~~15.501 - ratio~~ sheet

~~- go through folder~~

~~review tax withholding~~

~~do a practice exam~~

—

~~Uncollectable AR~~

~~look at past tests~~

~~fill in cheat sheet - cashflow?~~

MITSloan MANAGEMENT	**15.501/15.516** **Corporate Financial Accounting** **Final Examination** **December 15, 2009**

Practice 12/11/10

Name: ____

Instructions:

1) The exam length is 1 hour and 30 minutes.
2) This exam is 14 pages long (including the cover page). Please make sure your copy of the exam is not missing any pages.
3) A non-programmable calculator may be used for computation purposes during the exam. You are also permitted to use a single 8.5"x11" cheat sheet. No other materials are to be used during the exam.
4) Write your answers in the space provided and show any supporting computations you make. Do not attach additional material.
5) If you feel assumptions are necessary to answer a question, state all assumptions clearly.

Manage your time efficiently.

Just 1 practice exam

Question	Possible Points	Actual Points
1	10	
2	6	
3	20	
4	24	
5	5	
6	28	
7	15	
Total	***108***	

Op=interest +dividends receipts
Short term

Investing = PPE assets + intangibles
~~Sales~~ purchase of investments (bonds, etc) except cash eq
~~repayment~~ loans to borrowers

Financing = Stock + treasury stock
issuance of bonds
Pay ~~lease~~ dividends

Question 1 – Cash Flow (10 points)

↑ assets + debt

equity

Classify the following transactions of the current period as an operating, investing, or financial activity in the statement of cash flows.

	Type of Cash Flow (Circle the correct type)		
Disbursement of $96,900 to merchandise suppliers.	Operating	Investing	Financing
Receipt of $200,000 from issuing common stock.	Operating	Investing	Financing
Receipt of $49,200 from customers for sales made this period.	Operating	Investing	Financing
Receipt of $22,700 from customers this period for Sales made last period.	Operating	Investing	Financing
Disbursement of $100,000 to redeem bonds at maturity.	Operating	Investing	Financing
Disbursement of $16,000 for interest expense on debt.	Operating	Investing	Financing
Disbursement of $40,000 to acquire land.	Operating	Investing	Financing
Disbursement of $25,300 as compensation to employees.	Operating	Investing	Financing
Disbursement of $53,800 for a patent purchased From its inventor.	Operating	Investing	Financing
Disbursement of $19,300 as a dividend to shareholders.	~~Operating~~	Investing	Financing

don't care
year here

if it involves shareholders → equity!

Question 2 – Cash Flows (6 points)

Match each of the following items a through f with the appropriate definitions 1 through 6.

(a) Indirect method
(b) Operating activities
(c) Statement of cash flows
(d) Financing activities
(e) Direct method
(f) Investing activities

a (1) A calculation that reports net income and then adjusts the net income amount by adding and subtracting items that are necessary to yield net cash provided (used) by operating activities.

c (2) A financial statement that reports the cash inflows and cash outflows for an accounting period, and classifies those cash flows as operating, investing, or financing activities.

last left

? e (3) A calculation of the net cash provided (used) by operating activities that lists the major items of operating cash receipts, and then subtracts the major items of operating cash payments.

f (4) Transactions that include making and collecting notes receivable or purchasing and selling plant assets, or investments in other than cash equivalents and trading securities.

d (5) Transactions with a company's owners and creditors that include obtaining cash from issuing debt and repaying the amounts borrowed, and obtaining cash from or distributing cash to owners.

b (6) Activities that involve the production or purchase of merchandise and the sale of goods or services to customers, including expenditures related to administering the business.

Question 3 – Cash Flows (20 points)

Warren Corporation is preparing a statement of cash flows using the indirect method. Account balances for December 31, 2007 and December 31, 2008 appear below:

	2007 →	2008	
Cash	223,200	174,000	−49,200
Accounts receivable	327,600	306,000	−21,600
Inventories	645,600	579,600	−66,000
Plant, property and equipment	776,400	1,112,400	+336000
Accumulated depreciation	446,400	499,200	+52,800
Marketable securities	36,000	33,360	−2,640
Accounts payable	126,000	179,360	+53,360
Notes payable	360,000	400,000	+40,000
Common stock	600,000	600,000	—
Retained earnings	476,400	526,800	+50,400

During 2008, Warren Corporation did not sell any equipment. Net income was $100,400.

Prepare a full statement of cash flows for Warren Corporation using the indirect method.

Operating

Change in actual Cash matters? – no I think

Net Income	100,400 ✓
Decrease AR	+ 21,600 ✓
Decrease Inv	+ 66,000 ✓
~~Decrease~~ PPE	— ✓
Depreciation	+ 52,800 ✓
Sec	+ 2,640 ⊗
↑ AP	??? → + 53,360 ⊗
Notes Payable	—
Stock	—
RE	—
Total	~~187,440~~ 296,800

Money they have not paid yet

don't forget the other categories!

Investing

PPE −336,100

~~Marketable Securities~~ was in last one

Financing

Notes Payable +40,000

Stock Issued 0

RE ? ~~no change written~~

You don't include

Dividends −50,000

? must assume

~~?~~

Change in RE = NI − Dividends

Dividends = NI − ΔRE

So total change in cash match Balance sheet

Roe = $\frac{\text{Net income}}{\text{Avg SE}}$ Current = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$ Debt to Equity = $\frac{\text{Debt/Liabilit}}{\text{SE}}$?RE Cants!

Question 4 – FSA (24 points)

Indicate the immediate effects ("+" if it increases, "–" if it decreases, and "NE" if there is no effect) of each of the following independent transactions on (1) the rate of return on common shareholders' equity; (2) the current ratio, which starts at 1 before the following transactions are included; and (3) the debt to equity ratio (defined as total liabilities divided by shareholder's equity). Treat each transaction separately. If needed, state any assumptions you make.

?inventory = current assets ?? yes I think

a. A firm purchases, on account, merchandise inventory costing $205,000.
b. A firm sells for $150,000, on account, merchandise inventory costing $120,000. NI ↑
c. A firm collects $100,000 from customers on accounts receivable.
d. A firm pays $160,000 to suppliers on accounts payable. Assets ↓ Liabilities ↓ = NE
e. A firm sells for $10,000 a machine costing $40,000 and with accumulated depreciation of $30,000.
f. A firm declares dividends of $80,000. It will pay the dividends during the next accounting period. – ?changes SE?? ~~NA~~ No – (converts)
g. A firm issues common stock for $75,000.
h. A firm acquires a machine costing $60,000. It gives $10,000 cash and signs a note for $50,000 payable five years from now for the balance of the purchase price.

