YALE
UNDERGRADUATE
DIVERSIFIED
INVESTMENTS

MEETING # 2

ACCOUNTING STATEMENTS

OCTOBER 1 9 PM

GOALS OF MEETING # 1

1) Income Statement & Terms
2) Balance Sheet & Terms
3) Cash Flow & Terms
4) Linking the Statements
5) Accounting use in Valuation
6) Interview Questions

Income Statement

- Performance overtime (quarter or year)
- Revenue - Expenses = Income (profit)
  - Net Income > 0
  - Strong Profit Margins

INCOME STATEMENT & TERMS

- **Revenue (Sales)**
  - value of products/services sold in a period of time
  - Think - **Price x Quantity**
- **COGS**
  - represents expenses linked to the sale of products
- **Gross Profit**
  - Net sales - COGS
- **Operating Expenses**
  - Costs not directly linked to product sales
    - SG&A (sales, general & administrative)
    - Employee salaries
    - Rent
    - Marketing
    - Non-cash expense
    - Depreciation & Amortization

INCOME STATEMENT & TERMS

Revenue (Sales)
(COGS)
Gross Profit

(Operating Expenses)
SG&A
Rent, Employee Salaries, Marketing, etc.
Depreciation & Amortization
Operating Income (EBIT)

Interest Income or (Expense)
Other Income
Gain or (Loss) on Sale of PP&E
Pre-Tax Income

(Tax provision)
NET INCOME

Bakery Example

$2,000	100 loaves x $20/ loaves
(800)	100 loaves x $8/ per cost
1200	Gross Profit
(130)	(Operating Expenses)
70	Counter worker salary & posters
40	Rent for the year
20	2010 toaster machine lost value
1070	Operating Income (EBIT)
(100)	I owe the bank interest on my loan
0	Other Income
(200)	Lost money on a sale of a toaster
707	Pre-Tax Income
(248)	35% tax
$459	NET INCOME

Balance Sheet

- Snapshot of Company Performance
- Assets: Owns what?
- Liabilities: Owes what?
- Shareholder’s Equity
  - left over between what is owned and what is owed
  - Shareholder’s have a right to the assets of company and these are those assets

TOTAL ASSETS = TOTAL LIABILITIES + TOTAL SH.EQUITY

ASSETS

- **Cash**
  - physical cash only
  - short term investments are still less liquid than cash
- **Accounts Receivable**
  - recorded revenue on it's income statement but hasn't received the cash yet (an IOU)
- **Prepaid Expenses**
  - paid expenses in cash that have not been recorded as expenses on income statement
- **Inventory**
  - materials company needs to manufacture and sell products

ASSETS

- **PP&E**
  - plants, property & equipment
  - factories, buildings, land, equipment, etc.
- **Other Intangible Assets**
  - patents, trademarks, intellectual property
  - usually a result of an acquisition (Goodwill - when a company pays more during acquisition)

LIABILITIES

- **Revolver**
  - similar to a credit card
  - can borrow money but must repay quickly
- **Accounts Payable**
  - Expenses recorded on income statement but yet to be repaid
  - one time items with specific invoices
- **Accrued Expenses**
  - similar to accounts payable, but payments owed recur monthly
  - employee wages, utilities, rent (if included in income statement costs but not paid for yet) - perhaps spread over time

LIABILITIES

- **Deferred Revenue**
  - company has collected cash in advance from customers that have yet to receive product / service
  - recognized as real revenue over time
- **Deferred Tax Liability**
  - Company has paid lower taxes than what it really owes and must pay additional taxes in the future
- **Long Term Debt**
  - similar to a mortgage or car loan - debt that is due and must be repaid in over a year's time

EQUITY

- **Common Stock & Additional Paid in Capital (APIC)**
  - market value of shares at the time those shares were issued
  - when a company goes public, the total dollar value of shares shows up here.
  - This value does not change even if the share price changes afterward
- **Treasury Stock**
  - cumulative value of shares the company has repurchased from investors. this does not change even if share price does afterward.

