute key financial ratios by completing the following table. **(10 Points)**

Ratio [a]	**OISHI**	**ICHI**
Gross profit margin	**37.12%**	**25.10%**
Net profit margin	**8.37%**	**6.99%**
Return on total assets	**9.48%**	**4.27%**
Return on common equity	**19.09%**	**5.63%**
Debt ratio	**50.31%**	**24.30%**
Time interest earned ratio	**16.0820**	**16.2000**
Current ratio	**0.5868**	**1.3856**
Quick ratio	**0.3965**	**0.8851**
Inventory turnover	**13.4837**	**7.6732**
Average collection period	**14.5261**	**59.8177**

[a] Based on a 360-day year.

1.2 Summarize overall financial performance of ICHI comparing with OISHI under each criterion. Do you agree that OISHI still performs better than its key competitor, ICHI? Why? **(15 Points)**

ANSWER

Question 2

Win Hom Inc. reported total value of accounts receivable last year of $1,800 million with 25% gross profit margin. It has an inventory conversion period of 50 days, an average collection period of 45 days, and a payables deferral period of 40 days. In case that Win Hom Inc. needs short-term financing, ABC Bank offers a 20-days loan contract at 12% interest rate per year, but with 30% of compensating balance and the conditions of discount interest. Assume a 360-day year.

2.1 Calculate the company's gross profit last year, cash conversion cycle, and the amount of resources needed to support the cash conversion cycle. **(10 Points)**

ANSWER

So, sale =	**14,400**		Inv days	50
So, COGS =	**10,800**		A/R days	45
Gross Profit	**3,600**		A/P days	40
			CC =	**55**

Cash Investment in	
Inv	**1,500**
A/R	**1,800**
A/P	**1,200**
MCR =	**2,100**