Transaction	ROCE	Current Ratio	Debt to Equity Ratio	
a.	NE	NE	↑	✓
b.	↑	~~balances off~~ ↑	~~NE~~	✗ ??AR is an asset
c.	NE	NE balances	NE	✓ ~oh RE↑
d.	NE	NE	↓	✓
e.	NE	~~NE~~ ↑ $\frac{+10,000-10,000}{-}$??	NE	✗
f.	~~NE~~ ↑ Decreases RE, ↓SE	↓	↑	✗
g.	↓	↑ cash in	↓	✓
h.	NE	~~NE~~ ↑	↑	✗

$\frac{CAS-(10,000)+60000}{+50,000} = \frac{+50000}{+50000}$ NE ??

almost-ish

?cancle out accumulate dep as well?

Cash A + 10,000
Acc Dep A + 30,000
Asset A 40000
Gain 0

) ?again no change A

Question 5 (5 points)

(1.) An extraordinary item must meet which of the following two criteria?

a. Foreseeable and material.
b. Infrequent and unusual.
c. Substantial and measurable.
d. Unusual and measurable.

(2.) Which of the following ratios is likely to be the *least stationary* over an extended period?

a. Debt to total assets ratio.
b. Asset turnover.
c. Return on assets.
d. Interest-bearing debt to total assets ratio.

(3.) Which of the following is not typically a characteristic experienced by a company during the introductory phase of the corporate life cycle?

a. Cash used in operations will exceed cash generated by operations.
b. Considerable cash will be used to purchase productive assets.
c. Cash from investing is positive.
d. Cash from financing is positive. +

(4.) The information in the following table is from the statement of cash flows for a company at four different points in time (Period 1, Period 2, Period 3, and Period 4). Negative values are presented in parentheses.

	Period 1	Period 2	Period 3	Period 4
Cash provided by operations	$ (180,000)	$ 90,000	$ 360,000	$ (30,000)
Cash provided by investing	(300,000)	75,000	90,000	(120,000)
Cash provided by financing	210,000	(330,000)	(150,000)	360,000
Net income	(120,000)	30,000	300,000	(15,000)

Based on this information, which of the following answers most likely corresponds with the introductory phase, growth phase, maturity phase, or decline phase?

a. Period 2, Period 1, Period 3, Period 4.
b. Period 1, Period 4, Period 3, Period 2.
c. Period 3, Period 4, Period 1, Period 2.
d. Period 4, Period 1, Period 2, Period 3.

(5.) Indian River Groves in central Florida lost about 10% of its oranges (or $750,000) due to frost. Based on this information, how will Indian River Groves most likely report this loss?

a. As an extraordinary item net of taxes.
b. Below discontinued operations.
c. As a pretax ordinary loss prior to income before income taxes.
d. As a discontinued operation net of taxes.

? clarify on taxes

? why ordinary?

Question 6 (28 points)

~~46,900~~

Events related to Trans Allied Insurance's investments of temporarily excess cash appear below.

			Market Value on Dec 31			
Security	Date Acquired	Acquisition Cost	2006	2007	Date Sold	Selling Price
JT Marlin	06/14/2006	$12,000	$13,500	$15,200	02/15/2008	$14,900
Jackson Steinem	06/14/2006	29,000	26,200	31,700	08/22/2008	28,500
Gekko Co.	06/14/2006	43,000	43,500	--	10/11/2007	43,700

None of these three securities paid dividends. These are non-strategic (passive) investments. Assume that the accounting period is the calendar year. Ignore taxes.

< 20%

Dividends add to cash + RE

Instructions:

a. **Assume the firm classifies these investments as Available for Sale. Prepare journal entries or use the Balance Sheet Equation to record how Trans Allied Insurance will account for its investments upon these events (please date your entries):**
   - **Acquisition of securities**
   - **Revaluation on 12/31/2006 and 12/31/2007**
   - **Sale of securities**

Should be able to do w/ taxes
add to defered taxes
-take away from other equity
then pay tax at end

oh they wanted journal entries but can have this

	Cash	+ Noncash	= Liabilities	+ Contrib	+ RE	other equity
Acquisition 6/14/06	-84,000	-84,000 AFS Investments				
Reeval 12/31/07		-800 AFS Investments		-800 Other Equity Other Comprehensive Income	No change on income statement	
Sold 10/11/07	+43,700 Cash	-43,500 AFS Investment ✓ yes old value		-500 Other Eq	+700 Investment Income (Investment Cash flow)	(don't remember - guessing)
Reeval 12/31/07		+7,200 AFS Investment		+7,200 Other Equity		
Sale 2/15/08	+14,900 Cash	-15,200 AFS		-3,200 Other equity	+2,900 Investment Income	

Figured it out well

↓ one more (flip)

6 Sale 8/22/08 | +28,500 Cash | −31,700 AFS Investments | −2700 Other equity | −500 Investment Income (loss)

			Market Value on Dec 31			
Security	Date Acquired	Acquisition Cost	2006	2007	Date Sold	Selling Price
JT Marlin	06/14/2006	$12,000	$13,500	$15,200	02/15/2008	$14,900
Jackson Steinem	06/14/2006	29,000	26,200	31,700	08/22/2008	28,500
Gekko Co.	06/14/2006	43,000	43,500	--	10/11/2007	43,700

b. Assume the firm wants to reclassify JT Marlin and Jackson Steinem as Trading securities on 12/31/2007. How will Trans Allied Insurance account for this reclassification on this date? How will Trans Allied Insurance account for the sales of these securities on 02/15/2008 and 08/22/2008? Please use either journal entries or the Balance Sheet Equation. ← oh I did balance sheet eq, so ok

Must realize gains + losses up to that point (like selling + quickly re-buying)

"Sell" 12/31/07 | + 46,900 Cash | −39,700 AFS sec | +1300 AOCI (was loss before) | + 5,900 Gain from Securities

took a lot of work to fix!

"Purchase" 12/31/07 | −46,900 | +46,900 T sec

Sell 2/15/08 | +14,900 | −15,200 T sec | −300 Realized Gain from sec (Loss)

Sell 8/22/08 | +28,500 | −31,700 T sec | −3200 Gain (loss) from sec

Combined 1st two 12/31/07 | −39,700 AFS sec +46,900 T sec | +1300 AOCI | +5,900 Gain from sec

they record as 1 cat "marketable sec"

			Market Value on Dec 31			
Security	Date Acquired	Acquisition Cost	2006	2007	Date Sold	Selling Price
JT Marlin	06/14/2006	$12,000	$13,500	$15,200	02/15/2008	$14,900
Jackson Steinem	06/14/2006	29,000	26,200	31,700	08/22/2008	28,500
Gekko Co.	06/14/2006	43,000	43,500	--	10/11/2007	43,700

c. (For this part, ignore the reclassification in part b.)