EQUITY

- **Retained Earnings**
  - company's saved up, after tax profits (minus any dividends issued)
- **Accumulated Other Comprehensive Income (AOCI)**
  - "miscellaneous saved up income"
  - effect of foreign currency exchange rates
  - unrealized gains and losses on certain types of securities (value goes up or down but company hasn't sold that security yet)

BALANCE SHEET & TERMS

CURRENT ASSETS	**CURRENT LIABILITIES**
Cash & Cash Equivalents	Revolver
Short-term Investments	Accounts Payable
Accounts Receivable	Accrued Expenses
Prepaid Expenses	
Inventory	
Total Current Assets	Total Current Liabilities
LONG TERM ASSETS	**LONG TERM LIABILITIES**
PP&E	Deferred Revenue
Other Intangible Assets	Deferred Tax Liability
Long-Term Investments	Long Term Debt
Goodwill	
Total Longer Term Assets	Total Longer Term Liabilities
TOTAL ASSETS	**TOTAL LIABILITIES**

BALANCE SHEET & TERMS

SHAREHOLDER EQUITY
Common Stock & APIC
Treasury Stock
Retained Earnings
Accumulated Other Compr. Income
Total Shareholder Equity

TOTAL SH.EQUITY

Bakery Example

CURRENT ASSETS	
$1,000	Cash & Bank Account
100	Stocks or small investments
400	I sold 20 loaves of bread but haven't received payment.
150	I paid for new dough but haven't recorded the expense.
400	My stock of dough and cooking supplies.
$2,050	**Total Current Assets**

LONG TERM ASSETS	
3000	My 3 ovens & cooking pots
200	I have a patent on bread making.
1000	I own the building next to the bakery.
200	I paid more for John's bakery that it was worth.
$4400	**Total Long Term Assets**

$6460

Bakery Example

CURRENT LIABILITIES	
$1,000	I owe money on my credit card.
500	Bought a big sign but haven't repaid.
100	My staff wages I haven't paid yet.
$1,600	**Total Current Liabilities**

LONG TERM LIABILITIES	
860	Bob gave me money for bread but I haven't delivered yet.
600	I paid less taxes the past 3 years so I owe more.
1200	Bank gave me a 30 year loan for my bakery.
$2,660	**Total Long Term Liabilities**

$4,260

Bakery Example

SHAREHOLDER EQUITY	
$1,000	Total value of issues offered.
500	I repurchased some shares.
600	I saved up after tax profits + my net income flows here.
100	I sold bread in China and + exchange rate.
$2,200	**Total Shareholder Equity**

$2,200

Bakery Example

TOTAL ASSETS	=	TOTAL LIABILITIES	+	TOTAL SH.EQUITY
$6,460	=	$4,260	+	$2,200

Cash Flow Statement

- Performance overtime (quarter or year)
- Free Cash Flow measures the amount of cash that a company generates
  - pay shareholders/creditors
  - reinvest in company
- Cash is king - best indicator of company health
- Income Statement includes non-cash expenses (for example)- this needs to be adjusted because we are looking for the actual **PHYSICAL** cash a company has

CASH FLOW STATEMENT & TERMS

- **Cash Flow from Operations (CFO)**
  - Net Income flows here
  - adjusting for non-cash expenses
  - change of operational balance sheet items like accounts receivable & account payable (changes in Working Capital - [Current Assets - Current Liabilities]
- **Cash Flow from Investing (CFI)**
  - related to company's investments, acquisitions, & PP&E
  - Capital Expenditures (investments back into company such as PP&E)
  - purchases are negative
  - sales are positive
- **Cash Flow from Financing (CFF)**
  - items related to debt, dividends, and issuing or repurchasing shares

CASH FLOW STATEMENT & TERMS

CASH FLOW FROM OPERATIONS
Net Income
Stock Based Compensation
Amortization of Intangibles
(Gain) or Loss on Sale of PP&E
Change in Working Capital (for given time period)
Liabilities (debt accounted for in financing)
(Assets) (investments accounted for in investing)

CASH FLOW FROM INVESTING
(Purchase Short Term-Investments)
Sell Short term investments
(Purchase Long Term Investments)
Sell Long Term Investments
(CapEX)
PP&E Sales Proceeds

CASH FLOW STATEMENT & TERMS

CASH FLOW FROM FINANCING
(Dividends issued)
Issue Long Term Debt
(Repay Long Term Debt)
Issue Short Term Debt
(Repay Short Term Debt)
(Repurchase Shares)
Issue New Shares