As discussed in lecture, SFAS 159 gives management the option to elect fair value accounting for many financial assets for fiscal years beginning after 11/15/2007. (If the election is *not* made, SFAS 115 – which Trans Allied Insurance has been using in parts a. and b. – applies.)

?? don't remember the standards

For this part, assume that Trans Allied Insurance elects to use fair value accounting under SFAS 159 for its holdings of JT Marlin and Jackson Steinem on 11/15/2007, when these holdings have market values of \$15,000 and \$30,500 (respectively). On this date, Trans Allied Insurance makes the necessary cumulative adjustment to retained earnings and updates the assets' values in the balance sheet.

What journal entries will Trans Allied Insurance make on 12/31/2007 and when it sells its holdings of JT Marlin and Jackson Steinem?

?? what is the diff again – since can see market price

no difference?

FV is like trading

? So exactly like b?

except different valuations at that date and diff date

or what if we do – but test did not ask for it

but if we don't do this?

"Sell" 11/15/07 | +45,500 Cash | −39,700 AFS sec | +1300 AOCI | +4500 Realized gain

don't make entry here

Combined 11/15/07 | −39,700 AFS sec | +45,500 FV sec

Readjust 12/31/07 | +1400 FV sec | +1400 Unrecognized gain ✓

Same for others as B ✓

aka op cycle

Question 7 (15 points)

Instructions:

a. **Using the attached financial statements, calculate the cash ~~collection~~ conversion cycle for Company A and Company B. Show all supporting calculations. (Assume all sales are made on account.)**

ARK

So not sure

CCC = OC − Days in AP

OC = Days in AR + Days in Inv

yeah what I had on my sheet

A

Yeah answer in days

$$\text{Days in AP} = \frac{\text{Avg AP}}{\text{Supplier purchases}} \cdot 365 = \frac{9{,}981}{\cancel{11{,}883{,}110}\ \ 1{,}181{,}283} \cdot 365 = \cancel{3.02}\ \ 28.4$$

~~COGS~~ Purchases

← and it was wrong COGS # anyway way off – wrong company

$$\text{Days in Inv} = \frac{\text{Avg Inventory}}{\text{COGS}} \cdot 365 = \frac{229{,}179}{1{,}225{,}474} \cdot 365 = 68.75$$

$$\text{Days in AR (DSO)} = \frac{\text{Avg AR}}{\left(\frac{\text{Sales}}{365}\right)} = \frac{\text{Avg AR}}{\text{sales}} \cdot 365 = \frac{269{,}687}{1{,}878{,}184} \cdot 365 = 52.41$$

$$52.41 + 68.75 - \cancel{3.02}\ 28.4 = \cancel{118.14}\ \ 92.2$$

ARK * Purchases = COGS + change in inventory

I did just this

Answer:

Company A	~~118.14~~ 92.2
Company B	27.~~48~~

B

$$\frac{1{,}163{,}174}{11{,}083{,}910} \cdot 365 = 38.30$$ close - again Δ in inv

$$\frac{1{,}024{,}246}{11{,}083{,}910} \cdot 365 = 33.72$$ ✓

$$\frac{1{,}055{,}596}{12{,}039{,}259} \cdot 365 = 32.03$$ ✓

$$32.03 + 33.72 - 38.30 = 27.45$$

27.8 close

b. **One of these companies is The Toro Company, a Minnesota-based company that manufactures lawn and garden equipment, and the other is Land O'Lakes, a Minnesota-based dairy products company. Based on the your calculations in part a., which company corresponds to Company A and which company corresponds to Company B? (Explain your reasoning in no more than 3 sentences.)**

B Dairy - shorter inventory
Needs to pay farmers quickly
Stores pay slowly

that 3 # put me off
for AP

Answer:

Company A	Land O'Lakes
Company B	Toro

A much longer cycle (twice)
- fits manufacturing

Company A
Income Statement
For the period ending December 31st, 2008

Net sales	$	1,878,184
Cost of sales		1,225,474
Gross profit		*652,710*
Selling, general, and administrative expense		454,301
Earnings from operations		*198,409*
Interest expense		(19,333)
Other income, net		2,213
Earnings before income taxes		*181,289*
Provision for income taxes		61,638
Net earnings	*$*	*119,651*

Company B
Income Statement
For the period ending December 31st, 2008

Net sales	$	12,039,259
Cost of sales		11,083,910
Gross profit		*955,349*
Selling, general and administrative		756,606
Restructuring and impairment charges		2,893
Gain on insurance settlements		(10,638)
Earnings from operations		*206,488*
Interest expense, net		63,232
Other income		(12,028)
Equity in earnings of affiliated companies		(34,972)
Minority interest in earnings of subsidiaries		16,128
Earnings before income taxes		*174,128*
Income tax expense		14,508
Net earnings	*$*	*159,620*

Company A
Comparative Balance Sheets
As of December 31, 2007 and December 31, 2008

ASSETS		2007	2008
Cash and cash equivalents	$	62,047	99,359
Total receivables, net		283,115	256,259
Inventories, net		251,275	207,084
Prepaid expenses and other current assets		10,677	27,491
Deferred income taxes		57,814	53,755
Total current assets		*664,928*	*643,948*
Property, plant, and equipment, net		170,672	168,867
Deferred income taxes		5,185	6,476
Other assets		9,153	7,949
Goodwill		86,224	86,192
Other intangible assets, net		14,675	18,828
Total assets	$	*950,837*	*932,260*
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current portion of long-term debt	$	1,611	3,276
Short-term debt		372	2,326
Accounts payable		90,966	92,997
Accrued liabilities:			
Warranty		62,030	58,770
Advertising and marketing programs		53,765	48,412
Compensation and benefit costs		61,462	53,898
Income taxes		2,089	4,761
Other		69,175	60,011
Total current liabilities		*341,470*	*324,451*
Long-term debt, less current portion		227,598	227,515
Deferred revenue		10,062	9,363
Other long-term liabilities		1,269	6,256
Total liabilities		*580,399*	*567,585*
Stockholders' equity:			
Common stock, par value $1.00		37,951	35,485
Retained earnings		335,384	337,734
Accumulated other comprehensive loss		(2,897)	(8,544)
Total liabilities and stockholders' equity	$	*950,837*	*932,260*

Company B
Comparative Balance Sheets
As of December 31, 2007 and December 31, 2008

		2007	2008
ASSETS			
Cash and cash equivalents	$	116,839	30,820
Receivables, net		1,006,931	1,104,261
Inventories		964,515	1,083,978
Prepaid assets		857,257	1,101,005
Other current assets		76,357	123,504
Total current assets		*3,021,899*	*3,443,568*
Investments		304,013	314,487
Property, plant and equipment, net		565,293	658,261
Goodwill, net		280,942	277,176
Other intangibles, net		125,004	120,982
Other assets		122,044	166,838
Total assets	*$*	*4,419,195*	*4,981,312*
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities:			
Notes and short-term obligations	$	132,170	409,370
Current portion of long-term debt		3,082	2,864
Accounts payable		1,150,353	1,175,995
Customer advances		926,240	1,045,705
Accrued liabilities		341,421	423,494
Patronage refunds and other member equities payable		28,065	37,751
Total current liabilities		*2,581,331*	*3,095,179*
Long-term debt		586,909	531,955
Employee benefits and other liabilities		230,444	358,404
Minority interests		6,175	18,922
Commitments and contingencies			
Total liabilities	*$*	*3,404,859*	*4,004,460*
Equities:			
Capital stock		1,701	1,611
Member equities		937,126	947,141
Accumulated other comprehensive loss		(61,931)	(150,277)
Retained earnings		137,440	178,377
Total liabilities and equities	*$*	*4,419,195*	*4,981,312*

15.501/15.516
Corporate Financial Accounting

Final Examination
December 15, 2009

SOLUTIONS

Name:

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4) Write your answers in the space provided and show any supporting computations you make Do not attach additional material
5) If you feel assumptions are necessary to answer a question, state all assumptions clearly

Manage your time efficiently.

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Total	***108***	

Question 1 Cash Flow (10 points)

Classify the following transactions of the current period as an opei activity in the statement of cash flows.

	Typ (Circle	
Disbursement of $96,900 to merchandise suppliers.	Operating	Op
Receipt of $200,000 from issuing common stock	Operating	F
Receipt of $49,200 from customers for sales made this period	Operating	O
Receipt of $22,700 from customers this period for Sales made last period	Operating	O
Disbursement of $100,000 to redeem bonds at maturity	Operating	F
Disbursement of $16,000 for interest expense on debt.	Operating	O
Disbursement of $40,000 to acquire land	Operating	I
Disbursement of $25,300 as compensation to employees	Operating	O
Disbursement of $53,800 for a patent purchased From its inventor	Operating	I
Disbursement of $19,300 as a dividend to shareholders	Operating	F

Question 2 – Cash Flows (6 points)

Match each of the following items a through f with the appropriate definitions 1 through 6.

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__________ (3) A calculation of the net cash provided (used) by operating activities that lists the major items of operating cash receipts, and then subtracts the major items of operating cash payments.

__________ (4) Transactions that include making and collecting notes receivable or purchasing and selling plant assets, or investments in other than cash equivalents and trading securities.

__________ (5) Transactions with a company's owners and creditors that include obtaining cash from issuing debt and repaying the amounts borrowed, and obtaining cash from or distributing cash to owners.

__________ (6) Activities that involve the production or purchase of merchandise and the sale of goods or services to customers, including expenditures related to administering the business.

Answer: (1) a (2) c (3) e (4) f (5) d (6) b

Question 3 – Cash Flows (20 points)

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	2007	2008
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Notes payable	360,000	400,000
Common stock	600,000	600,000
Retained earnings	476,400	526,800

During 2008, Warren Corporation did not sell any equipment. Net income was $100,400.

Prepare a full statement of cash flows for Warren Corporation using the indirect method.

Change in Retained Earnings = Net Income – Dividends
Dividends = Net Income – Change in Retained Earnings = 100,400 – 50,400 = 50,000

CFO		
NI	100,400	
Depreciation	52,800	
Decrease in AR	21,600	
Decrease in Inv	66,000	
Decrease in Marketable Securities	2,640	
Increase in AP	53,360	
	296,800	
CFI		
Purchase of PPE	(336,000)	
	(336,000)	
CFF		
Additional Borrowing	40,000	
Dividends	(50,000)	
	(10,000)	
Total Cash Flow for the period	(49,200)	

Question 4 – FSA (24 points)

Indicate the immediate effects ("+" if it increases, "–" if it decreases, and "NE" if there is no effect) of each of the following independent transactions on (1) the rate of return on common shareholders' equity; (2) the current ratio, which starts at 1 before the following transactions are included; and (3) the debt to equity ratio (defined as total liabilities divided by shareholder's equity). Treat each transaction separately. If needed, state any assumptions you make.

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b. A firm sells for $150,000, on account, merchandise inventory costing $120,000.
c. A firm collects $100,000 from customers on accounts receivable.
d. A firm pays $160,000 to suppliers on accounts payable.
e. A firm sells for $10,000 a machine costing $40,000 and with accumulated depreciation of $30,000.
f. A firm declares dividends of $80,000. It will pay the dividends during the next accounting period.
g. A firm issues common stock for $75,000.
h. A firm acquires a machine costing $60,000. It gives $10,000 cash and signs a note for $50,000 payable five years from now for the balance of the purchase price.

Transaction	ROCE	Current Ratio	Debt to Equity Ratio
a.	No Effect	No Effect	Increase
b.	Increase	Increase	Decrease
c.	No Effect	No Effect	No Effect
d.	No Effect	No Effect	Decrease
e.	No Effect	Increase	No Effect
f.	Increase	Decrease	Increase
g.	Decrease	Increase	Decrease
h.	No Effect	Decrease	Increase

Question 5 (5 points)

(1.) An extraordinary item must meet which of the following two criteria?
a. Foreseeable and material.
b. **Infrequent and unusual.**
c. Substantial and measurable.
d. Unusual and measurable.

(2.) Which of the following ratios is likely to be the *least stationary* over an extended period?
a. Debt to total assets ratio.
b. Asset turnover.
c. **Return on assets.**
d. Interest-bearing debt to total assets ratio.

(3.) Which of the following is not typically a characteristic experienced by a company during the introductory phase of the corporate life cycle?
a. Cash used in operations will exceed cash generated by operations.
b. Considerable cash will be used to purchase productive assets.
c. **Cash from investing is positive.**
d. Cash from financing is positive.

(4.) The information in the following table is from the statement of cash flows for a company at four different points in time (Period 1, Period 2, Period 3, and Period 4). Negative values are presented in parentheses.

	Period 1	Period 2	Period 3	Period 4
Cash provided by operations	$ (180,000)	$ 90,000	$ 360,000	$ (30,000)
Cash provided by investing	(300,000)	75,000	90,000	(120,000)
Cash provided by financing	210,000	(330,000)	(150,000)	360,000
Net income	(120,000)	30,000	300,000	(15,000)

Based on this information, which of the following answers most likely corresponds with the introductory phase, growth phase, maturity phase, or decline phase?
a. Period 2, Period 1, Period 3, Period 4.
b. **Period 1, Period 4, Period 3, Period 2.**
c. Period 3, Period 4, Period 1, Period 2.
d. Period 4, Period 1, Period 2, Period 3.