Bakery Example

CASH FLOW FROM OPERATIONS	
$459	Net Income from Income Statement
20	Offered employees options (tax deductible on Income Statement)
20	2010 toaster machine depreciated
200	Loss on my toaster sale (compared to IRS depreciated value)
	Change in Working Capital (for given time period)
150	Liabilities (debt accounted for in financing)
50	(Assets) (investments accounted for in investing)

CASH FLOW FROM INVESTING	
20	I purchased some stocks.
20	I sold some stocks
20	I bought a long-term bond
20	Sold bonds
70	Bought new toasters
116	I sold my old toaster

Bakery Example

CASH FLOW FROM FINANCING	
25	I issued dividends to my shareholders.
100	The bank gave me more money.
90	I paid back some of the money I owe the bank.
350	I ranked up more on my credit card.
200	I repaid VISA for some of my credit card debt.
100	I bought some shares.
120	I issued some new shares

$1,000

LINKING THEM TOGETHER

STEP BY STEP - links occur typically through cash flow

1. Net Income (Income Statement) becomes the first line of Cash Flow
2. Non-cash expenses (Income Statement) added
3. Changes in operational (Balance Sheet) line items
   - Asset goes up, cash flow goes down
   - Liability goes up, cash flow goes up
4. Calculate net change in cash at the bottom of the (Cash Flow Statement) - becomes the cash of the next period's (Balance Sheet)
5. Update (Balance Sheet) to reflect changes in Cash, Debt, Equity, Investments, PP&E, and anything else from (Cash Flow Statement)

ACCOUNTING USE IN VALUATION

The 3 statements together are the backbone of a DCF (Discounted Cash Flow)

1. Bottom line of DCF is Cash Flow
   - **Free Cash Flow:**
     = Operating Cash Flows - CapEX

2. But companies have different capital structures
   - FCF excluding interest payments all together in the income statement to compare all companies regardless
   - **Unlevered Free Cash Flow:**
     = Operating Cash Flows - CapEX + interest(1 - tax%)

** Income Statement (net income), Balance Sheet (working capital) & Cash Flow Statement (CapEX) contribute to the Unlevered FCF equation.

What is the Difference Between Accounts Receivable & Deferred Revenue?

What is the Difference Between Accounts Receivable & Deferred Revenue?

- Accounts Receivable are the payments that are owed to the company from consumers that have yet to pay.
- Deferred Revenue is the the cash that the company has taken upfront for services or products yet to be delivered.
- Essentially opposites

Walk me through the 3 financial statements.

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- Income Statement: Over a set period of time - company's revenue & expenses overtime flow to net income (final line on statement)
- Balance Sheet: snapshot in time - company's resources - assets (short term and long term assets), and liability (short and long) - describes how they were acquired, etc.
- Cash Flow Statement: over a set period of time - Net income flows from Income Statement to the top line of Cash Flow, we add back non cash expenses and there are 3 categories, CFO, CFI, CFF

How do these 3 statements link together?

How do these 3 statements link together?

- Net Income from Income Statement flows to the top line of the cash flow statement, to retained earnings or shareholder's equity on Balance Sheet.
- Changes in investments, assets, and/or liabilities (such as paying off debt) changes the Cash Flow from Investing on the cash flow statement
- Cash from the Cash Flow Statement moves to the Cash under the short-term assets for the next year's Balance Sheet

Let's say I could only look at 2 statements to assess a company's prospects - which 2 would you use and why?

Let's say I could only look at 2 statements to assess a company's prospects - which 2 would you use and why?

- Income Statement
- Balance Sheet
- You can generate the Cash Flow Statement from both (assuming you have beginning and end balance sheets that correspond to the same period as the income statement)

There are non cash expenses (D&A) in the income statement. Why do we add back the entire expense on the Cash Flow Statement?

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- You want to reflect that you've saved on taxes with the non-cash expense.
- $10 of depreciation, you subtract that from earnings and with a tax of 40%, your net income would decrease by $6
- This decrease would also be seen on the cash flow statement, but this decrease doesn't actually exist because depreciation is a non-cash expense. At the end of the day, you will have saved $4 on taxes by including depreciation in your income statement and therefore need to add back $10 (the entire depreciation) to account for this increase given the decrease in net income as a result.