(5.) Indian River Groves in central Florida lost about 10% of its oranges (or $750,000) due to frost. Based on this information, how will Indian River Groves most likely report this loss?
a. As an extraordinary item net of taxes.
b. Below discontinued operations.
c. **As a pretax ordinary loss prior to income before income taxes.**
d. As a discontinued operation net of taxes.

Question 6 (28 points)

Events related to Trans Allied Insurance's investments of temporarily excess cash appear below.

Security	Date Acquired	Acquisition Cost	Market Value on Dec 31: 2006	Market Value on Dec 31: 2007	Date Sold	Selling Price
JT Marlin	06/14/2006	$12,000	$13,500	$15,200	02/15/2008	$14,900
Jackson Steinem	06/14/2006	29,000	26,200	31,700	08/22/2008	28,500
Gekko Co.	06/14/2006	43,000	43,500	--	10/11/2007	43,700

None of these three securities paid dividends. These are non-strategic (passive) investments. Assume that the accounting period is the calendar year. Ignore taxes.

Instructions:

a. **Assume the firm classifies these investments as Available for Sale. Prepare journal entries or use the Balance Sheet Equation for the events related to these investments (include dates):**
   - **Acquisition of securities**
   - **Revaluation on December 31 of 2006 and 2007**
   - **Sale of securities**

06/14/2006
Dr Marketable securities, $84,000
Cr Cash, $84,000

12/31/2006
Dr Other comprehensive income, $800
Cr Marketable securities, $800

Dr Accumulated other comprehensive income, $800
Cr Other comprehensive income, $800

Ar !! WtF!

10/11/2007
Dr Cash, $43,700
Dr Accumulated other comprehensive income, $500
Cr Marketable securities, $43,500
Cr Realized holding gain, $700

12/31/2007
Dr Marketable securities, $7,200
Cr Other comprehensive income, $7,200

Dr Other comprehensive income, $7,200
Cr Accumulated other comprehensive income, $7,200

02/13/2008
Dr Cash, $14,900
Dr Accumulated other comprehensive income, $3,200
Cr Marketable securities, $15,200
Cr Realized holding gain, $2,900

08/22/2008
Dr Cash, $28,500
Dr Accumulated other comprehensive income, $2,700
Dr Realized holding loss, $500
Cr Marketable securities, $31,700

Security	Date Acquired	Acquisition Cost	Market Value on Dec 31: 2006	Market Value on Dec 31: 2007	Date Sold	Selling Price
JT Marlin	06/14/2006	$12,000	$13,500	$15,200	02/15/2008	$14,900
Jackson Steinem	06/14/2006	29,000	26,200	31,700	08/22/2008	28,500
Gekko Co.	06/14/2006	43,000	43,500	--	10/11/2007	43,700

b. **Assume the firm wants to reclassify JT Marlin and Jackson Steinem as Trading securities on 12/31/2007. How will Trans Allied Insurance account for this reclassification on this date? How will Trans Allied Insurance account for the sales of these securities on 02/15/2008 and 08/22/2008? Please use either journal entries or the Balance Sheet Equation.**

Cumulative gains or losses, including those of current period, recognized on reclassification date. Subsequent market value changes reported in the income statement.

12/31/2007
Dr Marketable securities, $7,200
Cr Unrealized holding gain (R/E), $5,900
Cr Accumulated other comprehensive income, $1,300

02/13/2008
Dr Cash, $14,900
Dr Realized holding loss (R/E), $300
Cr Marketable securities, $15,200

08/22/2008
Dr Cash, $28,500
Dr Realized holding loss, $3,200
Cr Marketable securities, $31,700

Security	Date Acquired	Acquisition Cost	Market Value on Dec 31: 2006	Market Value on Dec 31: 2007	Date Sold	Selling Price
JT Marlin	06/14/2006	$12,000	$13,500	$15,200	02/15/2008	$14,900
Jackson Steinem	06/14/2006	29,000	26,200	31,700	08/22/2008	28,500
Gekko Co.	06/14/2006	43,000	43,500	--	10/11/2007	43,700

c. (For this part, ignore the reclassification in part b.)

As discussed in lecture, SFAS 159 gives management the option to elect fair value accounting for many financial assets for fiscal years beginning after 11/15/2007. (If the election is *not* made, SFAS 115 – which Trans Allied Insurance has been using in parts a. and b. – applies.)

For this part, assume that Trans Allied Insurance elects to use fair value accounting under SFAS 159 for its holdings of JT Marlin and Jackson Steinem on 11/15/2007, when these holdings have market values of $15,000 and $30,500 (respectively). On this date, Trans Allied Insurance makes the necessary cumulative adjustment to retained earnings and updates the assets' values in the balance sheet.

What journal entries will Trans Allied Insurance make on 12/31/2007 and when it sells its holdings of JT Marlin and Jackson Steinem?

12/31/2007
Dr Marketable securities, $1,400
Cr Unrealized holding gain (R/E), $1,400

02/13/2008
Dr Cash, $14,900
Dr Realized holding loss (R/E), $300
Cr Marketable securities, $15,200

08/22/2008
Dr Cash, $28,500
Dr Realized holding loss (R/E), $3,200
Cr Marketable securities, $31,700

Question 7 (15 points)

Instructions:

a. Using the attached financial statements, calculate the cash collection cycle for Company A and Company B. Show all supporting calculations. (Assume all sales are made on account.)

The cash conversion cycle is the period from when the firm spends cash on inputs until they receive payment from their customers minus the financing from creditors:

CCC = OC - Days in AP

The operating cycle, in turn, is the average time from purchase of inventory until collection of cash:

OC = Days in AR + Days in Inv.

Days in AR: 365 / (Net credit sales / Average AR)
Days in Inv: 365 / (COGS / Average Inv)
Days in AP: 365 / (Purchases / Average AP)
Purchases = COGS + Change in inv.

Company A:
Days in AR: 365 / [1,878,184 / 0.5*(283,115 + 256,259)] = 365 / 7.0 = 52.4
Days in Inv: 365 / [1,225,474 / 0.5*(251,275 + 207,084)] = 365 / 5.3 = 68.3
Purchases = 1,225,474 + (207,084 - 251,275) = 1,181,283
Days in AP: 365 / [1,181,283 / 0.5*(90,966 + 92,997)] = 365 / 12.8 = 28.4
CCC = Days in AR + Days in Inv – Days in AP = 52.4 + 68.3 – 28.4 = **92.2 days**

Company B:
Days in AR: 365 / [12,039,259 / 0.5*(1,006,931 + 1,104,261)] = 365 / 11.4 = 32.0
Days in Inv: 365 / [11,083,910 / 0.5*(964,515 + 1,083,978)] = 365 / 10.8 = 33.7
Purchases = 11,083,910 + (1,083,978 - 964,515) = 11,203,373
Days in AP: 365 / [11,203,373 / 0.5*(1,175,995 + 1,150,353)] = 365 / 9.6 = 37.9
CCC = Days in AR + Days in Inv – Days in AP = 32.0 + 33.7 – 37.9 = **27.8 days**

b. One of these companies is The Toro Company, a Minnesota-based company that manufactures lawn and garden equipment, and the other is Land O'Lakes, a Minnesota-based dairy products company. Based on the your calculations in part a., which company corresponds to Company A and which company corresponds to Company B? (Explain your reasoning in no more than 3 sentences.)

The calculations about show that Company A has a much longer cash collection cycle (more than three times longer than Company B). This would fit with a manufacturing company more than a dairy products company. This is corroborated by the operating cycle: Company A's operating cycle is approximately 4 months, or twice that of Company B. Hence, Company A is The Toro Company, and Company B is Land O'Lakes.

Company A
Income Statement
For the period ending December 31st, 2008

Net sales	$ 1,878,184
Cost of sales	1,225,474
Gross profit	*652,710*
Selling, general, and administrative expense	454,301
Earnings from operations	*198,409*
Interest expense	(19,333)
Other income, net	2,213
Earnings before income taxes	*181,289*
Provision for income taxes	61,638
Net earnings	$ *119,651*

Company B
Income Statement
For the period ending December 31st, 2008

Net sales	$ 12,039,259
Cost of sales	11,083,910
Gross profit	*955,349*
Selling, general and administrative	756,606
Restructuring and impairment charges	2,893
Gain on insurance settlements	(10,638)
Earnings from operations	*206,488*
Interest expense, net	63,232
Other income	(12,028)
Equity in earnings of affiliated companies	(34,972)
Minority interest in earnings of subsidiaries	16,128
Earnings before income taxes	*174,128*
Income tax expense	14,508
Net earnings	$ *159,620*

Company A
Comparative Balance Sheets
As of December 31, 2007 and December 31, 2008

		2007	2008
ASSETS			
Cash and cash equivalents	$	62,047	99,359
Total receivables, net		283,115	256,259
Inventories, net		251,275	207,084
Prepaid expenses and other current assets		10,677	27,491
Deferred income taxes		57,814	53,755
Total current assets		*664,928*	*643,948*
Property, plant, and equipment, net		170,672	168,867
Deferred income taxes		5,185	6,476
Other assets		9,153	7,949
Goodwill		86,224	86,192
Other intangible assets, net		14,675	18,828
Total assets	$	*950,837*	*932,260*
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current portion of long-term debt	$	1,611	3,276
Short-term debt		372	2,326
Accounts payable		90,966	92,997
Accrued liabilities:			
Warranty		62,030	58,770
Advertising and marketing programs		53,765	48,412
Compensation and benefit costs		61,462	53,898
Income taxes		2,089	4,761
Other		69,175	60,011
Total current liabilities		*341,470*	*324,451*
Long-term debt, less current portion		227,598	227,515
Deferred revenue		10,062	9,363
Other long-term liabilities		1,269	6,256
Total liabilities		*580,399*	*567,585*
Stockholders' equity:			
Common stock, par value $1.00		37,951	35,485
Retained earnings		335,384	337,734
Accumulated other comprehensive loss		(2,897)	(8,544)
Total liabilities and stockholders' equity	$	*950,837*	*932,260*

Company B
Comparative Balance Sheets
As of December 31, 2007 and December 31, 2008

			2007	2008
ASSETS				
	Cash and cash equivalents	$	116,839	30,820
	Receivables, net		1,006,931	1,104,261
	Inventories		964,515	1,083,978
	Prepaid assets		857,257	1,101,005
	Other current assets		76,357	123,504
	Total current assets		*3,021,899*	*3,443,568*
	Investments		304,013	314,487
	Property, plant and equipment, net		565,293	658,261
	Goodwill, net		280,942	277,176
	Other intangibles, net		125,004	120,982
	Other assets		122,044	166,838
	Total assets	$	*4,419,195*	*4,981,312*
LIABILITIES AND STOCKHOLDERS' EQUITY				
	Current liabilities:			
	Notes and short-term obligations	$	132,170	409,370
	Current portion of long-term debt		3,082	2,864
	Accounts payable		1,150,353	1,175,995
	Customer advances		926,240	1,045,705
	Accrued liabilities		341,421	423,494
	Patronage refunds and other member equities payable		28,065	37,751
	Total current liabilities		*2,581,331*	*3,095,179*
	Long-term debt		586,909	531,955
	Employee benefits and other liabilities		230,444	358,404
	Minority interests		6,175	18,922
	Commitments and contingencies			
	Total liabilities	$	*3,404,859*	*4,004,460*
	Equities:			
	Capital stock		1,701	1,611
	Member equities		937,126	947,141
	Accumulated other comprehensive loss		(61,931)	(150,277)
	Retained earnings		137,440	178,377
	Total liabilities and equities	$	*4,419,195*	*4,981,312*

15.501 Notes Review

12/4

Journal Entries

Debits (−SE, +E) 100
Credits (+A) 100

match

What
Wage expense (−SE, +E) 100
Cash (−A) 100
What

T-Accounts

Assets (A)

Dr	Cr
↑ Normal	↓

Liabilities (L)

Dr	Cr
↓	↑ Normal

Stock (SE)

Dr	Cr
↓	↑ Normal

Revenue (R)

Dr	Cr
↓	↑ Normal

Expenses (E)

Dr	Cr
↑ Normal	↓

Don't take notes here - make cheat sheet!

2

Cash Flow

< 3 months to maturity

tranfer b/w cash + cash equiv not included

interest + dividands under operating

Operating is basically the other cat

2 methods: direct + indirect

↑ appendix ↑ usual method

- Only reporting of operating differs, # same
- investing + financing same

direct

convert sales to cash recieved
↓ each seperate

- counteract change in AR
- " " " unearned revenue

convert COGS to cash paid for merch

- remove change in inventory

etc

remove investing + financing

indirect

Start w/ $\boxed{\text{net income}}$

- remove accrual things
- chang in inventory
- etc

} so really not all that much different.

Ratios

12/4

ROE

$$ROE = \frac{NOPAT}{Sales} \cdot \frac{Sales}{Assets} \cdot \frac{Net\ income}{NOPAT} \cdot \frac{Assets}{SE}$$

NOPM · Asset Turnover · Earnings leverage · Fin. Leverage

net operating profit margin

$$= \frac{Net\ income}{Shareholder\ equity}$$

ROA $= \frac{Net\ income}{Assets}$

NOPAT = Net operating profit after tax

= Operating Income · (1 - tax rate) = "Net income"

Operating Income = Gross Income - Op. Ex. - Depreciation

Recievables Turnover $= \frac{Net\ Credit\ sales}{Avg\ AR}$

Avg Collection Period $= \frac{Days \cdot AR}{Credit\ Sales} = \frac{Avg\ AR}{Avg\ Daily\ Sales}$

= **DSO**

(2)

<u>Inventory Turnover</u>

$$\frac{\text{Sales}}{\text{Inventory}} = \frac{\text{COGS}}{\text{Avg inventory}}$$

<u>Days Inventory Outstanding (DSI)(DIO)</u>

$$\frac{\text{Inventory}}{\text{COGS}} \cdot 365$$

<u>Accounts Payable Turnover</u> $= \dfrac{\text{Total supplier Purchases}}{\text{Avg AP}}$

<u>Operating Cycle</u> $= \underset{\text{inventory}}{DIO} + \underset{\text{sales}}{DSO} - \underset{\text{payable}}{DPO}$

=

<u>Cash Conversion Cycle (CCC)</u> $= DIO + DSO - DPO$

= Same as operating cycle

=

<u>Asset Turnover Ratio</u> $= \dfrac{\text{Revenue}}{\text{Assets}}$

(ROA is <u>net</u> income over assets)

<u>Quick Ratio</u> $= \dfrac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}} = \dfrac{\text{Cash} + \text{Cash equiv}}{\text{Current liabilities}}$ textbook

(3)

Current Ratio $= \dfrac{\text{Current assets}}{\text{current liabilities}}$

Current Cash Debt Coverage Ratio

$= $ Cash Current Debt Coverage Ratio

$= \dfrac{\text{Cash from Ops} - \text{Dividends}}{\text{Avg current liabilities}}$

Debt to Asset $= \dfrac{\text{Liabilities}}{\text{Assets}}$

Times Interest Earned Ratio (TIE)

$= \dfrac{\text{EBIT}}{\text{Interest payable}}$

EBIT = Earnings before Interest & Taxes

Earnings = After tax net income

3

Recurring/Persistant

- isolate nonrecurring/transitory
- easy to ~~~~ compare w/ prior years + other firms

Restructuring charges – reorg

discontined ops – biz units closed or sold

extraordinary items – materials gains + losses

quality of earnings – how closely match underlying econ conditions

discontined ops – report (net of tax)
and after tax gain/loss are on income
statement below income from continuing ops, but ~~above~~
still in net income

extraordinary – unusual
- infreq

Not/excluded

- write downs/write offs
- foreign currency gains/losses
- strikes
- accrual adjustments to long term contracts

4)

- gains/losses assets/biz segs
- defence againts takeover
- costs related to 9/11

Report sepertly net of taxes

Restructuring Costs - like discontined opps, but not a certain biz unit
- usually large
- so require seperate parts
- record in 2 parts
  1. Employee severance
  2. Asset write dows/write-offs

Often companies make this back - boosting income
- like a big bath

AOCI
- more inclusive notion of comp performance than net income
- net income + other gains and losses not on income statement
- foreign currency adjustments
- unrealized gains + losses AFS securities
- adjustments to pension
- generally events outside manigerial control

(5)

~~However~~ Not closed out after each accounting period

- continues

Fair Value

like trading in that gains + losses go to net income

At FV election

- cumulative adjustment to RE
- change in assets value on balance sheet

15.501 ~~Review~~ 12/13

More Studying

- leases
  - cap
  - op
  - auto transfer ownership
  - bargin purchase option
  - > 75% life
  - PV payments > 90% asset value

  must capitalize assets otherwise
  ↳ ie depreciate + add as assets

Pensions - did not do

Income tax expense

- taxable expenses follow diff rules - cash basis
- temporary + permanent differences
  - recognize as "provision for income taxes" or "deferred tax liability"
- why
  - depreciation - MACRS
  - Contract recognition date
- deferred tax asset - paid more tax upfront than financial statements ~~report~~ say should be paid

(2)

Tax obligation - what you actually owe

Tax Expense - what ~~the~~ income st says you owe

AR adjustments

- sales on account
- ~~collectable~~
- collectability risk
- net realizable value = total - allowance for uncollectable accounts
- aging analysis
- or simply % of sales

Sales ~~+100~~ +100,000 AR +100,000 RE

Estimate bad debts -2,400 AR net -2,400 RE

↳ goes into allowance for bad debts

Write off -500 AR

+500 ↳ allowance for uncollectables

(finally comes off AR)

no net effect on balance sheet

-oh now I get it more

③

re estimate at the end of year

make sure allowance for uncollectables ~~[illegible]~~ w

= your new aging analysis

Pratice exam went well

Very detail driven class

don't leave # off

multiple choice sneaky + lose lot of points

watch out for small things

mistakes have big impact on grade!

like be sure to average

Lease

- calculate lease interest + capital
  - calc interest payment
  - deduct from lease asset each year
  - must depreciate

① Depreciate Asset

↳ RE (Dep exp)

② Pay bill

↳ part ~~th~~ from lease liability

↳ part from RE (~~[illegible]~~ Int exp)

~~[illegible]~~ – cash

asset not taxed

T-accounts

Assets	Liabilities	SE	Rev	Exp
Dr / Cr	Dr / Cr	Dr / Cr	Dr / Cr	Dr / Cr
↑ / ↓	↓ / ↑	↓ / ↑	↓ / ↑	↑ / ↓
normal	N	N	N	N

15.501

12/11

Leases
Must be capitalized if
- auto transfer ownership
- bargain purchase option
- > 75% of asset life
- PV payments > 90%

Cash [BP + Pre] = NBP RE
+15.3 10 + 5.3 = 15.3
→ i real
-5 ↑ coupon rate -1 Cash RE 14.3 oldnet + premium -4 ↓ i real report

Journal Entries
Dr 100
 Cr 100 } same
 "what

Mark to market = fair mkt value published price

$PV = \frac{1}{(1+r)^t}$

$\frac{1}{r}$ annuity

Indirect
Start w/ Net Income
 + Depreciation + Amort + Depletion
 + Losses investing + financing
 + ↓ AR, Inv, prepaid ex
 + ↑ AP, unearned rev, accrued liab, def. tax liab

Lease
1. Depreciate
 - Asset
 - RE (Dep exp)
2. Pay bill
 - (part) RE (int exp)
 - (part) lease liability
 - Cash
 asset untouched

Intercorp Investments
Passive < 20%
AFS
- AOCI when value changes, not RE
- other income when bought + sold → income st
- investing cash flow
T
- unrealized gains + losses
- other income on income statement value change
- operating cash flow when bought + sold income st
- market value or fair value 2008 balance sheet
- both mark to market
- both dividends + cap gains on income statement
- pick at purchase
HTM
- debt only
- historical cost on balance sheet
- interest in operating cash flow + income statement

Sig Inf 20 < x < 50%
- equity accounting
- proportion of investee's equity
- dividends are recovery (↓ investment)
- income = proportional investee → income st.
- cap gains = income → income st.
Control
- consolidation
- balance sheet combined
- income st combined
- sale = cap gains + losses → income st.
- Pay attention to taxes

Direct
Sales + ↓AR + ↑Unearned = receipts from cust
COGS + ↑Inv + ↓AP = Payment for merch
Op ex + Int. + ↑Prepaid ex + ↑accrued lib = payment for exp
don't care about other stuff

Treasury Stock = SE
 Financing cash flow
AOCI is SE
Take Dividends out of RE
 - not separate line
Sec Deposit = short term

ROA + ROE + sales growth revert
LEV, ATR, ROS fairly steady

Bonds
~~Discount~~
Calculate PV principal + PVOA coupons
if premium/discount set in cat
 Bond payable - discount = NBP
 discount reduced each year
 coupon rate to interest expense
 what have to do to sell them

discount = contra liability
preimume = liability

amortize discount/preimum
 so effective interest expense is larger
 Cash Paid
 + amortization discount
 Interest expense

$$\text{ROE} = \frac{\text{Net income}}{\text{Avg SE} = \boxed{\text{BVE}}} = \text{ROA} \cdot \text{Fin lev}$$

$$= \text{NOPM} \cdot \text{Asset Turnover} \cdot \text{Earnings lev} \cdot \text{Fin lev}$$

$$= \frac{\text{NOPAT}}{\text{Sales}} \cdot \frac{\text{Sales}}{\text{Assets}} \cdot \frac{\text{NI}}{\text{NOPAT}} \cdot \frac{\text{Assets}}{\text{SE}}$$

$$\text{ROA} = \frac{\text{Net income}}{\text{Assets}}$$

NOPAT = Net op profit after tax

$$= \text{Op Income} \cdot (1 - \text{tax rate})$$

= "Net income

Op Income = Gross Income - OpExp - Dep.

$$\text{Recievables Turn} = \frac{\text{Net credit sales}}{\text{Avg AR}}$$

$$\text{AVG collection Period / DSO} = \text{DSO} = \frac{\text{Days} \cdot \text{AR}}{\text{Credit Sales}} = \frac{\text{Avg AR}}{\text{Avg Daily Sales}}$$

$$\text{Inventory Turn} = \frac{\text{Sales}}{\text{Inventory}} = \frac{\text{COGs}}{\text{Avg Inventory}}$$

$$\text{Days Inv Outstanding (DSI, DIO)} = \frac{\text{Avg Inventory}}{\text{COGS}} \cdot 365$$

$$\text{AP Turnover} = \frac{\text{Total Supplier Purchases}}{\text{Avg AP}}$$

$$\text{Op Cycle / Cash Conversion Cycle (CCC)} = \underbrace{\text{DIO} + \text{DSO}}_{\text{Op Cycle}} - \text{DPO}$$

$$\text{Asset Turnover} = \frac{\text{Revenue}}{\text{Avg Assets}}$$

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}} = \frac{\text{Cash} + \text{cash-eq}}{\text{Current liabilities}}$$

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Current Cash Debt Coverage Ratio

$$= \text{Cash Current Debt Coverage Ratio} = \frac{\text{Cash From Ops} - \text{Dividends}}{\text{Avg current Liabilities}}$$

$$\text{Debt to Asset} = \frac{\text{Liabilities}}{\text{Assets}}$$

$$\text{Times Interest Earned (TIE)} = \frac{\text{EBIT}}{\text{Interest payable}}$$

EBIT = Earnings before interest + taxes

Earnings = After tax net income

$$\text{Debt to Equity} = \frac{\text{Total Liabilities}}{\text{Total SE}}$$

$$\text{Market to Book} = \frac{\text{Market Value}}{\text{Book value}}$$

Free Cash Flow = Cash Flow from Ops - Cap Ex - Dividends

$$\text{Net Op Profit Margin (NOPM)} = \frac{\text{NOPAT}}{\text{Sales}}$$

$$\text{AR Turnover (ART)} = \frac{\text{Sales}}{\text{Avg AR}}$$

$$\text{Avg Collect Period (ACP)} = \frac{\text{Avg AR}}{\text{Avg daily Sales}}$$

$$\text{GPM} = \frac{\text{Gross profit}}{\text{Total Sales}}$$

Gross profit = Net sales - COGS

no employees, rent deducted, etc.

Net sales = Sales - Returns

Net Income = Gross Profit - Op Ex - Taxes - Interest

$$\text{Invt} = \frac{\text{COGS}}{\text{Avg Inv}}$$

$$\text{PPE Turn (PPET)} = \frac{\text{Sales revenue}}{\text{Avg PPE}}$$

$$\text{\% Depreciation} = \frac{\text{Accumulated Dep}}{\text{Cost of dep. assets}}$$

$$\text{OCFL (Op cash flow to Liabilities)} = \frac{\text{Net Cash from Ops}}{\text{total liabilities}}$$

$$\text{Effective tax rate} = \frac{\text{Provision for income tax expense}}{\text{Income before taxes}}$$

$$\text{Basic EPS} = \frac{(\text{Net income} - \text{Perferred dividends})}{\text{Weighted avg \# shares outstanding}}$$

$$\text{Diluted EPS} = \frac{(\text{NI} - \text{PD} + \text{add backs})}{\text{Avg common shares} + \text{Shares convertable assumed converted}}$$

$$\text{Days Payment Outstanding} = \frac{\text{Avg AP}}{\text{Supplier purchases}} \cdot 365$$

$$\text{ROA} = \text{ROS} \cdot \text{ATR} = \frac{\text{Net income}}{\text{Sales}} \cdot \frac{\text{Sales}}{\text{assets}}$$

$$\text{ROS} = \text{return on sales} = \text{profit margin} = \frac{\text{net income}}{\text{Sales}}$$

$$\text{ATR} = \text{Asset turnover} = \frac{\text{Sales}}{\text{assets}}$$

$$\text{Cash ratio} = \frac{\text{Cash} + \text{Marketable securities}}{\text{Current Liabilities}}$$

BVE = Book value of equity = Total SE

Purchases = COGS + Change in Inv

12/14

Post 15.501 Final

Was Difficult

Not fully awake at start

Forgot some details here + there

But of course curved on how other people do

A lot of details to get right

I think I did not do as well as I ~~[illegible]~~ hoped

Prob B on exam and B+ in class